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Public-Private Partnerships: the Swiss specificity

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Public Private Partnerships: The Swiss Specificity

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Introduction

Since the first implementation of the Private Finance Initiative in the United Kingdom in 1992, the last decades have seen a spectacular development of public-private partnerships (designated as PPPs hereafter) in many (developed as well as developing) countries, in the wake of an increased participation of the private sector in the provision of not only the asset or infrastructure associated with a public service, but also the service itself.

Interestingly to note also that, while most countries have adopted PPPs, the prevalence of such arrangements differs widely across countries and the differences have been persistent. In particular, while around 700 PPP projects have been launched in the United Kingdom between 1994 and 2011, Switzerland has experienced only 2 of such arrangements over the same period of time, and exhibits one of the lowest number of PPPs within OECD countries.

What could explain this Swiss specificity? Is this specificity a good or a bad thing? What is the right number of PPPs? The goal of this chapter is to answer these questions. To this aim, we first define precisely what PPPs are, and what they are not (Section 1). We then develop the theoretical framework that points out the conditions under which PPP arrangements are optimal, or relatively more optimal than the other possible modes of provision (Section 2). This normative analysis highlights that the choice to resort to PPPs should be driven by the characteristics of the public service considered. As we expect public services to be quite similar across countries of similar level of economic development, we can infer that it is only cultural and institutional differences that could help to explain the differences in actually implemented PPPs. We then consider the Swiss cultural and institutional specificities that might lead the number of PPPs to be under optimal in Switzerland but also over optimal in other countries (Section 3). Finally, we conclude with some policy recommendations.

1. What is a public private partnership?

In this section, we first define PPPs in absolute terms but also relatively to the other modes of provision of public services. We also present the different types of PPPs that have been developed in practice, and finally consider their importance in number and in value over the last two decades within OECD countries to highlight the Swiss specificity.

1.a. Public private partnerships within the myriad ways of providing public services

Once a public service has to be provided, public authorities can choose between a large number of modes of provision. To distinguish between these possibilities, it is useful to divide the life cycle of a project or an asset into four main tasks: design, build, finance, and operate/maintain. The allocation of these tasks between one or several agents (public and/or private) determines the mode of provision. The most frequent modes of provision are presented in Table 1.

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Table 1 Overview of the possible modes of provision of public services

Type of mode of provision	Design	Build	Finance	Operate	Ownership of the assets
Traditional procurement	Public	Private	Public	Public	Public
Private financing	Public (possibly with private)	Private	Private (sometimes with Public)	Public	Public
Service contract (Lease / Management contracts)	Public	Private	Public	Private (≠ Build)	Public
PPP	Private (possibly with public)	Private	Private (sometimes with Public)	Private	Public
		The same private provider is involved in all stages			
Regulated market	Private	Private	Private	Private	Private

Under traditional procurement, the public authority remains in charge of all four stages, except the building stage, which is most of time contracted to a private firm through a procurement contract. This means that the public authority keeps all the control over the infrastructure and the service provided, and that it also bears all the risks but the construction risk. It might happen that the public authority gives some autonomy to the public provider of the service by creating specific public entities. These entities can be either autonomous public entities (e.g. the Geneva Airport), or State-owned limited companies that can be under public law (e.g. the Swiss Federal Railway and the Swiss Post) or under private law (e.g. the air navigation service provider Skyguide). The relationship between the authority and the autonomous entity can either be based on a law or on a contract as for the Swiss national center of expertise in the social sciences FORS (see Athias (2013) for a description of this case). All these arrangements correspond to a public provision of the public service.

Another way to provide a public service, quite frequent in Switzerland, is the case where a private operator builds and finances all or part of a public infrastructure in exchange for the opportunity to exploit premises for commercial purposes that are not related to the public service (e.g. shopping malls or office buildings). This is made possible by the grant of a distinct and permanent building right[2], which provides the private partner the right to build and own an infrastructure on a ground whose ownership remains in the hands of the public authority. The landowner becomes the owner of the infrastructure (against an adequate compensation) at the expiration of the distinct and permanent right, whose duration is typically between 30 and 100 years. An example is the Tissot Arena, the new sport complex inaugurated in 2015 in Biel, which encompasses football, ice-hockey and curling fields, as well as a shopping mall. Whereas these arrangements are often considered as PPPs due to the private financing of the public infrastructure, they are not PPPs as there is no involvement of the (same) private partner in the service provision.

