Managing critical services through hybrid arrangements

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Abstract

Purpose – Building on the literature of hybrids in the context of public organizations, this paper aims to discuss under which conditions hybrids can adequately provide "critical services", a subset of public services characterized by their simultaneous exposure to externalities, socio-economic cohesion and legitimacy concerns.

Design/methodology/approach – The authors collect indications from two stylized examples, prisons and defense, to develop propositions as a step toward assessing the potential role of hybrids as alternatives to direct public provision or full privatization in the delivery of critical services.

Findings – This paper examines the conditions under which hybrid arrangements outperform the polar cases of public bureaus and full privatization in the delivery of a specific subset of public goods that the authors identify as "critical services".

Originality/value – The authors suggest that there might be comparative advantages in relying on hybrid arrangements rather than the usual solutions of fully private or fully governmental provision. However, they also submit that these advantages are conditional to the capacity of hybrids to reconcile competing interests to achieve socio-economic cohesion, to combine capabilities dispersed among partners to benefit from positive externalities and to satisfy legitimacy concerns with respect to the role of government.

Keywords Public-private partnerships, Hybrids, Critical services, Prisons, Defense

Paper type Conceptual paper

Introduction

The pertinence of hybrid arrangements to deliver public services is a controversial subject. Some challenge the ability of these arrangements to address citizen needs

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effectively (Chen, Hubbard, & Liao, 2013; Hodge & Greve, 2007). However, despite numerous problems, the number of agreements such as public-private partnerships (PPPs) around the globe is ever growing (World Bank, 2017), including in the delivery of *critical services* where governments are traditionally the sole provider.

Critical services can be characterized as services that are no direct inputs to other economic activities and:

- must deal with *externalities* that directly affect the life of citizens;
- are needed to secure *socio-economic cohesion*; and
- raise issues of *political legitimacy*.

Services meeting these criteria deserve special attention because they pose problems of coordination among suppliers; generate specific contractual hazards; raise issues regarding the modalities of control; and pose questions about the ability of providers to measure, charge, and collect adequate fees from the beneficiaries and about the capacity of end-users to pay these services according to their usage. If not properly solved, these problems may generate discontinuities threatening fundamental socio-economic functions. Military operations, cybersecurity, correctional activities, defense systems are some examples of critical services that demand further investigation.

In this paper, we aim to identify and analyze conditions under which hybrids can enable critical services provision and outperform not only government direct-provision but also full-fledged privatization. Based on the hybrid governance literature on, and using indications provided by two stylized examples, prisons and defense, we build three testable propositions addressing under which conditions hybrids can effectively deliver adequate critical services. We focus on prisons and defense because we find these sectors particularly relevant to understand how hybrids can manage complexity to achieve socio-economic cohesion, how they can combine capabilities to address externalities, and how they can satisfy concerns of legitimacy regarding their capacity to deliver appropriate critical services. At the same time, these examples help delineating the limits these conditions impose on hybrid solutions and identifying factors that potentially discard them as credible alternatives.

Our paper, which is conceptual, contributes to the literature by offering a view beyond the "pure public" versus "pure private" dichotomy and by improving the existing knowledge on hybrid governance, particularly PPPs. More specifically, we address the boundary conditions in which hybrids are feasible alternatives in the highly sensitive context of critical services. Our arguments are organized as follows. First, we discuss the concept of "critical services" and its three defining conditions. Second, we take advantage of the growing literature on hybrids to identify specific conditions under which the delivery of critical services through such arrangements can be a feasible and even superior solution. The next three sections introduce examples that lead to propositions opening ways to rigorously assess the potential advantages of hybrids in delivering critical services. We are fully aware that these examples remain what they are: illustrative. Nevertheless, they shed light on issues encapsulated into our analysis and propositions. Drawing lessons from these examples, the last section discusses limitations that hybrid solutions face and concludes.

Critical services: definition and characteristics

The concept of critical services only partially overlaps with the traditional concept of public goods. The presence of non-rivalry in consumption and non-excludability characterizes public goods. These properties explain why actors rarely produce these goods at a market

equilibrium price, or in many cases, at any price at all. Normally, the resulting market failures require government intervention, with taxes funding this public interference (Pigou, 1932; Weimer & Vining, 2005).

Coase (1960, 1974) challenged this "interventionism," arguing that voluntary settlements among private parties may often solve externality problems at lower transaction costs than those associated to government intervention. Following Coase's challenge, two other Nobel Prizes awardees discussed the organizational mechanisms most appropriate to provide specific services such as prisons and defense (Hart et al., 1997; Williamson, 1999). Recent contributions went further, highlighting the possibility that neither private nor public management can guarantee the optimal provision of some "public" services (Iossa & Martimort, 2012; Warsen et al., 2018).

Although it has not yet permeated the academic literature, the idea of "critical services" as referring to a specific category of public goods has already contributed to some significant reorientation in public policies. The adoption of European Directive 2008/114 (EU, 2008) and the USA Presidential Directive 21 (USA_White_House, 2013) are illustrative of an increasing concern for services that can carry systemic risks, potentially challenging the continuity of strategic economic functions and threatening social cohesion. In this paper, we consider as "critical" those services:

- crucial to maintain social cohesion thus guaranteeing the continuity of socio-economic interactions;
- providing means to monitor externalities that can impact the capacity of agents to safely organize their activities; and
- tightly interwoven with legitimacy issues rooted in collective values regarding the expected role of public authorities.

Services such as defense, police, prisons and related judicial support; or other services – Williamson (1999) gives the example of diplomacy – needed to secure these three functions are critical in that respect: they have direct implications on a society's capacity to organize economic activities, maintain cohesion among its constituencies, and secure its territory. Flaws in the provision of these services might challenge the stability or integrity of a society (Brown & Jacobs, 2009). We discuss each dimension in turn.

Three defining functions: social cohesion, externalities and legitimacy

Critical services differ from public goods in that they can allow excludability and may exhibit rivalry in consumption. Moreover, in their conventional acceptance public goods are not primarily intended to deal with externalities while *simultaneously* securing socio-economic cohesion and economic stability; and they do not *necessarily* face legitimacy challenges if provision is secured by non-governmental actors. Therefore, public goods do not satisfy our three criteria all together. Critical services also differs from the more recent concept of critical infrastructures in that these services do not provide direct inputs for other economic activities, contrarily to electricity, transportation, or sanitation, for example (Kunneke et al., 2010).

The defining functions of critical services also impose specific constrains. First, maintaining socio-economic cohesion is essential to guarantee the integrity of a society, to reduce disparities, to support productive investments, and to help nations circumventing economic challenges (Smith, 1976). Dealing with market failures through adequate provision of critical services is crucial to assure social peace (Polanyi, 1957). In market economies, governments usually complement market forces in maintaining social order (Brown &

Jacobs, 2009) through the provision of specific critical services. For example, governments secure relationships among citizens by the development of defense systems to prevent foreign intrusion that would challenge the continuity of social interactions.

Second, the adequate provision of critical services can also generate positive externalities. It can impact the welfare of a wide range of individuals through services that can hardly rely on exclusive market provision (Milgrom & Roberts, 1992). Examples are the need to protect property rights, to guarantee safe trading activities, and/or to secure interactions among organizations. Border security; systems to prevent money-laundering, tax evasion and corruption; and defense systems and prisons (Bures, 2017) are illustrative of critical services, whose proper provision can hinder negative externalities that would otherwise impose costs on third parties (Pigou, 1932).

