Collaborative Innovation in the Brazilian Public Sector: A Study about InovaGov Network Under the Open Innovation Perspective

Giuliano Magno de Oliveira Condé - Centro Federal de Educação Tecnológica Celso Suckow da Fonseca (CEFET/RJ) e Universidade Federal do Rio de Janeiro, Brazil.

Maria de Fátima Bruno de Faria – Universidade Federal do Rio de Janeiro, Brazil.

We would like to thank the CEFET/RJ and the UFRJ for supporting this study and the Brazilian research.
Abstract

Over the last few years, in order to meet the demand for responsive and adaptive public organizations (Teece 2007; Piening 2013) capable of transforming public policies into efficient increase of welfare of the citizens (Nelson and Winter, 1982), governments worldwide have promoted the implementation of novel techniques of management and production of public services (Bresser-Pereira, 1995). Following these efforts, in 2015, the Brazilian federal government has created the InovaGov network. It aims to promote innovation within government organizations through collaborative diffusion of ideas among public, private, academic and non-governmental organizations. It has been the major effort made by the government towards an open innovation approach (Chesbrough, 2003), since the signature of the Open Government Partnership. However, studies that evaluate the results reached by InovaGov identified several barriers that have limited its reach. Several times, the engagement of public organizations in this network depends on individual efforts of civil servants (Faria et al., 2017). Therefore, it suggests the insufficiency of institutional support by the governmental organizations involved (North, 1991). None of the abovementioned studies has investigated this network from the perspective of organizational strategy as systems of rules capable of enabling a change of behaviour. Thus, through documental research (Godoy, 1995) and content analysis (Bardin, 2009), this study aimed to analyse, qualitatively, the documents of the strategic planning of all 52 public organizations that take part in the InovaGov network in order to identify convergences between the goals established by these organizations and the qualifying parameters of open innovation (Bommert, 2010). The promotion of a positive attitude towards public sector innovation and facilitation of risk-taking has been poorly identified during the investigation of the strategic plans. The absence of alignment identified between the qualifying criteria of open innovation and the content of the strategic planning of most of the analysed organizations indicates that isomorphism must have taken place, due to the fact that there is no evidence that it has generated the expected outcomes (Dimaggio & Powell, 1981).
1 Introduction

Over the years, the enlargement of the role played by the State in the face of the emergence of new demands from the citizens and companies, in countries like Brazil, have provoked the need of several initiatives towards the adaption of governmental resources to the volatility of these demands. In this way, the public administration must promote as many transitions as are necessary in order to constitute a competitive productive sector and a society endowed with the welfare of all kinds.

Nelson and Winter (1982) emphasize the preponderance of the organizations concerning the implementation of public policies as the last can be considered a continuous process. Thus, the achievement of the goals of a public policy depends on responsive organizations endowed with dynamic capabilities and, consequently, with a high level of learning skills (Teece, 2007; Piening, 2013).

In order to match the demand for private and public organizations with these adaptative skills, different ways of managing technology and innovation have been discussed, mainly those that provide a multilateral and intense knowledge flux beyond the organisational borders, once the linear innovation perspectives that approaches the organisation as closed-system have demonstrated to be insufficient to guarantee a satisfactory level of effectiveness and competitive advantage (Chesbrough, 2003).

In substitution of this closed-system perspective, Chesbrough (2003) proposes an open model in which the organizational frontiers are flexible towards the incorporation of knowledge and ideas originated from external resources and the diffusion of knowledge created internally seeking its utilization by other organizations, moved by commercial interests.

As long as we observe the conception of the idea coined by Chesbrough (2003), we must recognize that the concept of open innovation has been born around the private sector reality. Only years later a small group of scholars aimed to comprehend how this terminology would be applicable to the public organizational environment.