When the provision of a public service does not require an asset or when the public authority owns an infrastructure but wants to delegate only its operation to a private operator, the resort to the private sector is mostly based on service contracts, such as for child day-care centers or the support for migrants. Within such contracts, we can distinguish between lease contracts where the private firm is paid by the users of the service, and management contracts where the private operator receives a fixed price from the authority.

[2] Droit distinct et permanent (DDP), Selbständiges und dauerndes Recht (SDR).

The provision of the public service can also be outsourced through public-private partnerships. PPPs can be defined as long term arrangements between a public authority and a private partner, chosen after a competitive tendering, in order to design, build, finance, and operate an infrastructure that is used to provide the public service[3]. This infrastructure can be either a new asset or an existing asset that needs to be renovated. The peculiarity of PPPs lies in the bundling of building and operation. As highlighted by HM Treasury, *"Private sector expertise and experience has always been used in public sector procurement, but, where in traditional procurement, private companies built and then walked away, PPP seeks to ensure that the private sector takes responsibility for the quality of design and construction it undertakes, and for long term maintenance on an asset, so that value-for-money is achieved*" (HM Treasury, 2003). PPPs can be either *contractual* or *institutionalized*. In the first case, the public authority concludes a contract with the project company (which can be a consortium of several firms) without being part of it. By contrast, in institutionalized PPPs, the public authority is a (minority or majority) shareholder of the project company. Boxes 1 and 2 below provide Swiss examples of both types of PPPs. Among PPPs, we can further distinguish *availability* and *concession* schemes. Whereas both are fixed price, long-term arrangements to design, build, finance and operate a public infrastructure, the main difference relies in the sharing of the risks between the public and private partners. In availability schemes, the public authority pays a fixed price to the project company according to performance criteria (demand risk is hence borne by the public sector). By contrast, in a concession scheme, it is the project company that bears the demand risk and is hence remunerated according to the demand for the service (either directly by the users or indirectly by the public authority via shadow tolls).

Finally, the public service can be provided though a regulated market. In this case, an authorisation to provide the service is required, subject to compliance with some minimum requirements to ensure the quality of the service provision. By contrast to PPPs that are dedicated to specific projects, the requirements in regulated markets apply to all firms of a sector; they are based either on the federal, cantonal or municipal legislation, or on specific guidelines issued by the administration. This is for example the case for nursing homes, for which most Cantons apply a more or less strict regulation (Athias and Wicht, 2018a).

BOX 1: The administrative centre Neumatt, the only contractual PPP in Switzerland

The first and only example of a contractual PPP in Switzerland is the administrative complex Neumatt, in the city of Burgdorf (BE). The availability contact has been signed in 2009 between the Canton of Bern and the project company Zeughaus PPP AG, formed by the construction groups Marti AG and Royal BAM AG, as well as Hälg Facility Management AG. This contract, that covers a period of 25 years since 2012, concerns the design, building, financing, and operating of a new complex, which encompasses a regional prison for 110 inmates, four administrative buildings, a workshop for the Cantonal Road and Civil Engineering Services, as well as an underground car park. The project company has been chosen among five companies, after three rounds of competitive tendering and the total value of the project is 150 million of Swiss Francs.
The operator of the complex is in charge of most tasks that are not closely related to the core of the activity of public authorities, that is, all tasks related to the custody and care to inmates. The services provided by the private partner encompass, among others, the facility management of the buildings, the management of the car parks, the refuse management, the internal mail service, the staff restaurant, the signage, the management of the keys, and the management of the office supplies. The private company is also in charge of the security and the surveillance of the complex, with the exception of the prison that remains in the hands of the public authority.

[3] Maskin and Tirole (2008) define a public private partnership as *"A long-term development and service contract between government and private partner. The government typically engages its partner both to develop the project and to operate and service it. The partner may bear substantial risk and even raise private finance. Its revenue derives from some combination of government payments and user fees*".