A third set of constraints, of particular significance for our analysis, comes out of the legitimacy issue. Legitimacy concerns the social acceptance of the modalities through which critical services can be delivered: it refers to the alignment (or misalignment) between the organizational arrangement chosen and the citizens' expectations framed by values and beliefs regarding the role of public authorities (Meyer & Rowan, 1977). Legitimacy plays a particularly important role in critical services, such as defense systems, in which providers are at high risk of being exposed to public disapproval (Vergne, 2012). In specific institutional settings, a given arrangement (e.g. full privatization) might be perfectly legal and effective, but generate instability due to challenges by strategic constituencies, while in other settings in which performance criteria prevail a similar arrangement might be unconditionally accepted (Hirsch & Andrews, 1984).

Hybrids and the delivery of critical services

If we accept the idea that critical services have specific characteristics, what is the most adequate and acceptable organizational solution for their provision? We argue that under specific circumstances, "hybrid" arrangements combining resources from otherwise legally and economically distinct entities can be feasible alternatives. Joint ventures or PPPs are typical examples. These arrangements differ from markets and hierarchies with respect to four dimensions: incentive intensity, administrative controls, performance attributes and contract law (Williamson, 1999). According to Makadok and Coff (2009) hybrids are market-like in some of these dimensions while simultaneously hierarchy-like in others, a combination that requires the development of specific mechanisms of governance (Menard, 2013; Reuer & Devarakonda, 2016).

Why would governments go hybrid to deliver critical services?

The literature initially focused on hybrids in the context of private agreements. In choosing to go hybrid, parties to a transaction would decide to share essential rights because they expect to:

- better deal with uncertainty by pooling resources;
- benefit from spillover effects; and
- ease the monitoring of non-contractibility and the allocation of joint rents through relational contracts (Makadok & Coff, 2009; Menard, 2013; Parmigiani & Rivera-Santos, 2011).

Concisely, "hybrids" develop because parties expect benefits from jointly calibrating rights, control, and incentive schemes, thus facilitating adaptability and improving performance through lower transaction costs.

These properties have increasingly attracted the attention of contributors intrigued by the potential role of such arrangements in the provision of public goods and services (Bel, Brown, & Warner, 2014; Bovaird, 2004; Joldersma & Winter, 2002). These arrangements take many different forms and names (e.g. coproduction, PPPs, consortia) but share the central feature of hybrids: *substantial decision and property rights are pooled among parties,* in our case between public authorities and private actors.

However, considering the challenging functions that critical services must satisfy, why and how would such arrangements be relevant for their delivery? Without referring to the concept of critical services, numerous authors have raised this question for the provision of services such as defense and prisons. The inherent complexity involved in the provision of such services along with criticisms regarding the presence of profit-oriented firms in doing so create additional challenges to the perspective of adopting hybrid solutions (Forrer, Kee, Newcomer, & Boyer, 2010; Brown, Potoski & Van Slyke, 2010; Cabral & Santos, 2018). The sustainability of these arrangements is particularly worrisome when criticality is high (Grimsey & Lewis, 2004). On the other hand, it has also been argued that implementing public-private ventures can yield value creation (Mahoney, McGahan, & Pitelis, 2009). This is likely to occur because idiosyncratic capabilities developed through collaborative interactions (Sanderson, 2009; Cabral et al., 2013), injection of market incentives (Hefetz, Warner, & Vigoda-Gadot, 2014), and effective monitoring of private contractors (Cabral et al., 2010; Pierce & Toffel, 2013). Combining these advantages could allow hybrids to improve performance, reduce contractual hazards, and increase perception of probity, thus helping these forms to address simultaneously social cohesion, externalities, and legitimacy more effectively than polar forms (full privatization vs. full governmental provision).

The alignment issue

We argue that three conditions must be fulfilled to have hybrid solutions aligned with the defining criteria of critical services (socio-economic cohesion, externalities and legitimacy), thus making it possible for hybrid arrangements to outperform full-fledged privatization and government provision. Figure 1 summarizes this alignment issue, at the core of our analytical approach, between the characteristics of the critical services and the organizational conditions that must be satisfied.

More specifically, we submit three theoretical propositions that intend to capture this alignment issue. In this conceptual paper, we do not test the validity of these propositions.

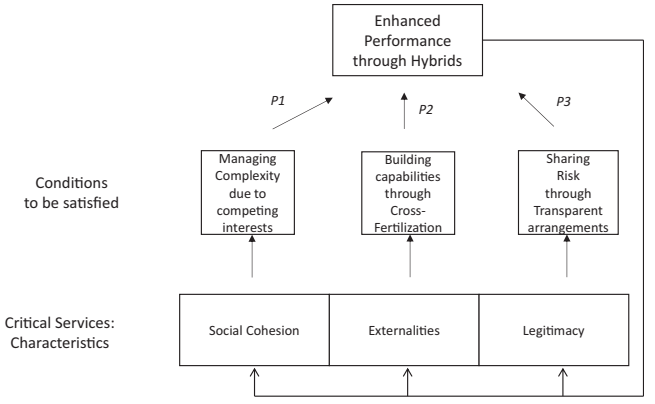

Figure 1.
Our analytical framework

We rather follow the pattern of some economics, management and public administration leading scholars (Ansell & Gash, 2008; Hart et al., 1997; Rangan, Samii, & Van Wassenhove, 2006), building our propositions and illustrating the applicability of our framework with real-world examples from two critical services: prisons and defense. The selection of these two domains is motivated by:

(1) their tight correspondence with our criteria (their role in maintaining socio-economic cohesion; their capacity to mitigate negative and foster positive economic externalities; their status in legitimizing governmental action); and

(2) the multiplication of controversial initiatives to introduce hybrid arrangements in the delivery of these services.

We offer examples from Australia, Brazil, European Union, France, Germany, South Africa, the UK and the USA. We are aware that these are only examples; they are not demonstrations nor do they provide a comparative analysis based on an extensive qualitative or quantitative investigation. This is beyond our scope at this point.

Condition #1: managing complexity to achieve cohesion

Our characterization of critical services emphasizes their importance in assuring economic continuity while keeping social cohesion. Indeed, the joint presence of a high level of criticality with non-contractible aspects, for example due to uncertainties coming out of technological requirements or performance measurement, makes the delivery of these services particularly exposed to contractual hazards and risks of opportunistic behavior. We argue that there are circumstances under which hybrid arrangements present advantages when it comes to reconciling competing interests and dealing with technological and financial complexities, thus positing them in a favorable position to secure socio-economic cohesion.

Assuring cohesion through adequate provision of prisons and defense services

To build the argument, we first consider some experiences of provision of prison and defense services through hybrid arrangements, and we point out conditions under which they might have outperformed alternative solutions.

Prison services face important financial constraints, accentuated by diverging interests. The provision of this critical service requires significant investment in non-redeployable infrastructures and in human capabilities to guarantee a secure environment for inmates, staff, and citizens. Prisons involve several stakeholders, which makes their regulatory design and performance measurement particularly complex (Boin, James, & Lodge, 2006). This complexity is amplified by permanent conflicts between rules imposed by public authorities and those implemented by the inmates themselves. Although communities tend to pay little attention to conditions of incarceration, social concern about safe confinement is universal, with prisons primarily expected to guarantee order and security rather than to provide services for inmates (Wacquant, 2009). This concern for securing social cohesion and controlling negative externalities clearly underlies the choice by Hart, Shleifer and Vishny (1997) of prison services to illustrate their discussion on the "proper scope of government".