As we could not ignore such different approaches – private and public ones – we must make a decision that involves choosing one of the three following alternatives: to transpose uncritically the research agenda proposed by West et al. (2006) to the governmental reality; assume the inadequacy between the model coined by Chesbrough (2003) and the public reality ignoring the potential contributions to this field of study; or; finally; reflect about a conception of open innovation as an element capable of impacting the consecution of the set of goals established by public policy, and, consequently, by public organizations.
On the occasion of this study, regarding what we have pointed in the previous paragraph and considering the need for innovative public organizations able to follow the transforming technological and societal contexts (Bresser-Pereira, 1995), we concentrated our efforts on the third alternative due to the fact that this is the only one that can expand our yet incipient understandings about open innovation in the public sector.

Eggers and Singh (2009) argue that public organizations must widen their innovation sources through the congregation of ideas and practices generated from individuals and organizations acting outside their organizational frontiers. Nambisan (2008) understands that such an approach allows a faster innovation process in public organizations. Besides, it promotes superior performance and a wider scope so that it provokes an increase of the quality level of public services.

Kankahalli et al. (2016), through an essay, despite attributing the theoretical pioneering of the open innovation concept to the private sector environment, as they promote a non-systematic literature review the authors try to establish a research agenda for public administration scholars interested in deepening their studies upon empirical evidences.

Therefore, following these efforts, in 2015, the Brazilian federal government has created the InovaGov network (Faria et al., 2017). It aims to promote innovation within government organizations through collaborative diffusion of ideas among public, private, academic and non-governmental organizations. It has been the major effort made by the government towards an open innovation approach (Chesbrough, 2003).

However, studies that evaluate the results reached by InovaGov identified several barriers that have limited its reach. Several times, the engagement of public organizations in this network depends on the individual efforts of civil servants (Faria et al., 2017). Therefore, it suggests the insufficiency of institutional support by the governmental organizations involved (North, 1991).

None of the abovementioned studies has investigated this network from the perspective of organizational strategy as systems of rules capable of enabling a change of behaviour. Thus, through documental research (Godoy, 1995) and content analysis (Bardin, 2009), this study aimed to analyse, qualitatively, the documents of the strategic planning of all 52 public organizations that take part in the InovaGov network in order to identify convergences between the goals established by these organizations and the qualifying parameters of open innovation which are (a) open the innovation cycle to internal and external assets; (b) facilitate risk-taking; (c) promote a positive attitude towards public sector innovation" (Bommert, 2010, P.23).
In order to achieve our objective, we have decided to divide the work into four sections. Firstly, we introduce the main changes that have been happening in the Brazilian public administration and all over the world upon reviewing relevant concepts that orbit around the public administration field. It enables us to initiate a discussion, over the second topic, about the application of the concept of innovation in public organizations and its peculiarities. In the third section, we approach the concept of open innovation so that we can delimit the features that clarify the reason why its application to the public sector is so specific. Fourthly we categorize the goals present in the strategic planning of the 52 members of InovaGov Network according to the collaborative innovation criteria (Bommert, 2010). Finally, we discuss the main results of the content analysis and argue that the institutional approach is the construction cornerstone of an open innovation framework aligned to public services organizations.

2 Literature Review

2.1 Public Administration in Brazil and over the world

Considering the importance of pointing the particularities inherent to public organizations, we begin this section exposing the main concepts of Public Administration and its consequences to innovation in the public sector.

According to Waldo (1971), the concept of Public Administration can be understood as the organization and management of men and materials towards the achievement of governmental goals. This wider perspective approaches Public Administration as the organizational expression of all actions developed by any government. The author makes clear his intention to associate the concept to the decision making about the allocation of human, technological and material resources that can be employed in the public services offer.

Harmon & Mayer (1999) emphasize the relevance of human resources when they define Public Administration as the occupation of all the employees that work in the name of the citizens which actions have a consequence to all individuals and social groups.