BOX 2: Cadiom, an institutionalized PPP to provide distance heating in Canton Geneva

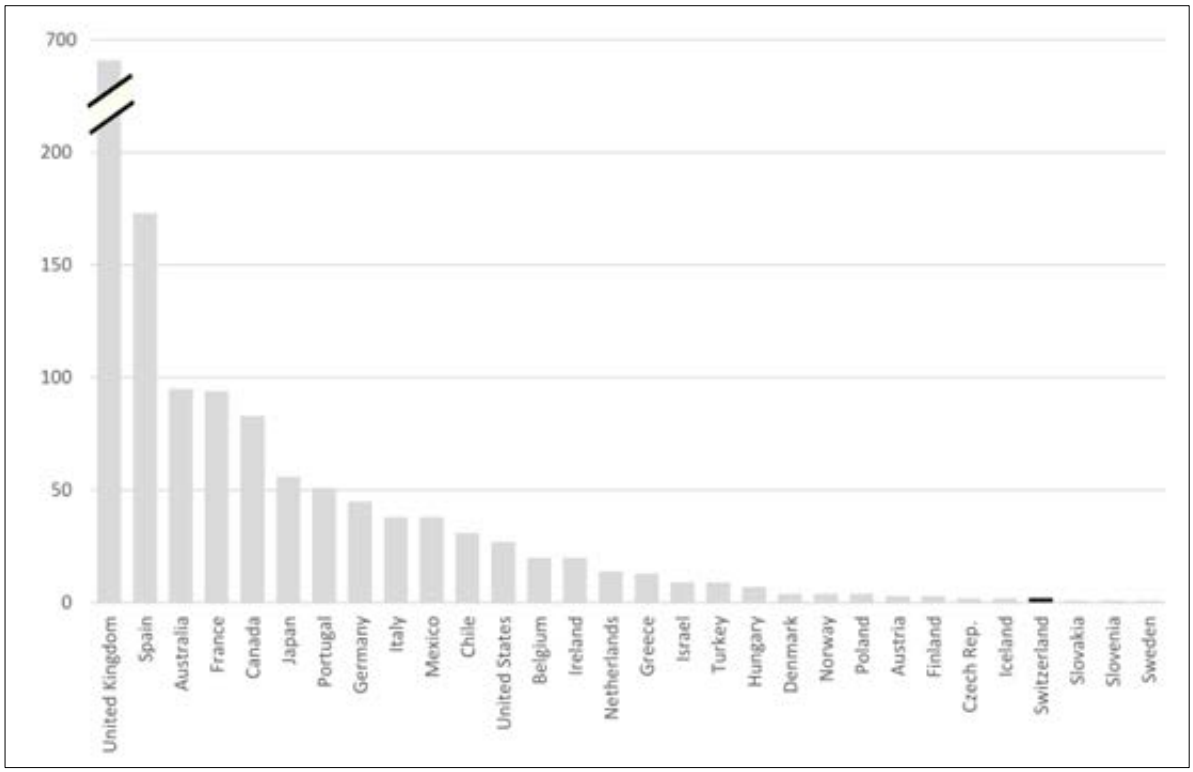
Cadiom is an institutionalized PPP created in 1999 between the *Services Industriels de Genève* (SIG, an autonomous State company) and the consortium Vulcain, composed by CGC Energie, two engineering companies, and the construction group Zschokke (now Implenia). The public authority holds a majority (51%) of the project company Cadiom SA. The goal of this company is to design, build and operate a distance heating network in order to use the surplus of heat coming from the incineration plant of Les Cheneviers, in Aire-la-Ville. This network provides heating to more than 10'000 homes in five municipalities of Canton Geneva. The company Cadiom is paid directly from the clients (homeowners), hence corresponding to a concession scheme. The Canton grants Cadiom the right to use the public domain and monitors the price and the quality of the service. The private partner has been chosen after a competitive tendering process.

1.b. PPPs in the World: The Swiss exception

Between 1994 and 2011, 1541 PPPs have been realized in the OECD countries (Fig. 2), for a total value of 431 billion dollars. Among these projects, almost half has been realized in the United Kingdom (44.8% of the projects), way ahead of Spain (11.2%) and Australia (6.2%), who complete the podium.

A striking fact exhibited by these data is that Switzerland has a very low number of PPPs. Indeed, albeit many projects are incorrectly described as PPPs by the authorities, only two actual PPP projects have been realized in Switzerland so far. The only example of a contractual PPP in Switzerland is the administrative center Neumatt in Burgdorf (BE) (see Box 1), and the only example of an institutionalized PPP is the distance heating network Cadiom, in the Canton of Geneva (see Box 2).

Figure 1: Number of PPPs in OECD Countries (1994-2011)



Data : From Athias et al. (2018)

2. When should governments resort to PPPs?

After this descriptive overview of what PPPs are, and what they are not, the question of when governments should resort to PPPs naturally emerges. This question is related to the more general question of optimal organizational choices, which has been tackled in the works of two Nobel laureates, namely Ronald Coase (Nobel Prize 1991) and Oliver Williamson (Nobel Prize 2009). The associated general theoretical framework is described in the first part of this section. We then use this framework to assess the relative efficiency of PPPs compared to the other possible modes of provision.