Empirical evidence suggests that there are circumstances under which hybrids may have comparative advantages in facing these complex factors while circumventing flaws associated to full privatization and full governmental provision. Total privatization in corrections remains very controversial. Performance in prisons is far from perfectly contractible and observable,

which opens room for opportunism, with incentives for private operators to cut costs at the expense of quality of confinement (Hart et al., 1997). Drawing on the 2000 *Census of State and Federal Adult Correctional Facilities*, Makarios and Maahs (2012) showed quality shading in full-fledged privatization in the USA, with private prisons doing worse than public ones in treatment and education to inmates. In the same context, Gaes et al. (2004) argue that security is lower in private prisons. Examples of negative effects of prisons privatization where the government has limited controls of the correctional activities have also been observed in South Africa (Rynne & Harding, 2016; Sloth-Nielsen, 2003).

By contrast, Harding (2001) and Lundahl et al. (2009) argued that overall private contractors did not worsen the conditions and even contributed to improvements in prisons when they pooled rights and tasks with governments. Empirical results from Australia even suggest greater attention to the conditions of confinement in privately operated prisons (English, 2013), with enhanced services compatible with decreased costs when there is intense interactions between public authorities and private partners (OCIS, 2011). Cabral, Lazzarini & Azevedo (2010) showed similar advantages in Brazil, with prisons under hybrid governance reporting escapes 96 per cent lower than in publicly operated prisons, fewer deaths and similar or enhanced performance in medical care and legal aid for inmates. Quality improvements in prisons are also observed in the French experience of private participation, particularly with respect to management, food, cleaning, and health care facilities (Cour_des_Comptes, 2006). However, these solutions differ for pure privatization. Indeed, a noticeable condition for their success is the constant interactions between public and private actors, which allowed prison managers to deal with the inherent complexity of the corrections reality and to promote enhanced accountability standards (Cabral & Santos, 2018).

As for defense services, their significance in maintaining social cohesion by securing a territory and rights of its inhabitants make them unambiguously critical. Moreover, many governments have an incentive to develop domestic capabilities in hope of positive economic externalities coming out of local production of military and defense equipment (Levine, Mouzakis, & Smith, 2000). However, the technological complexity of these systems often exceeds what governments can do efficiently (Oudot, 2010). Also, full governmental provision may not be possible or desirable because of red-tape, which thwarts the flexibility needed to develop new and uncertain technologies (Depeyre & Dumez, 2008). On the other hand, full privatization put too high a risk on societal needs for protection, while the high level of sunk costs may deter private operators to fully assume the risks involved in arms-length contracts (Leyden & Link, 1993).

These elements may explain why government and suppliers tend to share rights in defense systems. Requirements for innovative technologies and capabilities and geopolitical aspects motivate the choice of organizational arrangements with joint decision rights, against an arms-length contractual approach that often leads to cost increases, as observed in US defense cases (Depeyre & Dumez, 2008). Referring to the US Coast Guard's Deepwater project, Brown et al. (2010) argue that a non-cooperative approach may explain inferior results in complex projects in the defense sector, while evidence from the British defense sector shows that joint decision-making generates positive results (Sanderson, 2009). Similarly, Lohmann and Rötzel (2014) demonstrate that hybrid arrangements in the German defense ease the management of complex technologies and better address government needs than arms-length contracts. European Union policy makers emphasize the role played by public-private collaboration in complex domains such as the maritime security, thanks to improved risk management and more effective crisis response (European_Commission, 2014). Similarly, it has been shown that public-private arrangements help to increase national system¨s resilience in sensitive domains such as cybersecurity (Bures, 2017). It has

also been acknowledged by different public authorities (European_Commission, 2007) that hybrids help developing interoperability of defense systems, which is crucial to secure socio-economic cohesion.

Reconciling competing interests in complex settings

What these examples suggest is that there is the potential for hybrids to efficiently manage complexity in contexts in which critical services are crucial to secure socio-economic cohesion. However, the relevance of choosing hybrid solutions is conditional to a better identification of factors generating this complexity.

There are indeed different sources of complexity, which can arise from supply and/or demand forces. On the supply side, complexity in the production and delivery of critical services may come out of *technologies* requiring expertise that the government may not have, or of *financial constraints*, either because the government does not have the resources needed, or because private operators need external support (e.g. refinancing). On the demand side, complexity can develop when users of critical services have ambiguous or diverging preferences, thus increasing demand diversity (Fountain, 2001). This diversity often grows out of the multiplicity of stakeholders with different perceptions of what to expect from critical services, forcing governments to find ways to conciliate competing interests (Klein, Mahoney, McGahan, & Pitelis, 2013)[1].

How can hybrids outperform polar forms (markets and hierarchies) in dealing with these complex situations? One argument is that in comparison to, say, standard public procurement, they facilitate coordination between governments and private operators (Makadok & Coff, 2009), which can attenuate contractual hazards (Domberger, Farago, & Fernandez, 1997) and promote the flexibility needed to address diffuse interests and avoid adverse effects (Klein et al., 2013). Indeed, critical services often involve several synergistic and competing tasks, for example, operation and maintenance in defense systems. Acting as "principal," a government can facilitate coordination among suppliers involved by combining incentives and authority, thus crafting more efficient governance (Makadok & Coff, 2009). Formal partnerships with private suppliers can also allow a government to benefit from their expertise, improving its own capacity to address complex technological situations and reconcile divergent interests (Gordon & Poppo, 1991; Oudot, 2010).

When it comes to financial constraints, hybrids might facilitate access to innovative financial mechanisms, such as new equity funds jointly crafted by public and private partners (Erol & Ozuturk, 2011) or revenue guarantees based on put options (Cabral & Silva, 2013). Hybrids can also help handling the lack of financial resource for government, while private partners benefit from public authorities remaining ultimately liable, as well illustrated by numerous PPPs agreements (Hodge & Greve, 2007). Pooling resources might also mitigate risk of capture and of opportunistic behavior by providing incentives that attenuate both quality issues observed in full privatization and motivation problems that plague government provision (Cabral et al., 2010; Hart, 2003). Actually, to get adequate rewards for their participation, private partners have incentives to meet the variety of demand; and governmental authorities, at least those in democratic regimes,[2] have incentives to control quality to satisfy their constituencies and maintain social cohesion, particularly when critical services face adverse circumstances (Friedkin, 2004). We summarize these arguments as follows:

P1. The higher the need to face competing interests and constraints in the provision of critical services, the higher is the opportunity for hybrids to prevail over markets and hierarchies for managing complexity and securing socio-economic cohesion.

Condition #2: dealing with externalities

Dealing with externalities is a criterion on which the concept of critical services overlaps with the concept of public goods. However, it differs because of its interdependence with the two other criteria, particularly social cohesion. Indeed negative externalities coming out of inadequate critical services challenge the security of persons and property rights, for example if prisons do not play their role of confinement or if defense systems do not assure required protection against external aggressions. We shall argue that there are circumstances in which hybrid provision of critical services can mitigate negative externalities and generate positive externalities. This is likely to occur when coordination capabilities of governments are aligned with distinctive efficiency-driven abilities from non-governmental actors.

Capitalizing capabilities in the delivery of prison and defense services

Combining public and private capabilities in prison services can lower the costs of containing dangerous individuals under control while promoting social reinsertion (Reasons & Kaplan, 1975). In a study on Brazilian prisons, Cabral, Lazzarini and Azevedo (2013) show that hybrids improve related performance indicators; however, these gains are conditional to previous experience of private entrepreneurs with: dealing with governments and monitoring security issues. The authors argue that the combination of coordination by public authorities with incentives and flexibility of private operators put hybrid arrangements in a favorable position to address simultaneously supporters of law and order and advocates of more humane treatment. Data from the Australian prison service confirms such cross-fertilization and positive results when public and private capabilities combine (English, 2013; OCIS, 2011). More specifically, empirical evidence suggests that these benefits prevail over results from the exclusive delivery of prison services by a hierarchical public entity and by a fully privatized prison if control rights are actually shared, an important condition to motivate pooling capabilities (Cabral & Saussier, 2013).