Di Pietro (2013) establishes a narrow distinction from the concept present in the paragraph above as she supports that Public Administration can be considered as every activity assigned to the State in order to produce benefits to the society. Her definition encompasses both direct and indirect actions conducted by the government. It means that these activities can be partially outsourced by private organizations contracted by public organizations. In Brazil, the outsourcing usually does not include the “core business” of public organizations, involving mainly the support services and material supply.
Thus, this study will assume Public Administration as being the junction of all these concepts: the organizational State apparatus – including human, technological and material resources – in charge of the decision-taking intrinsic to public policy formulation and implementation.

Once the conceptualization of Public Administration adopted by this study is comprehended, in the next paragraphs, we reveal the main transformations occurred in the public sector in Brazil and all over the world.

Over the last few years, the demand for transparency and a higher quality of public services have situated the public organizations in a position in which they have to be connected with the citizen's necessity and responsive to the productive sector necessities.

The fiscal crisis of the State faced by most of the west countries stimulated the emergence of several approaches committed to the reduction of the role of the State and principles of efficiency. Additionally, the petroleum crises worsened public finances and pressed the politicians and public organizations to mitigate its expenditures (De Paula, 2005).

By early 1970's, the governments around the world had been criticized because of its expenditures in order to match the demands of the welfare state aligned with the Keynesian perspective that had been promoting important transformations during the post second world war period. As the movement *reinventing government* – in The United States - as the New Public Management – in The United Kingdom – represented a significant change in the trajectory of the approach surrounding Public Administration (Osborne & Gabler, 1994; Hood, 1991).

This new way of thinking the Public Administration was not circumscribed to the USA and United Kingdom and inspired transformations in several countries, mainly around Europe, Latin America, and Oceania. These changes also included the stimulation of the employment of managerial terminology and techniques from the private sector in public organizations. According to this thought, competitiveness, efficiency, and decentralization should be incorporated by public managers in the decision-making process (Hood, 1991; Bresser-Pereira, 1995; Desai, 1994).

As highlighted by Wallis and Goldfinch (2013), the state reforms had different outlines and produced peculiar outcomes all over the countries that adopted it as a reason for changing the configuration of state apparatus. In Brazil, Bresser-Pereira idealized a model through which the public manager had more autonomy in the management of human, material and budgetary resources; the objectives that these public managers had to accomplish were objectively defined in order to permit a clear measurement and posterior evaluation about the performance.
Concerning the organizational sphere, the decentralization and downsizing would be essential. In sum, the public administration must be more permeable to the participation from private sector and civil society (Bresser-Pereira, 1995).

2.2 Is the Brazilian bureaucracy capable of innovating?

Firstly, when we think about the decision-taking process involving the Brazilian public administration, we cannot take into consideration its juridical-administrative constitution.

According to the 1988 Brazilian federal Brazilian Federal Const. art. 37, caput., in all situations, the public administrator must decide grounded on the current law framework. It means that the public officials do not have the discretion of a private manager.

In this case, considering this prescriptive way of regulating public administration in Brazil, the public managers must take decisions concerning alternatives provided by law. In another hand, private sector can take any decision since they are not expressly forbidden. There is such a difference between the two cases (Di Pietro, 2013).

However, depending on the way we face what is nominated as “legality principle” by the Brazilian federal Constitution, we could harmfully assume that innovation in the Brazilian public sector can be seen as being unlikely or even unfeasible. We understand that the prospection of new practices of management and production of services goes beyond the normative reach of the “principle of legality” so that the present study seeks to support the investigation of alternative ways of conjugating the knowledge available to the public managers that permits the expansion of the innovative capacity of Brazilian Public Administration.

The idea described in the previous paragraph converges with authors as Polanyi (2010), once all through his work he challenges the omnipresence of explicit knowledge – that could be inferred from the merely juridical interpretation of the “legality principle” instituted by the Brazilian federal Constitution – by pointing several reasons that support the relevance of the tacit knowledge to normal, professional or scientific activities.