2. a. Make or buy for public services: the general framework

Within the myriad ways of providing a public service, there is a broad distinction between in-house provision ("make"), such as through traditional procurement and private financing schemes, and outsourcing to the private sector ("buy") either through service contracts or PPPs or regulated markets.

Historically, the economic answer to the determinants of organizational and contractual choices for producing goods and services can be traced back to the seminal work by Ronald Coase (1937). In this pioneering article, Coase asks the fundamental question of what differs between "make" and "buy", in other words, why firms, or more generally public and private organizations, exist alongside the traditional market governance structure. He distinguishes between the hierarchy (the firm/organization) as a governance structure where the coordination mechanism is the authority and hierarchy of the entrepreneur (through the labour/subordination contract) [4] and the market where it is the price mechanism that ensures coordination of different players. As Coase (1937, p.390) wrote: "The main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism". The concept of cost of using the price mechanism -- transaction cost -- has been further developed in the early 1970's by Oliver Williamson[5]. He undertook the task of developing the transaction cost theory (TCT hereafter) and formulated precise propositions on the nature of transactions costs, their measurement and the trade-off between make and buy.

According to the TCT, the market features a productive efficiency advantage due to stronger incentives related to the private ownership of profit and the competitive pressure that allows to discipline and sanction low performance of agents. In some cases, the market governance structure might also achieve cost efficiency through economies of scale associated with high fixed costs services. That is the case, for instance, when the private partner has many clients and is present in many markets enabling it to spread the average costs on large production size, which is not possible for instance for a single geographically delimited public administration entity. There is however a cost in using the market because contracts are incomplete *per se* due to the assumption of bounded rationality of agents. Agents are assumed to be rationale but they face cognitive limits in processing all available information to design a complete contract. This contractual incompleteness leads to transaction costs that can manifest themselves *ex-ante* (costs of redaction and negotiation, guarantees), and above all *ex-post* (costs of contract maladaptation, renegotiation, contract enforcement, as well as costs of contract breach). While the most important transaction costs are not observable, the very important contribution of the TCT is to highlight that their magnitude can be nevertheless assessed according to the characteristics of the transaction in terms of asset specificity, uncertainty and complexity.

Asset specificity is defined as the extent to which the investments made to support a particular transaction have a higher value to that transaction than they would have if they were redeployed for any other purpose. For example, if an individual learns Navajo, a language only spoken by specific Amerindian community in

[4] As pointed out by Coase (1937), when the firm's employees switch from one department to another, this is not because they are responding to changes in the wage but because they are ordered to do so.
[5] In particular Williamson (1975) and Williamson(1985).

southern United States, he is making a very specific investment compared to those learning English, as the knowledge of Navajo is nearly with no value outside these communities. As a result, the presence of specific assets leads to the apparition of the so called quasi-rent (the difference of value of the investments for the transaction and outside the transaction). Asset specificity can be of different types from physical specificity involving specific equipment to human capital specificity associated to the specific knowledge valuable to the transaction, or site specificity involving geographical localisation specificity and others. Asset specificity leads to transaction costs because it locks-in contracting parties into a situation of bilateral dependence increasing the risk of occurrence of opportunistic behaviours to appropriate the quasi-rent from both contracting parties, knowing that contracts are incomplete[6].

In addition to asset specificity as a determinant of transaction costs, uncertainty refers to the conditions that will prevail during the execution of the contract. As agents are supposedly rationally bounded, they might be unable to forecast all future contingencies during the life cycle of the contract. Thus, uncertainty often calls for welfare enhancing adaptation *ex post* by renegotiating the initial contractual terms, opening the door to potential opportunistic behaviour, and hence, overall, transaction costs.

Finally, transactions might be intrinsically complex in their object. The contractual difficulty generated by complexity can manifest itself either *ex-ante* or *ex-post*. *Ex-ante*, it comes from the difficulty in specifying in the contract the expected service and the quality requirements, whereas *ex-post,* it comes from the difficulty of observing and measuring the quality of the service provided. It might also be the case that even if the quality can be measured, it may be difficult to prove to third parties (e.g. a court) that an insufficient quality is attributable to the provider and not to exogenous causes. As a consequence, private providers can reduce costs to the expense of the quality of the public service. This is what Hart *et al.* (1997) observe in the particular case of US prisons. When operated by private operators, they observe that warders are under-qualified leading to an increase in violence and escapes. This would explain why, according to them, prisons delegated to private providers in the US are prisons for under 18 and not for dangerous prisoners.