Similarly, important positive externalities might come out of the hybrid delivery of defense services, thanks to pooled capabilities. Besides its role in securing a community, in many countries defense is a structuring component of economic activities, involving complex supply chains and generating significant export revenues (Yakovlev, 2007). However, the increasing complexity of defense systems makes it unlikely that all strategic capabilities can be concentrated in the government. Building partnership with private operators might do better in capitalizing on disperse knowledge. Although government agencies tend to keep fundamental research within their domain (Mazzucato, 2013), activities related to the development of critical technologies increasingly rely on arrangements that facilitate cross-fertilization.

Casual evidence collected from the development of the Brazilian air-to-air missile MAA-1A Piranha illustrates this cross-fertilization. In this case, a hybrid arrangement allowed six government engineers to absorb knowledge about the technical features of the system under development, while contractor employees got the opportunity to learn about the way technical requirements are developed by defense officers and about the inherent bureaucracy when transacting with government. One additional benefit of hybrids comes from the incremental nature of innovation in defense systems. In facilitating information exchange and knowledge accumulation among a larger number of individuals, the hybrid arrangement was crucial for the accumulation of joint experience that led to the updated MAA-1B version of this missile through PPP. The development of the strategic missile M-51 by Airbus Defense and Space provides a very similar example (Moura & Oudot, 2017).

Public-private interactions combining disperse capabilities has also been observed in French defense contracts, with indications that it diminishes negative externalities through reduced information asymmetries and cost overruns (Kapstein & Oudot, 2009). In Germany, evidence shows that opportunistic behavior from outside suppliers in the defense industry decreases when the rate of renegotiations increases because private partners have an interest in building a positive reputation of cooperative behavior (Lohmann & Rötzel, 2014).

Hybrids as learning arrangements

The above examples suggest that public authorities go hybrid because they expect cross-fertilization from cooperation with private partners when capabilities are disperse among parties, a positive externality acknowledged by public administration and strategic management scholars (Brinkerhoff & Brinkerhoff, 2011; Cabral et al., 2013). Besides benefiting from the technical expertise of private partners, public authorities may capitalize on their managerial skills, and/or their knowledge of the demand for critical services (Baum & McGahan, 2013). Symmetrically, private partners can expect benefits by taking advantage of shared information and knowledge to posit themselves on future transactions, with this specific government or with other (public or private) partners. More generally, it has been shown that strategic alliances between public and private actors in costly and complex projects in critical services, such as aerospace and defense, have allowed contracting parties to mutually benefit from specific capabilities (Harrigan, 2017).

However, to reap these benefits public authorities must maintain technological and organizational skills internally to supervise the supplier(s) efficiently while securing the transfer of information and knowledge (Pierce & Toffel, 2013). Indeed, building capabilities involves learning and experimentation (Zollo & Winter, 2002). For example, the creation of centers of excellence focused on PPP (e.g. "Partnership UK") has induced the extensive diffusion of best practices in these hybrid agreements (Iossa & Martimort, 2012). Enduring cooperation also develops reputational assets that enable synergies, prevent opportunism, and mitigate contractual hazards (Sanderson, 2009).

As shown in several empirical studies, by joining complementary capabilities previously dispersed and disconnected, hybrids boost more flexible solutions, creating conditions to outperform full outsourcing to private operators or full integration within a public bureau (Cabral et al., 2013; Rangan et al., 2006). Constant interactions in the decision-making for multiple, combined activities favor hybrid performance (Gulbrandsen, Thune, Borlaug, & Hanson, 2015) with possible spillover to other activities as well (Kivleniece & Quelin, 2012). Hence, when dealing with externalities that require the coordination of dispersed capabilities, hybrids will likely outperform polar forms. Formally:

P2. The more disperse are the capabilities required for addressing externalities in critical services provision, the higher are the chances for hybrids to outperform markets and hierarchies.

Condition # 3: satisfying legitimacy

Political legitimacy is a key value when it comes to the delivery of critical services. Indeed, government is expected to guarantee a secure provision of these services; but in doing so it faces important risks with respect to the cost, quality, and timing of delivery (Hart et al., 1997). Further, all citizens can benefit from critical services at some point, which may feed high expectations but also claims for public accountability especially when private actors are involved in the delivery of such sensitive services (Bures, 2017). In this context, the

acceptance of hybrid solutions and their capacity to outperform polar forms greatly depend on the way arrangements manage risk and deal with transparency standards.

Dealing with legitimacy in the delivery of prisons and defense services

The intervention of private operators in prisons and defense has raised strong debates about its legitimacy, as illustrated by the scandal surrounding the private management of prisons under military supervision in Iraq (Hansen, 2015). Full privatization of prisons, with control rights transferred to private operators, has been questioned on theoretical ground with the argument that cost cutting could threaten quality (Hart et al., 1997), a point that empirical studies in the USA tend to support (Dilulio, 1988; Makarios & Maahs, 2012).

One way for governments to circumvent information asymmetries is through intense on-site oversight of the private partner (Lazerges, 1997). Although performance and efficiency are important features, accountability is sensitive to public opinion and political actors. This makes pressure for improved transparency particularly acute when private actors are engaged in the delivery of prison services (Cabral & Santos, 2018). In France, public supervisors keep residual control rights over decisions that affect quality while civil servants jointly act with the private operator (s) in the prison routines (Cour_des_Comptes, 2010). However, the impact of these controls on legitimacy largely depends on public standards such as rectitude, respect of contractual obligations (Williamson, 1999) and on the capacity and willingness to monitor private contractors (Cabral et al., 2013). This also requires adequate incentives for public supervisors, usually based on reputational aspects, career concerns and long-term labor contracts if no faults are detected, (Cabral et al., 2010). Symmetrically, empirical evidence shows that the acceptability and performance of hybrids in prisons also depend on private entrepreneurs having proper control over the inputs necessary to achieve the assigned goals. French and Brazilian experiences demonstrate that the capacity of private operators to invest in highly specific assets required to secure buildings, to develop and implement security devices, and to train employees are key features for successful partnerships and to address legitimacy concerns (Cabral & Saussier, 2013).

In the defense industry, the capacity of hybrids to assure efficient coordination while reducing costs plays a crucial role in forging legitimacy. In an empirical study of the high technology segment of the French defense system, Ménard and Oudot (2010) showed that PPPs in the development of innovative projects with high uncertainty, high specific investment and highly unpredictable variations in costs relied on flexible risk-sharing rules to ease coordination. However, to satisfy legitimacy concerns, this relational dimension must satisfy two conditions: trust and transparency.

In this sensitive and increasingly complex industry, trust depends on the continuous interactions among partners, which partially explains why defense contractors often hire former members of the military. Besides absorbing skilled human resources, this strategy likely carries benefits from close ties with active-duty officers, better collaboration and reduced risks (Brook, Dilanian, & Locker, 2009). Repeated interactions are expected to engender better control over risks while avoiding adversarial relationship (Sanderson, 2009). It is particularly so when adjustments and renegotiations respond to the materialization of risks, as suggested by evidence from German defense contracts (Lohmann & Rötzel, 2014).