By mentioning that “we know more than we can tell”, Polanyi (2010, p. 14) points, through several examples, that the knowledge is not circumscribed to the evidences which can be explicit and formally communicated. Thus, considering the focus of the present study, we are going to take into account both perspectives: the perception that the public managers must guide their decisions through grounding them on the current law framework, and the dimension that takes into account the relevance of the tacit knowledge involved in the decision-making process within public organizations. We justify our choice for a wider perspective defending that only such a wingspan is capable of responding to the complexity of the changes and
innovations in the public sector, once that the incorporation of new practices of management and production of public services is not limited to changes over the law and normative framework,

However, the study of the role played by the government in the promotion of innovation can emphasize two main approaches: the state as an inductor of innovation in the productive sector, and the efforts towards the creation and diffusion of new techniques of management and production of services within public organizations (Karo & Kattel, 2015).

In the first case, Karo and Kattel (2015) analyse how different types of public organizations – Neo-Weberian and organic horizontalized – can succeed in the implementation of innovation policies. Following this point of view, Mazzucato (2011) coins the concept of “entrepreneur state” as she underlines the preponderance of the governmental initiative in several remarkable disruptive innovation episodes that occurred jointly with the private sector.

Concerning the second situation – which is focused on the innovation within the government – Kattel et al. (2014) undertake a profound literature review about innovation in public organizations so that they provoke a wide debate around this phenomenon, mainly aiming to reach a new comprehension about productivity and efficiency that would be desirable to public organizations, according to NPM perspective. These authors criticize this approach as they highlight that public administrators must be guided by participative principles and those capable of propelling the democratic initiative. Thus, they conceive public organizations as open systems endowed with the ability to effectively respond to the influences from the society and its productive sector.

Additionally, Kattel et al. (2014) points to several existent research gaps about innovation within government such as authority, organizational interfaces, legitimacy and confidence. The authors criticize and denounce that a significative part of the studies about this subject is still constituted by an uncritical transposition of the concept turned to the private sector and market reality. These critics are not evoked by chance. Private and public sector work in deeply different realities even if we can always identify some features that would be desirable in both cases.

### 2.3 Innovation in the public sector

Hartley (2013) seeks to contrast peculiarities that can differentiate the contexts surrounding public and private organizations, so that they delineated the dimension, unit of analysis and the environmental drivers of innovation involving both sectors as they illustrated in Table 1 below, in which they expose the characteristics of the invention phase.
Table 1 – The invention phase: public and private sector approaches to innovation similarities and differences in emphasis.

<table>
<thead>
<tr>
<th>Dimensions of Innovation</th>
<th>Private sector emphasis</th>
<th>Public sector emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Product, service, process, market/position, strategic, business model, management innovation</td>
<td>As for private sector but also policy, governance and rhetorical innovation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The unit of analysis for innovation</th>
<th>Firm, and sometimes its strategic partners and supply chain. Also industrial sectors and clusters Competition</th>
<th>Individual organisation, industrial sectors and institutional fields Changing needs and aspirations of society</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The environmental drivers of innovation</th>
<th>Competition Changing needs and aspirations of society</th>
<th>The catalysts of innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managers and staff Networks Open innovation with customers and users</td>
<td>Managers and staff Networks Open innovation with citizens, users and advocates Elected politicians and policy Advisors</td>
<td>-----------------------------</td>
</tr>
</tbody>
</table>


Despite having divergences between public and private contexts of innovations, we should remember that they have many other aspects in common, mainly when we deal with the implementation stage. According to Hartley (2013), there are similarities concerning the perception that (1) organizational size fosters innovation, (2) bureaucracy reduces innovation, (3) culture supports innovation. In opposition, at this point of the innovation process, the criteria of success and the accountability have different emphasis when comparing these two sectors. The profits are the main criterion of success for private organizations as the improvements in service and public value can be seen as its correspondence for public organizations. Concerning the accountability process, while firms are inclined to focus on internal stakeholders, public organizations are turned to the public.