Thus, the magnitude of potential transaction costs is determined at the transaction level, according to the above mentioned transaction characteristics. This magnitude, in turn, drives the choice of the governance structure, that is, the efficiency of alternative institutional arrangements turns on transaction cost comparisons. Considering the respective advantages and drawbacks of the governance structures, the main theoretical proposition from the transaction cost theory is as follows: the higher the expected transaction costs, the more hierarchical the chosen governance structure should be. The optimality of the choice depends then on the adaptation of the governance structures to the characteristics of the transactions that they have to frame, defining the alignment principle.

2. b. Relative optimality of PPPs

The trade-off developed above applies to the particular case of PPPs. As described in the first section of this chapter, PPPs correspond to a “buy” solution and hence exhibit advantages in terms of productive efficiency but drawbacks in terms of transaction costs that will be more or less important according to the public service that is considered. Nevertheless, PPPs have also their own specific potential advantages and drawbacks, beyond the ones mentioned for the general case of the “buy” solution.

First, a specific benefit of PPPs derives from the bundling of different phases of a project. In particular, the bundling of designing, building, operating and maintenance phases leads to life-cycle cost savings: the private partner, who is responsible for building a certain infrastructure, has more incentives to provide a better quality when she also has to manage the maintenance of this infrastructure, in order to reduce total costs. In other words, it induces the private partner to internalize at the building stage possible externalities

[6] It is important to note that asset specificity, if it generates transaction costs, has important advantages in terms of production costs reduction or product differentiation leading to higher revenues.

on the operating phase, that is, to exploit the complementarities and synergies existing between the different phases of the project. In this way the bundling increases alignment of incentives between the public and the private partner. Then, the higher the externalities between different project phases, the higher the productive efficiency gains associated with PPPs.

However, bundling involves a certain number of disadvantages in terms of transaction costs. In particular, bundling leads to a longer procurement process and to higher costs of bidding than traditional procurement. Bundling of different phases of the project increases also project complexity. As a consequence, and certainly the main source of transaction costs, problems of adverse selection might arise. In other words, the winning private provider might not always be the most efficient one but the most opportunistic one, that is, the one that best anticipates the future renegotiation of the contract, or the most optimist one -- regarding future demand or costs leading to the winner's curse (see Athias and Nuñez (2008)).

Thus, specificities of PPPs strengthen both productive efficiency gains and transaction costs associated with the market solution. The alignment principle mentioned above would then call for a hierarchical PPP structure to minimize total costs. Athias and Saussier (2018) highlight that contractualized PPPs, more specifically concession contracts, might indeed be very hierarchical, with for instance contractual clauses that forecast not only that partners will have to renegotiate the contract every three or five years, but also the way renegotiations should take place. They also highlight that PPP contracts exhibit an important heterogeneity in terms of hierarchical structure, function of the degree of uncertainty surrounding the transaction, as predicted by the theory. In addition, within PPPs, the features of institutionalized PPPs make them more hierarchical than contractual PPPs. We expect then institutionalized PPPs to be chosen for public services potentially prone to more important contractual hazards. This is in line with the two case studies presented in Boxes 1 and 2. In the case of the Cadiom, the project involves the design, building and operation of a distance heating network with high uncertainty over the source of energy to be used. This uncertainty led to the choice of a more hierarchical form of PPP allowing for more coordination and mutual adaptation. By contrast, the Neumatt project involved relatively more simple tasks leading to a less hierarchical form of PPP, that is, the availability contract.

As a result, when governments should resort to PPPs depends on the characteristics of the service to be delivered. It is hence possible to explain variations in the propensity to resort to PPPs across services, but not across countries of similar level of economic development (for which public services are the same).

3. Why is Switzerland different? The bad reasons to resort and not to resort to PPPs

The previous section has indicated the efficiency considerations that should drive the use or the non-use of PPPs, that is, the good reasons to resort to PPPs, as well as the good reasons to renounce to such arrangements. As highlighted in the previous section, these considerations depend mainly on the type of the service considered. In order to explain the Swiss low number of PPPs, we shall now turn to a positive analysis and incorporate institutional and cultural considerations that lead public authorities to resort or not to resort to PPPs for bad reasons.