However, this relational dimension may also threat the legitimacy of hybrids as it raises issues of collusive behavior (Markusen, 2003) and secrecy (Parker & Hartley, 2003), thus reinforcing the need for transparency. The existence of watchdog agencies and audit commissions may mitigate these effects, for example the Defense Contract Audit Agency or the Defense Contract Management Agency in the USA or the Cour des Comptes in France.

Technical features may also obstruct collusion and reduce the risk of opportunism: turning a blind eye to technical flaws may end up in detectable failures, so that private partners have an incentive to provide reliable critical services to maintain long term and effective relationships (Ng, Maull & Yip, 2009). Furthermore, as the defense industry is exposed to controversy because of the destructive potential of its products, technical credibility and expertise also foster legitimacy in this industry (Baum & McGahan, 2013).

Risk management, transparency and legitimacy

More generally, a major threat to hybrid solutions comes from incentives for governments to transfer risks management to private operators, especially when these risks are high and difficult to monitor. On the other hand, full privatization of critical services easily feed the view that public authorities are abandoning their duties without evidence of the effectiveness of this solution (Hodge, 2006). Risk transfer may also engender disruptions, due either to *technological factors*, as when technology is new or not well understood by the private operator or suffer from flaws unforeseen by partners (Kunneke et al., 2010); or to *institutional* factors, coming from malignant political forces (e.g. "third party opportunism"), incompetent regulators, or biased judiciary (Spiller, 2009). These factors expose full privatization to high contractual hazards and public controversies. In that respect, hybrids can mitigate or even overcome these risks, particularly when public authorities do not have the managerial capabilities required to properly monitor risks across all phases of the value chain (Mahoney et al., 2009). Contracts framing adequately public-private interactions, particularly if complemented by guiding documents and control devices (Van Den Hurk & Verhoest, 2016), help leading to a non-adversarial approach and positive outcomes (Sanderson, 2009), mitigating resistance to private involvement in critical services and reinforcing the legitimacy of hybrid arrangements.

However, benefitting from these solutions also depends on the capabilities of private actors to control the resources necessary to reach expected targets (Menard, 2013) and of public partners to make payments conditional to effective advances in a project (Shen, Platten, & Deng, 2006). Benefits for private partners are also contingent to guarantees against the hazards of expropriation once investments have been made (Ng & Loosemore, 2007). These are necessary to reduce risk aversion (Makadok & Coff, 2009) and stimulate collaborative behavior (Brown, Potoski & Van Slyke, 2010).

When facing a social context of skepticism regarding the benefits of private participation in critical services, more conditions must even be fulfilled to make hybrid solutions accepted as legitimate. Transparency and accountability standards are compelling factors for all parties to hybrid solutions in that respect (Forrer et al., 2010). Information on amounts spent, contractual obligations, performance indicators, and mechanisms to assess conformity must be disclosed (Hodge & Coghill, 2007). Governmental capabilities to adequately monitor the contract must be available, which requires technical expertise and non-propensity to engage in illicit arrangements (Cabral et al., 2013). Legitimacy through transparency can also be reinforced by independent governmental agencies, NGOs, and other external "watchdogs" (Bovaird, 2004) that tend to be much more thorough when critical services are delivered by hybrids than through traditional public provision (Cabral & Santos, 2018; English, 2013). Indeed, the fear of illicit behavior can push toward reinforcing control over partners, which may generate some rigidity but also provides incentives for superior performance as parties are aware that if the legitimacy of going hybrid is challenged, calls to switch back to public provision will develop. Superior levels of public scrutiny can also avoid misuse of critical services by economic and political elites to oppress the wider society. Overall, the presence of effective risk allocation and clear sharing rules can reduce the risk of adversarial

collaboration (Sanderson, 2009) and facilitate acceptance of hybrid solutions. We summarize these elements as follows:

P3. The more transparent are risk sharing rules and monitoring devices, including watchdog agencies, the better are the chances of hybrids to outperform polar arrangements while being accepted as legitimate solutions.

Discussion and conclusion

This paper examined the conditions under which hybrid arrangements that contractually combine resources from public authorities and private operators can outperform the polar cases of public bureaus and full privatization in the delivery of a specific subset of public goods that we identified as "critical services". This concept builds on the accumulation of recent reports and empirical studies[3] and on insights from theoretical contributions about the specificity of some public goods (Hart et al., 1997; Williamson, 1999; Kunneke et al., 2010). Following indications from this literature, we argued that the production and delivery of these services raise questions about their most appropriate modality of organization. We suggested, and substantiated with stylized examples from two critical services, prisons and defense, that there might be comparative advantages in relying on hybrid arrangements rather than the usual solutions of fully private or fully governmental provision. However, we also submitted that these advantages are conditional to the capacity of hybrids to reconcile competing interests to achieve socio-economic cohesion, to combine capabilities dispersed among partners to benefit from positive externalities and to satisfy legitimacy concerns with respect to the role of government.

Notwithstanding the possible success of hybrids under these conditions, there are also factors that may hamper their capacity to achieve positive results. First, there might be misalignment between the transfer of substantial decision rights to a private partner and the sunken investments required. Typically, non-negligible portions of the investments and the associated risks remain on the shoulders of public authorities, thus challenging the benefits of PPPs (Hodge & Greve, 2007). Second, the continuing interaction between private operators and public authorities in hybrid arrangements exposes decision-makers to influence costs, capture, and illicit arrangements. Corruption and deviant behavior can be overcome only if conditions of transparency and accountability are met, which requires relatively sophisticated institutional settings and civil servants highly immune against these distortions (Cabral & Lazzarini, 2015). Third, there is the crucial problem of acceptability. The proper alignment between social norms and the delivery conditions of these services is central to enhanced performance. To reach social acceptability (Scott, 2008), the actions of providers must be perceived as desirable and appropriate within a socially constructed system of norms and beliefs (Suchman, 1995). Gaps or even conflicts between social norms of users and preferences of critical services providers may challenge the acceptability of arrangements involving non-governmental agents, especially when the government does not or cannot monitor these agents properly (Forrer et al., 2010).

Implications for theory

Without neglecting these limiting factors, our framework sheds light on the well-defined circumstances under which hybrids might outperform alternative arrangements in the delivery of critical services. Our insights contribute to the ongoing debate in the public administration/management literature and among practitioners about the role of organizational solutions that differ from extended outsourcing or full privatization and from

the in-house provision of public services by public bureaus (Bel et al., 2014; Van Den Hurk & Verhoest, 2016; Warsen et al., 2018). Focusing the attention on "critical services" enabled us to push further in the direction suggested by some scholars about potential gains from public-private interactions and their implications on value creation (Kivleniece & Quelin, 2012).

Our contribution also fosters the dialogue between public management and strategic management (Boyne & Walker, 2010; Mahoney et al., 2009). By integrating strategic management constructs such as capabilities, our paper offers an enhanced understanding about the role of hybrids in public service performance improvement, thus contributing to refine strategic management theories and enlarge their scope beyond business-level policies (Barney, 2005; Ring & Perry, 1985).

Implications for practice

Our analysis also addresses aspects relevant for policymakers who have to choose and create organizational solutions for delivering critical services. Our propositions allow the identification of necessary conditions under which public-private collaboration in critical services might work, thus helping public managers and politicians in the decision process. They also suggest the key role of specific capabilities among public and private actors to make hybrids successful solutions in delivering critical services. Governments and private actors must leverage their ability to effectively procure and manage goods and services delivered through joint action. In the same vein, firms and public authorities should promote internal structures that allow them to code and retain the accumulated learning from previous and current collaborations, for example by developing adequate information systems and coopting committed managers[4].