Laurence and Lynn (2013, p. 38) establish a parallel between state reform and innovation within government through historical findings and succeed in demonstrate the relations between them. The authors defend that public management reform can potentially generate innovation if two conditions are fulfilled “entrepreneurial strategies and changes in organization structures, on behalf of efficiency and service improvement”. Besides, they claim that reform can be led by innovations or vice-versa or the mutual influence can be even simultaneous.
Laurence and Lynn (2013, p.41) recognize that keeping mindful that “efforts devoted to creating conceptual distinctions between innovation and reform(...)is probably a waste of time” if the change agents invested in public position are not “willing to invest considerable time and effort in translating structural changes into durable changes in how agencies do their work” and mindful of the fact that it involves a difficult politic process.

Beyond the differentiation between public or private innovation, several scholars sought to coin a definition of innovation in the public sector. Despite trying to constitute an approach grounded on public administration reality, they do not come to an agreement towards the wideness of their proposals of conceptualization.

Lynn (1997) differs a routine improvement from innovation when she claims that “innovation [in government] is properly defined as an original, disruptive and fundamental transformation of an organization’s core tasks”. This, the author also excludes the incremental improvements all through the ancillary tasks.

On the other hand, other authors (Moore et al., 1997; Newman et al., 2001) consider that innovation does not need to be disruptive as long as they are new to the organization in which the process takes place. As the first highlight the temporal aspect of innovation for observing how intensively it affects its operations the latter emphasizes that it must be a successfully implemented initiative.

The authors cited above focus, specially, on the organizational dimension though others as Green et al. (2001. p. 9) assume innovation as being new practices or process and add the possibility that it could be “a new pattern of intra or inter organizational relationships.

Mulgan (2007, p.5) incorporates a relevant element to this concept as he understands it as “new ideas that work creating value for the public”. This approach specifies the peculiarity of the central reason to innovate in the public sector: public value.

Considering the scope of this study, despite taking into account the abovementioned dimensions of innovation in the public sector we will assume, all through this study, the
organizational sphere of innovation that we can investigate through the strategic plans of the 52 organizations-members of InovaGov Network.

2.4 Open innovation in the public sector

Eggers and Singh (2009) argue that public organizations must widen their innovation sources through the congregation of ideas and practices generated from individuals and organizations acting outside their organizational frontiers. Nambisan (2008) understands that such an approach allows a faster innovation process in public organizations. Besides, it promotes superior performance and a wider scope so that it provokes an increase of the quality level of public services.

However, we must not consider that any initiative towards a participative process of improvements is eligible for being called as an open innovation. This happens because several attempts of introducing participative ways of decision-making and feedback available for citizens through public organizations do not generates automatically a new process that can be successfully implemented by public organizations as delimited by Moore et al. (1997) and Newman et al. (2001). Therefore, a new idea proposed by an actor outside the borders of a public organizations may not change the organizational processes or might not be implemented.

Taeihagh (2017) claims that crowdsourcing can be useful as a technological activator rather than a tool for the formulation of public policies. Additionally, the author enumerates three types of crowdsourcing: open competition of ideas, open voluntary collaboration and virtual labour market. While comprehending the main features of these three categories, we must acknowledge that open innovation only can take place in the first and second categories. This occurs because only these two initial possibilities make room for the conception and implementation of new ideas. In the latter case – virtual labour market – due fact that the tasks demanded are previously detailed, innovation possibilities are limited.

This change of the prism through which we conceive the innovation in public organizations as being an open phenomenon (Bartlett, 2016) generates several consequences – as benefits and barriers – to organizational performance of public agencies.

From an empirical perspective, Bifulco, Tregua and Amitrano (2017) investigated the relevance of participative governance in smart cities and living labs all through the European Union. The authors demonstrate the ascendant utility of living labs to the development of smart cities conceived through more inclusive projects in which public, private and citizens co-create new services. Despite this, Voorberg, Bekkers and Tummers (2014), when analysing the co-
production and co-creation process, claim that most of the studies focus on the antecedents of these processes, usually neglecting their results.