3.a. Bad reasons to resort to PPPs

PPPs are frequently perceived by policy makers as a good way for a public authority to realize an infrastructure project when the financial means are constrained; this argument suffers however from an evident myopia. Whereas it is true that PPPs allow to avoid — or at least to limit — the initial investment, and hence the future interest and amortization of the debt, the counterpart is that the public authority will have to pay a contribution to the private provider (in the case of an availability contract), or to forego earnings from user fees (in the case of a concession), and this, throughout the operation stage of the project. This boils down to the Ricardian Equivalence: the resources saved by the government by not paying the upfront

investment under a PPP should be equal, in present value, to fees paid or user fee revenue foregone to the private provider. In addition, this leads to shift the cost of a project to future generations. Thus, PPPs must not be considered as a means to get a "free lunch". In practice, resorting to a PPP for the only reason that the authority cannot bear the initial investment is often a means of circumventing the debt constraint imposed by law or upper tiers. As The Economist (2009) notes*: "Cynics suspect that the government remains keen on PFI not because of the efficiencies it allegedly offers, but because it allows ministers to perform a useful accounting trick"*. This is also what happened in the case of the administrative center Neumatt. The Canton of Berne considered that the project was not concerned by the debt brake, as the investment was borne by the private partner rather than the Canton. However, the Cantonal financial control required the project to be treated as a classical investment. The cantonal infrastructure minister then explained that the Canton became less interested to do new PPPs as, despite the success of the project, *"the goal of this approach, that is, alleviating the burden on the investment budget, has not been reached"* (Neue Zürcher Zeitung, 2009, translation). This window-dressing of budget deficits as a way to get around the law is obviously not an acceptable, valid economic reason to justify the resort to PPPs. Note that the accounting rules about PPPs have been adapted in order to avoid such behaviour from governments[7].

In this respect, it is interesting to highlight that Switzerland developed another way to circumvent debt constraints through the private financing project scheme, as highlighted in the first section of the chapter. Indeed, as the private provider finances the construction of the infrastructure associated with the public service, there is no debt for the public authority. Whereas, as with PPPs, it gives the authorities the illusion of a *free lunch,* the opportunity cost associated with the alternative use of the ground is not assessed while potentially important. Thus, private financing is used in Switzerland as a substitute for PPPs to circumvent debt constraints. Important to note also that private financing projects can also be used by Swiss public authorities to avoid to have to face a referendum. Indeed, the referendum is an important instrument of the Swiss direct democratic system. This instrument allows a given number of citizens to force public authorities to organize a vote on a decision of the (federal, cantonal, or municipal) parliament, for instance the modification of a law or an investment/spending that exceeds a given amount. As private financing projects allow to avoid the initial investment, this may lead public authorities to use private financing schemes as a means to circumvent the direct-democratic instrument.

PPPs are also often used in order to circumvent some weaknesses of the traditional procurement. In particular, the authority might use a PPP to force itself to evaluate properly the *global* costs of a project, by locking itself into a contractual or institutionalized relationship. In other words, PPPs would be used as a commitment device by public authorities. Although this might at first glance lead to a better efficiency, it would however be more appropriate to correct the organizational problems within the administration, rather than resorting to a PPP when it is not efficient. PPPs are not the quick fix solution to the inefficiencies and the bad practices of the public sector. This would in turn explain why the resort to PPPs is less frequent in countries where the public sector is considered to be more efficient, as in Switzerland (for a ranking, see for example Afonso *et al.* 2005 and Adam *et al.* 2014). This might be another explanation for the comparatively high number of PPPs in some countries.

3.b. Bad reasons NOT to resort to PPPs

However, if there are bad reasons to resort to PPPs, there also exist bad reasons NOT to resort to PPPs.