Wrapping it up

Besides the development of specific capabilities to deal with the peculiarities of critical services and engender a collaborative approach, we pointed out the importance of appropriate motivations to deal with risk allocation and the gains from adequate control mechanisms. The absence of accountability structures enabling a more transparent contracting environment is likely to jeopardize the legitimacy of hybrids in critical services. Policymakers must be aware of these aspects before stimulating a massive participation of private actors in critical services, otherwise the observed results can be as a bad as, or even worse than those obtained via polar modes, and have deterrent effects on future potentially beneficial projects.

Finally, we emphasized through the examples of prisons and defense that positive results from choosing hybrids can be expected only if specific conditions are met. Public management literature will benefit from future studies that offer a more thorough comparative analysis using primary sources. Further research efforts can also promote data collection to allow quantitative tests to substantiate or challenge our analysis. We are aware that this is not an easy task as the very nature of critical services often makes information a strategic issue. Nevertheless, we are confident that future works can collect additional empirical evidence and test them against our propositions.

Notes

1. International cooperation in the defense industry is illustrative: the European NH-90 helicopter exists in 23 versions in order to satisfy different functions prioritized by participating governments.

2. We are aware that critical services can be used to sustain the dominance of local elites at the expense of oppressing significant portions of the wider society (North, Wallis, & Weingast, 2009). This is particularly true in autocratic regimes with lower accountability standards. In these institutional settings, the private participation in critical services can generate an opposite effect compared to what we propose and social cohesion will not hold.
3. Significant examples are: Moteff, Copeland, & Fisher (2003), the Directive on European Critical Infrastructures (Dec. 08, 2008), the US Presidential Policy Directive 21 (Feb. 12, 2013), Financial Stability Board (2013).
4. As already noted by Palay (1985, p. 168) successful agreements require "high premium on personnel with long memories, sound hearts, and a penchant for looking both ways before crossing the street".

References

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, *18*, 543-571. https://doi.org/10.1093/jopart/mum032

Barney, J. B. (2005). Should strategic management research engage public policy debates? *Academy of Management Journal*, *48*, 945-948. https://doi.org/10.5465/amj.2005.19573092

Baum, J. A., & McGahan, A. M. (2013). The reorganization of legitimate violence: The contested terrain of the private military and security industry during the post-cold war era. *Research in Organizational Behavior*, *33*, 3-37. https://doi.org/10.1016/j.riob.2013.10.004

Bel, G., Brown, T., & Warner, M. (2014). Editorial overview: Symposium on mixed and hybrid models of public service delivery. *International Public Management Journal*, *17*, 297-307. https://org.doi/10.1080/10967494.2014.935231

Boin, A., James, O., & Lodge, M. (2006). The new public management 'revolution' in political control of the public sector: Promises and outcomes in three European prison systems. *Public Policy and Administration*, *21*, 81-100. https://doi.org/10.1177/095207670602100207

Bovaird, T. (2004). Public–private partnerships: From contested concepts to prevalent practice. *International Review of Administrative Sciences*, *70*, 199-215. https://doi.org/10.1177/0020852304044250

Boyne, G. A., & Walker, R. M. (2010). Strategic management and public service performance: The way ahead. *Public Administration Review*, *70*, s185-s192. https://doi.org/10.1111/j.1540-6210.2010.02271.x

Brinkerhoff, D. W., & Brinkerhoff, J. M. (2011). Public–private partnerships: Perspectives on purposes, publicness, and good governance. *Public Administration and Development*, *31*, 2-14. https://doi.org/10.1002/pad.584

Brook, T. V., Dilanian, K., & Locker, R. (2009, 18 November). Retired military officers cash in as well-paid consultants. *USA Today*.

Brown, L. D., & Jacobs, L. R. (2009). *The private abuse of the public interest: Market myths and policy muddles*. IL: University of Chicago Press.

Brown, T., Potoski, M., & Van Slyke, D. (2010). Contracting for complex products. *Journal of Public Administration Research and Theory*, *20*, 41-58. https://doi.org/10.1093/jopart/mup034

Bures, O. (2017). Contributions of private businesses to the provision of security in the EU: Beyond public-private partnerships. *Crime, Law and Social `Change*, *67*, 289-312. https://doi.org/10.1007/s10611-016-9650-6

Cabral, S., & Lazzarini, S. G. (2015). The 'guarding the guardians' problem: An analysis of the organizational performance of an internal affairs division. *Journal of Public Administration Research and Theory*, *25*, 797-829. https://doi.org/10.1093/jopart/muu001

Cabral, S., Lazzarini, S. G., & Azevedo, P. F. (2010). Private operation with public supervision: Evidence of hybrid modes of governance in prisons. *Public Choice*, *145*, 281-293. https://doi.org/10.1007/s11127-009-9566-0

Cabral, S., Lazzarini, S. G., & Azevedo, P. F. (2013). Private entrepreneurs in public services: A longitudinal examination of outsourcing and statization of prisons. *Strategic Entrepreneurship Journal*, *7*, 6-25. https://doi.org/10.1002/sej.1149

Cabral, S., & Santos, M.-F. (2018). Accountability mechanisms in public services: Activating new dynamics in a prison system. *International Public Management Journal*, *21*, 795-821. https://doi.org/10.1080/10967494.2016.1141815

Cabral, S., & Saussier, S. (2013). Organizing prisons through Public-Private partnerships: A cross-country investigation. *Bar - Brazilian Administration Review*, *10*, 100-120. https://doi.org/10.1590/S1807-76922012005000010

Cabral, S., & Silva, A. F. (2013). An approach for evaluating the risk management role of governments in public-private partnerships for mega-event stadiums. *European Sport Management Quarterly*, *13*, 472-490. https://doi.org/10.1080/16184742.2013.811607

Chen, C., Hubbard, M., & Liao, C.-S. (2013). When public–private partnerships fail. *Public Management Review*, *15*, 839-857. https://doi.org/10.1080/14719037.2012.698856.

Coase, R. H. (1960). The problem of social cost. *Journal of Law and Economics*, *3*, 1-44. https://doi.org/10.1086/466560

Coase, R. H. (1974). The lighthouse in economics. *Journal of Law and Economics*, *17*, 357-376. https://doi.org/10.1086/466796

Cour_des_Comptes (2006). Rapport public thématique: Garde et reinsertion-la gestion de prisons. France: Cour des Comptes.

Cour_des_Comptes (2010). Rapport public thématique: Le service public pénitentiaire, Paris, France: La Documentation Française.

Depeyre, C., & Dumez, H. (2008). What is a market? A wittgensteinian exercise. *European Management Review*, *5*, 225-231. https://doi.org/10.1057/emr.2008.25

Dilulio, J. J. (1988). What is wrong with private prisons. *Public Interest*, *92*, 66-83. Retrieved form www.ncjrs.gov/App/Publications/abstract.aspx?ID=113189

Domberger, S., Farago, S., & Fernandez, P. (1997). Public and private sector partnering: A re-appraisal. *Public Administration*, *75*, 777-787. https://doi.org/10.1111/1467-9299.00086

English, L. M. (2013). The impact of an independent inspectorate on penal governance, performance and accountability: Pressure points and conflict "in the pursuit of an ideal of perfection. *Critical Perspectives on Accounting*, *24*, 532-549. https://doi.org/10.1016/j.cpa.2013.08.002

Erol, T., & Ozuturk, D. D. (2011). An alternative model of infrastructure financing based on Capital markets: Infrastructure REITS (InfraREITs) in Turkey. *Journal of Economic Cooperation and Development*, *32*, 65-88.