In challenging the myth that the private sector is more innovative than the public sector, Hartley, Sorensen e Torfing (2013) analyse three innovation strategies: neo-Weberian state, New Public Management and collaborative governance. They conclude that the choice for one of those strategies is situational rather than absolute, even highlighting that the collaborative governance is the most adaptable framework. This work contributes a lot to the open innovation literature because it situates the collaborative governance, NPM and neo-Weberian in a comparative perspective, underlining their strengths and weakness, depending on the occasion.

Other works like Wolfson (2010), also recognize that the contingencies play an important role in the public administration processes, identify that situational contracts can stimulate higher levels of user commitment and their participation in the innovative process. This study conducted in Dutch social security system suggests that situational contracting through a higher autonomy of public managers provokes open innovation and collaboration.

On the other hand, other points of view surrounding the stimulation of open innovation in the public sector can be found in the literature. Approaches such as service as a system, innovation prizes (Williams, 2012), play at the workplace (Kinder, Stenvall e Memon, 2018), situational contracting (Wolfson, 2012) are supposed to enhance the open innovation in public organizations.

In investigating the intra, inter and extra organizational factors that can influence the implementation of an open process of innovation – through Challenge.gov North American case - Mergel (2018) finds that, if the public policies toward innovation within government are aligned with the strategic goals of public organizations that execute these policies, the opportunities for changing and diversifying the sources of innovation are higher.

2.5 The role of institutions in open innovation in the public sector

North (1991, p. 97) defines institutions as being informal constraints and formal rules capable of “structure political, economic and social interaction”. From his perspective, three main types of institutions mitigated the transaction costs and the risk involved in the long-distance commerce in Western Europe: those that allowed the capital mobility; those which reduced the costs of information obtention; and those that have mitigated the risks. All through the abovementioned text, the author provides a rich historical perspective of western institutions. This kind of approach demonstrates the central role that institutions have played all over economic history.
On the other hand, economic, political and social change means that the interfaces between government, society and productive sector must work under a transforming paradigm. If public sector organizations don’t follow the transitions occurred in the demands of the private sector and ordinary individuals, the misaligned deliverance between public goods and societal needs would impair the welfare and economic performance once they depend on human and – consequently - organizational capabilities (Evans, 2010; Teece, 2007).

Despite highlighting the preponderance of state institutions capable of delivering public goods - in order to promote and sustain what he calls the developmental state of the 21st century - Evans (2010) ponders that this conception of the state demands an effective governmental structure and recognize that it’s not simple to achieve. The author claims that it would be ingenuous to think that there would be a prescription or a universal model ready to be applied and adapted to any context.

Even convinced that it would be an ambitious goal, Evans (2010, p.51) claims that “building a 21st-century developmental state promises immeasurable well-being gains”. Therefore, concerning that misconceptions could mitigate these gains and even worsen the life conditions and economic performance of a country or region, the author warns that there would exist pitfalls that could make this proposal of the new role of the state unfeasible: the constitution of misrepresented alliances among the public organizations and big private entrepreneurship and the inability to assimilate the particular cultural, historical and economic features of a community.

From this perspective, Evans (2010) criticizes the focus on the blind autonomy of the bureaucrats and on the cost-benefit evaluation defended by the New Public Management approach, once he understands that the governmental actions must be committed to the local sphere and its particular needs. The author indicates that the technocrats tend to establish partnerships with big companies and may keep a distance from the inputs from local community groups. Thus, normal citizens become unable to participate in the decision-making processes that occur within the public organizations in charge of providing collective goods like health and education, for example. According to the author, it happens due to the perception of the bureaucrats that a private corporation could threat the autonomy of public organizations and an ordinary citizen could not.

In short, we can understand that the main conditions of the constitution of a 21st developmental state are a "bottom-up" approach that permits a customized capability building connected to local particularities and a state apparatus protected from the capture by private
corporations. After fulfilling these requirements, the country would be able to develop the "ability to take advantage of high-growth opportunities" (Evans 2010, p. 53).