The public choice theory tells us that there are private benefits for politicians to keep the provision of public services within the public sector. Indeed, keeping the control on public services allows policy makers to award jobs to their relatives, friends, or political colleagues. Albeit Transparency International considers Switzerland

[7] In particular the IPSAS 32 standard, whose application is also recommended by the Swiss Public Sector Financial Reporting Advisory Committee as part of the Harmonized Accounting Model for the Cantons and Municipalities (HAM2), requires that the assets and liabilities related to a PPP are included in the balance sheet of the public authority.

as one of the less corrupted countries in the World, which reflects the fact that the number of criminal convictions is very low and that bribery is very seldom, Switzerland also experiences some forms of hidden corruption in the hiring process of the public authorities, as well as in the public procurement procedures. Such practices of cronyism (also referred to as the "*B Vitamins*", where B stands for the German word *Beziehungen*, that is, Relationships) are widespread in Swiss administrations, especially at the local and cantonal levels. In particular, the high degree of decentralization gives a substantial power to local politicians who, due to the militia system[8], have closer connections with private interests (Meinhardt *et al.*, 2014) and are hence more likely to make biased choices. In the same vein, at a higher level, it is a well-known fact that the lobbies have a very strong influence on the militia members of the cantonal and federal parliaments. Such bad practices are easier to hide in non-PPP projects for which it is easier to adapt the project in order to circumvent the obligation to use competitive tendering that applies to PPPs[9]. This would help also to explain why Swiss public authorities are biased against PPPs.

Whereas the previous argument provided a potential explanation for the higher reluctance of the Swiss public sector to engage in a PPP, "bad reasons" to avoid PPPs can also be found on the private side. Indeed, albeit PPPs allow the private sector to be involved in the provision of public services, the private sector however may also tend to be skeptical about the quite hierarchical nature of PPPs (cf supra). In such a structure, the mission orientation of the public authority may conflict with the profit orientation of the private provider. In Switzerland, the degree of mission orientation strongly varies between cultural groups, in particular between language areas, as German-speakers are more prone to consider that public firms must be managed as private firms (for an in-depth analysis of this issue in the Swiss context, see Athias and Wicht, 2018b). There is then in Switzerland a cultural reluctance, from the main part of the population, to accept that for the market solution, and in particular the PPP arrangement, to be efficient in the provision of complex services that are prone to important transaction costs, it has to be associated with an important regulation.

In addition, another factor that might explain the quasi-absence of PPPs in Switzerland is the lack of a specific legal and institutional framework at the federal level. Indeed, contrary to some countries that have laws specifically designed for PPP arrangements (e.g. France, or U.K.), PPPs in Switzerland are based on the general rules of contract and procurement laws. Thus, the legal environment in Switzerland is weaker than in other countries, leading the market solution through PPPs to be less likely efficient in Switzerland than in other countries where the legal framework is stronger. In addition, whereas some countries have specific institutions to support the implementation of PPPs (e.g. the *FIN INFRA* in France), this is not the case in Switzerland. An indirect consequence is that local deciders might not have the skills to develop PPPs.

4. Conclusion

This chapter has first defined what PPPs are and then pointed out a Swiss specificity associated with its very low propensity to resort to these schemes to provide public services. We then developed the theoretical framework that is useful to explain the conditions under which these arrangements are optimal and should be used. This theoretical framework highlights the fact that it is the characteristics of the service considered, and hence the magnitude of the potential hazards, that should drive the choice to resort or not to a PPP. We then identified the Swiss cultural and institutional peculiarities that might explain why the number of PPPs is under optimal in Switzerland but also over optimal in other countries.

[8] By *militia system*, we mean the fact that many politicians are non-professionals. Indeed, less than 2 percent of the members of local executive authorities serve on a full-time basis, 16.7 percent serve on a part-time basis, and more than 80 percent are non-professionals (Ladner, 2011 ; Geser *et al.,* 2012).

[9] In accordance with the general rules of procurement law (that is, the Federal Law and Ordinance on Government Procurement and the World Trade Organisation Agreement on Government Procurement), competitive tendering is compulsory for PPPs in Switzerland (Brahier (2017)). See also Athias and Chever (2018) for an analysis of the pros and cons of competitive tendering.

This analysis leads to several policy recommendations. First, private financing projects are the way used by Swiss public authorities to circumvent debt and direct-democratic constraints as well as competitive tendering; they hence bias their choice against PPPs while the latter could be more optimal. This bias should disappear. This is possible, for instance, by changing the accounting rules for private financing projects, as it has been the case for PPPs, and by imposing competitive tendering not only for PPPs but also for private financing projects. Second, it seems essential that the legislation is strengthened in order to provide a strong framework to implement PPPs and that specific institutions are developed to assist the public authorities in the implementation of such arrangements and provide them with the required skills. Finally, the conception of the market has to evolve in Switzerland. Even in absence of an imperfect competition market structure, but in presence of transaction costs, regulation of the market provision through PPPs should be important.