European_Commission (2007). *Growing regions, growing Europe: Fourth report on economic and social cohesion*. Luxembourg: Office for Official Publications of the European Communities.

European_Commission (2014). For an open and secure global Maritime domain: Elements for a European union Maritime security strategy. Retrieved from Brussels:http://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52014JC0009

Financial. Stability Board (2013). Guidance on identification of critical functions and critical shared services. Retrieved from www.fsb.org/2013/07/r_130716a/

Forrer, J., Kee, J. E., Newcomer, K. E., & Boyer, E. (2010). Public-Private partnerships and the public accountability question. *Public Administration Review*, *70*, 475-484. https://doi.org/10.1111/j.1540-6210.2010.02161.x

Fountain, J. E. (2001). Paradoxes of public sector customer service. *Governance*, *14*, 55-73. https://doi.org/10.1111/0952-1895.00151

Friedkin, N. E. (2004). Social cohesion. *Annual Review of Sociology*, *30*, 409-425. https://doi.org/10.1146/annurev.soc.30.012703.110625

Gaes, G. G., Camp, S. D., Nelson, J. B., & Saylor, W. G. (2004). *Measuring prison performance: Government privatization and accountability*. Oxford, United Kingdom: Alta Mira Press.

Gordon, W., & Poppo, L. (1991). Profit centers, single-source suppliers, and transaction costs. *Administrative Science Quarterly*, *36*, 66-87.

Grimsey, D., & Lewis, K. K. (2004). *Public private partnerships*. Cheltman, United Kingdom: Edward Elgar.

Gulbrandsen, M., Thune, T., Borlaug, S. B., & Hanson, J. (2015). Emerging hybrid practices in public–private research centers. *Public Administration*, *93*, 363-379. https://doi.org/10.1111/padm.12140.

Hansen, L. (2015). How images make world politics: International icons and the case of Abu Ghraib. *Review of International Studies*, *41*, 263-288. https://doi.org/10.1017/S0260210514000199

Harding, R. (2001). Private prisons. *Crime and Justice*, *28*, 265-346. https://doi.org/10.1086/652212

Harrigan, K. R. (2017). Strategic alliances as agents of competitive change. In L. F. Mesquita, R. Ragozzino, & J. J. Reuer, (Eds.), *Collaborative strategy: Critical issues for alliances and networks* (pp. 13-19). Northampton, MA: Edward Elgar.

Hart, O. D. (2003). Incomplete contracts and public ownership: Remarks, and an application to Public-Private partnerships. *The Economic Journal*, *113*, C69-C76. https://doi.org/10.1111/1468-0297.00119

Hart, O. D., Shleifer, A., & Vishny, R. W. (1997). The proper scope of government: Theory and an application to prisons. *Quarterly Journal of Economics*, *112*, 1127-1161. https://doi.org/10.1162/003355300555448

Hefetz, A., Warner, M., & Vigoda-Gadot, E. (2014). Concurrent sourcing in the public sector: A strategy to manage contracting risk. *International Public Management Journal*, *17*, 365-386. https://doi.org/10.1080/10967494.2014.935242

Hirsch, P. M., & Andrews, J. A. Y. (1984). Administrators' response to performance and value challenges: Stance, symbols, and behavior. In T. J. Sergiovanni, & J. E. Corbally, (Eds.), *Leadership and organizational culture* (pp. 170-185). Urbana Champaign, IL: University of IL Press.

Hodge, G. (2006). Public private partnerships and legitimacy. *The University of New South Wales Law Journal*, *12*, 43-48.

Hodge, G. A., & Coghill, K. E. N. (2007). Accountability in the privatized state. *Governance*, *20*(4), 675-702. https://doi.org/10.1111/j.1468-0491.2007.00377.x

Hodge, G., & Greve, C. (2007). Public-private partnerships: An international performance review. *Public Administration Review*, *67*, 545-558. https://doi.org/10.1111/j.1540-6210.2007.00736.x

Iossa, E., & Martimort, D. (2012). Risk allocation and the costs and benefits of public–private partnerships. *The RAND Journal of Economics*, *43*, 442-474. https://doi.org/10.1111/j.1756-2171.2012.00181.x

Joldersma, C., & Winter, V. (2002). Strategic management in hybrid organizations. *Public Management Review*, *4*, 83-99. https://doi.org/10.1080/14616670110101708.

Kapstein, E. B., & Oudot, J.-M. (2009). Reforming defense procurement: Lessons from France. *Business and Politics*, *11*, 1. https://doi.org/10.2202/1469-3569.1264

Kivleniece, I., & Quelin, B. V. (2012). Creating and capturing value in public-private ties: A private actor's perspective. *Academy of Management Review*, *37*, 272-299. https://doi.org/10.5465/amr.2011.0004

Klein, P. G., Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2013). Capabilities and strategic entrepreneurship in public organizations. *Strategic Entrepreneurship Journal*, *7*, 70-91. https://doi.org/10.1002/sej.1147

Kunneke, R., Groenewegen, J., & Menard, C. (2010). Aligning modes of organization with technology: Critical transactions in the reform of infrastructures. *Journal of Economic Behavior and Organization*, *75*, 494-505. https://doi.org/0.1016/j.jebo.2010.05.009

Lazerges, C. (1997). Les établissements penitentiaires a gestion mixte: À l'eprouve de l'observation. P. Lafarge, (Ed.), *Établissements penitentiaires a gestion mixte: actes du colloque de montpellier* (pp. 32-49). Paris: Pedone.

Levine, P., Mouzakis, F., & Smith, R. (2000). Arms export controls and emerging domestic producers†. *Defence and Peace Economics*, *11*, 505-531. https://doi.org/10.1080/10430710008404963

Leyden, D., & Link, A. (1993). Privatization, bureaucracy, and risk aversion. *Public Choice*, *76*, 199-213. https://doi.org/10.1007/BF01049320

Lohmann, C., & Rötzel, P. G. (2014). Opportunistic behavior in renegotiations between Public-Private partnerships and government institutions: Data on public-private partnerships of the German armed forces. *International Public Management Journal*, *17*, 387-410. https://doi.org/10.1080/10967494.2014.935245

Lundahl, B. W., Kunz, C., Brownell, C., Harris, N., & Van Vleet, R. (2009). Prison privatization: A Meta-analysis of cost and quality of confinement indicators. *Research on Social Work Practice*, *19*, 383-394. https://doi.org/10.1177/1049731509331946

Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2009). The interdependence of private and public interests. *Organization Science*, *20*, 1034-1052. https://doi.org/10.1287/orsc.1090.0472

Makadok, R., & Coff, R. (2009). Both market and hierarchy: An incentive-systems theory of hybrid governance forms. *The Academy of Management Review*, *34*, 297-319. https://doi.org/10.5465/amr.2009.36982628

Makarios, M. D., & Maahs, J. (2012). Is private time quality time? A national private–public comparison of prison quality. *The Prison Journal*, *92*, 336-357. https://doi.org/10.1177/0032885512448608

Markusen, A. R. (2003). The case against privatizing national security. *Governance-an International Journal of Policy and Administration*, *16*, 471-501. https://doi.org/10.1111/1468-0491.00225

Mazzucato, M. (2013). *The entrepreneurial state: Debunking public vs. Private sector myths*. New York, NY: Anthem Press.

Menard, C. (2013). Hybrid modes of organization. Alliances, joint ventures, networks, and other 'strange' animals. In R. Gibbons, & J. Roberts, (Eds.), *The handbook of organizational economics* (pp. 1066-1108). NJ: Princeton University Press.