This point of view can contribute to the target of this study as long as the present work discusses the concept of open innovation that has been originated in the literature based on the private sector. Thus, in order to avoid the acritical transposition of this terminology to the public sector reality, we try to collect in different fields of study – like institutionalism - potentially useful elements that could become cornerstones of this new approach that has been neglected by many studies in public administration journals.

We can identify a clear convergence between the perspective exposed above with the idea defended by Ostrom (1996, p. 1076) as long as she acknowledges that “the actions of public officials at the heads of state agencies and national governments discourage effective participation of citizens” in the decision-making and production processes involved in the provision of public goods. Through a cross case-study of two different realities – Brazil and Nigeria – the author compares a top-down approach applied in Nigerian education and an innovative condominial program of urban infrastructure in Brazil. She concludes that the co-production perspective employed in the Brazilian reality enables a change over the elements of the public services production over time and provokes convergent innovativeness among public officials, ordinary individuals from local communities and private partners.

Even though the usefulness of Elinor Ostrom work for public open innovation approach in the public sector, many authors that have written about this incipient subject have neglected this perspective and sought to incorporate features from the private sector experience in open innovation.

We believe that it is a misperception of the governmental context once the public and private sectors respond to different logics. Even because Ostrom’s theoretic propositions about collective goods management takes into account the specific stakeholders involved in the state-society relations.

Converging to that and with an open innovation approach, Rodrik (1999, p. 19) claims that “it is helpful to think of participatory political institutions and meta-institutions that elicit and aggregate local knowledge and thereby help build better institutions”.

On the other hand, neo-institutionalists like DiMaggio and Powell (1981) highlight the observable similarities among organizations belonging to what the authors call the same organizational field. According to them, both organizations and individuals are led to develop resemblances as they look for legitimacy among the organizations acting under the same set of
rules and professional associations that usually provoke professional standardization, respectively.

This focus on resemblances is hardly criticized by Peci (2006) while the author defends that the neo-institutionalists fail to explain the birth and the transformation of institutions over the time. Additionally, she points to epistemological inconsistencies and accuses neo-institutionalists of being incoherent towards the conceptual micro-foundations because they tend to have different unit of analysis without adequate conceptual background.

Besides, this perspective diverges from the paradigms that are supposed to base neo-institutionalism – ethnomethodology and social constructivism – once they consider the institutions as given and don’t answer the reason why some practices are institutionalized and some are not (Peci, 2006).

From a different perspective, when proposing a theoretical-methodological framework that would be capable of representing the dimensions that influence the innovation process within Brazilian judicial organizations, Castro and Guimarães (2019) argue – with the support of organizational institutionalism and innovation theory – that the innovation inside these public organizations are affected by different analysis levels, which are institutional, interorganizational, organizational, and individual.

The mentioned authors highlight the yet incipient diffusion of studies that combine both institutional and innovation theory and defend that such a perspective promotes a wider view with the capacity to approach the innovation process as being dependent on the social context in which it is embedded. Thus, “the innovation in the centre of the diagram express the interdependence of this phenomena with multiple dimensions” (Castro & Guimarães, 2019, p. 180).

As illustrated by Castro and Guimarães (2019) through Figure 2, they claim that the institutional environment can press and affect the principles of individuals, leadership, organizational resources and the cooperative relations surrounding the innovative process.
Figure 2 – Interactions between the institutional environment and the innovative behaviour.

In this context, the insertion of the institutional analysis into the innovation in the public sector field of study provides a profitable perspective that can be used to constitute an open innovation theory suitable to public organizations, once the openness that supports this approach presuppose an even higher level of interaction with the external environment.

However, the institutionalist literature used by Castro and Guimarães (2019) cannot be understood as being specifically turned to an open process of innovation. Therefore, as we would like raise theoretical support for innovation in the public sector, and, considering that we could not transpose the conceptual basis focused on the private sector reality, we must deepen our efforts into authors as Ostrom (1996) that emphasize the participative decision-making process as being the plausible alternative to face the challenges involved in the provision of collective goods and governmental legitimacy.
Despite she doesn’t explore deeply the innovation as a field of study, her legacy is extremely complementary when combined with innovation in the public sector in an open perspective and it escapes from the commonplace pursued by several efficiency-based NPM studies.