References

Adam, Antonis, Delis Manthos, and Kammas Pantelis, "Fiscal Decentralization and public sector efficiency: evidence from OECD countries", *Economic Governance*, 15, pp. 17-49, 2014.

Afonso, António, Ludger Schuknecht, and Vito Tanzi, "Public Sector Efficiency, an International Comparison", *Public Choice*, 123, pp. 321-347, 2005.

Athias, Laure, "La contractualisation de service public : une analyse économique" in Ladner, Andreas, Jean-Loup Chappelet, Yves Emery, Peter Knoepfel, Luzuis Mader, Nils Soguel, Frédéric Varone (eds.), *Manuel d'administration publique suisse*, Lausanne: Presses Polytechniques et Universitaires Romandes, 2013.

Athias, Laure and Lisa Chever, "The Relative Efficiency of Competitive Tendering", in Saussier and De Brux (eds.), *The Economics of Public-Private Partnerships: Theoretical and Empirical Developments,* Springer 113-133, 2018.

Athias, Laure, Julie Le Gallo and Thierry Madiès, "Do More Fiscal Accountable Governments Resort More to Public Private Partnerships?", Working paper, 2018.

Athias, Laure, and Antonio Nuñez, "Winner's curse in toll road concessions", *Economics Letters*, *101*(3), pp. 172-174, 2008.

Athias, Laure, and Stéphane Saussier, "Are Public Private Partnerships that Rigid? And Why? Evidence from Price Provisions in French Toll Road Concession Contracts", *Transportation Research Part A: Policy and Practice*, *forthcoming,* 2018.

Athias, Laure, and Pascal Wicht, "Institutional Environment and Organizational Choices: the Impact of State-level Norms within Switzerland on the Prevalence of For-Profit Nursing Homes", Working paper, 2018a.

Athias, Laure, and Pascal Wicht, "Using Differences in the Salience of Public Sector's Mission-Orientation across Neighbor Cultures to Uncover its Impacts on Public Service Delivery Productivity", Working paper, 2018b.

Besley, Timothy, and Maitreesh Ghatak, "Competition and incentives with motivated agents", *The American Economic Review*, *95*(3), pp. 616-636, 2005.

Brahier, Jean-Michel, "Partenariat public-privé et concession de travaux – Proposition de systématisation et réflexions sur la soumission au droit des marchés publics des partenariats publics-privés et des concessions de travaux" in Journées suisses du droit de la construction, 2017.

Coase, Ronald H., "The nature of the firm", *Economica*, *4*(16), pp. 386-405, 1937.

Geser, Hans, Urs Meuli, Kathia Horber-Papazian, Andreas Ladner, and Reto Steiner, “Les membres des exécutifs dans les communes suisses”, Glarus/Chur: Éditions Rüegger, 2012.

Gregg, Paul, Paul A. Grout, Anita Ratcliffe, Sarah Smith, and Frank Windmeijer, “How important is pro-social behaviour in the delivery of public services?”, *Journal of public economics*, *95*(7), pp. 758-766, 2011.

Hart, Oliver, Andrei Shleifer, and Robert W. Vishny, "The Proper Scope of Government: Theory and an Application to Prisons", *The Quarterly Journal of Economics*, 112(4), pp. 1127-1161, 1997.

HM Treasury, “PFI: Meeting the Investment Challenge”, HM Treasury, London, 2003.

Ladner, Andreas, “Die Schweizer Gemeinden im Wandel: Politische Institutionen und lokale Politik”, Cahiers de l’IDHEAP, 237, Lausanne, 2011.

Maskin, Eric and Jean Tirole, “Public-private partnerships and government spending limits”, *International Journal of Industrial Organization*, 26, pp. 412-420, 2008.

Meinhardt, Marcel, Fadri Lenggenhager and Oliver Labhart, “Switzerland“, in Pickworth, Jonathan, and Deborah Williams (eds), Bribery & Corruption, 2nd edition, Global Legal Group Ltd, 2014.

NAO, “Private Finance Projects”, Technical report, National Audit Office, London, 2009.

Neue Zürcher Zeitung, “Wenn Private den Staat zu mittelfristigem Denken zwingen”, September 9th, 2013.

The Economist, “Singing the blues: Recession is heaping problems on a controversial form of public investment”, July 2nd, 2009.

Williamson Oliver E., “Markets and Hierarchies : Analysis and Antitrust Implications”, Free Press, 1975

Williamson Oliver E., “The Economic Institutions of Capitalism”, Free Press, 1985.