Ménard, C., & Oudot, J.-M. (2010). Opportunisme ou équité? Le cas des contrats d'approvisionnement de défense. *Revue Française D'Economie*, *24*, 196-226. Retrieved from https://halshs.archives-ouvertes.fr/halshs-00624280

Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations - Formal-Structure as myth and ceremony. *American Journal of Sociology*, *83*, 340-363. https://doi.org/10.1086/226550

Milgrom, P., & Roberts, J. (1992). *Economics, organization and management*, Englewood Cliffs, NJ: Prentice-Hall.

Moteff, J., Copeland, C., & Fisher, J. W. (2003). *Critical Infrastructures: What Makes an Infrastructure Critical?* (RL 31556), Washington DC: Congressional Research Service, The Library of Congress.

Moura, S., & Oudot, J. M. (2017). Performances of the defense industrial base in France: The role of small and medium enterprises. *Defence and Peace Economics*, *28*, 652-668. https://doi.org/10.1080/10242694.2016.1195574

Ng, A., & Loosemore, M. (2007). Risk allocation in the private provision of public infrastructure. *International Journal of Project Management*, *25*, 66-76. https://doi.org/10.1016/j.ijproman.2006.06.005

Ng, I., Maull, R., & Yip, N. (2009). Outcome-based contracts as a driver for systems thinking and service-dominant logic in service science: Evidence from the defence industry. *European Management Journal*, *27*, 377-387. https://doi.org/10.1016/j.emj.2009.05.002

North, D., Wallis, J. J., & Weingast, B. R. (2009). *Violence and social orders: A conceptual framework for interpreting recorded human history*. MA: Cambridge University Press.

OCIS. (2011). Report of an announced inspection Acacia Prison, report no. 71. Perth.

Oudot, J. M. (2010). Performance and risks in the defense procurement sector. *Journal of Public Policy*, *30*, 201-218. https://doi.org/10.1017/S0143814X10000073

Palay, T. M. (1985). Avoiding regulatory constraints: Contracting safeguards and the role of informal agreements. *The Journal of Law, Economics, and Organization*. https://doi.org/10.1093/oxfordjournals.jleo.a036885

Parker, D., & Hartley, K. (2003). Transaction costs, relational contracting and public private partnerships: A case study of UK defence. *Journal of Purchasing and Supply Management*, *9*, 97-108. https://doi.org/10.1016/S0969-7012(02)00035-7

Parmigiani, A., & Rivera-Santos, M. (2011). Clearing a path through the forest: A meta-review of interorganizational relationships. *Journal of Management*, *37*, 1108-1136. https://doi.org/10.1177/0149206311407507

Pierce, L., & Toffel, M. W. (2013). The role of organizational scope and governance in strengthening private monitoring. *Organization Science*, *24*, 1558-1584. https://doi.org/10.1287/orsc.1120.0801

Pigou, A. C. (1932). *The economics of welfare* (4th ed.). London: Mcmillan and Co.

Polanyi, K. P. (1957). *The great transformation: The political and economic origins of our time*. MA: Beacon Press.

Quélin, B. V., Kivleniece, I., & Lazzarini, S. (2017). Public-Private collaboration, hybridity and social value: towards new theoretical perspectives. *Journal of Management Studies*, *54*, 763-792, https://doi. org/10.1111/joms.12274.

Rangan, S., Samii, R., & Van Wassenhove, L. N. (2006). Constructive partnerships: when alliances between private firms and public actors can enable creative strategies. *Academy of Management Review*, *31*, 738-751. https://doi.org/10.5465/amr.2006.21318928

Reasons, C. E., & Kaplan, R. L. (1975). Tear down the walls? Some functions of prisons. *Crime and Delinquency*, *21*, 360-372. https://doi.org/10.1177/001112877502100408

Reuer, J. J., & Devarakonda, S. V. (2016). Mechanisms of hybrid governance: Administrative committees in non-equity alliances. *Academy of Management Journal*, *59*, 510-533.

Ring, P. S., & Perry, J. L. (1985). Strategic management in public and private organizations: Implications of distinctive contexts and constraints. *Academy of Management Review*, *10*, 276-286. https://doi.org/10.2307/257969

Rynne, J., & Harding, R. (2016). Private prisons. In Y. Jewkes, J. Bennet, & B. Crewe, (Eds.), *Handbook on prisons* (2nd ed., pp. 149-168). New York, NY: Routledge.

Sanderson, J. (2009). Buyer-supplier partnering in UK defence procurement: Looking beyond the policy rhetoric. *Public Administration*, *87*, 327-350. https://doi.org/10.1111/j.1467-9299.2008.01734.x

Scott, R. W. (2008). *Institutions and organizations: Ideas and interests* (3rd ed.). Thousand Oaks, CA: Sage.

Shen, L.-Y., Platten, A., & Deng, X. P. (2006). Role of public private partnerships to manage risks in public sector projects in Hong Kong. *International Journal of Project Management*, *24*, 587-594. http://dx.doi.org/10.1016/j.ijproman.2006.07.006

Sloth-Nielsen, J. (2003). *Overview of policy developments in South African correctional services*. CSPRI Research Paper.

Smith, A. (1976). *An inquiry into the nature and causes of the wealth of nations*. United Kingdom: Oxford University Press.

Spiller, P. (2009). An institutional theory of public contracts: Regulatory implications. In M. Ghertman, & C. Menard, (Eds.), *Deregulation or re-regulation: institutional and other approaches* (pp. 45-66). New York, NY: Edward Elgar Publishing.

Suchman, M. C. (1995). Managing legitimacy - strategic and institutional approaches. *Academy of Management Review*, *20*, 571-610. https://doi.org/10.5465/amr.1995.9508080331

USA_White_House. (2013). *Presidential policy directive 2: Critical infrastructure security and resilience*. Washington, DC: Office of the Press Secretary. Retrieved from https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resilience

Van Den Hurk, M., & Verhoest, K. (2016). The challenge of using standard contracts in public–private partnerships. *Public Management Review*, *18*, 278-299. https://doi.org/

Vergne, J. P. (2012). Stigmatized categories and public disapproval of organizations: a mixed methods study of the global arms industry (1996-2007). *Academy of Management Journal*, *55*, 1027-1052. https://doi.org/

Wacquant, L. (2009). *Prisons of poverty* (Vol. 23). Minneapolis, MN: University of MN Press.

Warsen, R., Nederhand, J., Klijn, E. H., Grotenbreg, S., & Koppenjan, J. (2018). What makes public-private partnerships work? Survey research into the outcomes and the quality of cooperation in PPPs. *Public Management Review*, *20*, 1165-1185, https://doi. org/10.1080/14719037.2018.1428415.

Weimer, D. L., & Vining, A. R. (2005). *Policy analysis: Concepts and practice* (4th ed.). NJ: Prentice Hall.

Williamson, O. E. (1999). Public and private bureaucracies: a transaction cost economics perspective. *Journal of Law, Economics, and Organization*, *15*, 306-342. https://doi.org/10.1093/jleo/15.1.306

World Bank. (2017). Private Participation in Infrastructure. Annual Report. The World Bank Group. Retrieved from http://ppi.worldbank.org/~/media/GIAWB/PPI/Documents/Global-Notes/PPI_2017_AnnualReport.pdf Last consulted January 2019

Yakovlev, P. (2007). Arms trade, military spending, and economic growth. *Defence and Peace Economics*, *18*, 317-338. https://doi.org/10.1080/10242690601099679

Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, *13*, 339-351. https://doi.org/10.1287/orsc.13.3.339.2780

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