3 Methodology

Firstly, we undertook a literature review on the research and the central sources for the theme, especially with regard to the existing literature on open innovation. Thus, we followed the steps proposed by Creswell (2007) so that the bibliographic review could be a significant basis for a documental analysis.

Concerning the documental research, Godoy (1995, p. 23) highlights that three aspects must have an especial attention by the scholars: the documents choice, the access to them and the analytic process. Therefore, we have decided to collect documental information based by these three criteria. Thus, we raised information present on the strategic plans of InovaGov Network signatories (organizations) so that we could identify elements that could configure the organizational long-term commitment of these public organizations to an open – collaborative – innovative process.

Thus, through documental research (Godoy, 1995) and content analysis (Bardin, 2009), this study aimed to analyse, qualitatively, the documents of the strategic planning of all 52 public organizations that take part in the InovaGov network in order to identify convergences between the goals established by these organizations and the qualifying parameters of open innovation which are (a) open the innovation cycle to internal and external assets; (b) facilitate risk-taking; (c) promote a positive attitude towards public sector innovation” (Bommert, 2010, P.23).

The theoretical background for such an analysis was constituted by the three qualifying criteria of collaborative innovation idealized by Bommert (2010), once they permit the categorization of open innovative purposes – translated into strategic goals - so that this can generate a perception about the capacity of these organizational plans of overcoming the deficiencies of public sector innovation. We decided to analyse the data through content analysis (Bardin, 2009) in which the categories of analysis were established ex-ante, once we had a theoretical framework that could be contrasted with the strategic plans.
4 Results and discussion

In 2015, the Brazilian federal government created the InovaGov network. It aims to promote innovation within government organizations through collaborative diffusion of ideas between public, private, academic and non-governmental organizations. It has been the major effort made by the government towards an open innovation approach (Chesbrough, 2003).

The Network is basically constituted by 4 distinct sectors: public, private, NGO’s and universities. This proposal assumes that the conjugation of different organizational perspectives can permit the cross-fertilization of ideas among its members so that it can provoke positive changes in the way the public services are provided.

Through an empirical point of view, Faria et al. (2017) expose that the involvement between actors within InovaGov still depends on individual efforts, suggesting that a more intense organizational engagement would be desirable.

Once that we decided to focus on open innovation within government, we excluded from our content analysis the private and non-governmental organizations that constitute the InovaGov Network. Thus, only the “state-owned” organizations have been considered all through this investigation.

Considering these empirical issues showed in the previous paragraph and recognizing the centrality of the strategic plans as a main guideline for tactical public managers, we categorized – under the light of collaborative innovation criteria formulated by Bommert (2010) - all through the Table 2 any objectives that would have any alignment with public sector innovation.
Table 2 – Categorization of strategic goals and guidelines focused on open or collaborative innovation established by signatories of InovaGov Network.

<table>
<thead>
<tr>
<th>Public Organization Signatories of InovaGov, November, 2018.</th>
<th>Strategic goals and guidelines focused on open or collaborative innovation</th>
<th>Qualifying criteria of collaborative innovation (Bommert, 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agência Brasileira de Desenvolvimento Industrial (ABDI)</td>
<td>Strengthen and diversify the network with strategic partners</td>
<td>Diverging</td>
</tr>
<tr>
<td>Agência Brasileira de Promoção de Exportações e Investimentos (Apex)</td>
<td>Purposeful and operational alignment between APEX-Brazil and Ministry of International Relations</td>
<td>Diverging</td>
</tr>
<tr>
<td>Agência Nacional de Aviação Civil (Anac)</td>
<td>Create and implement a program of cooperation agreements in order to access information systems of other public agencies and entities</td>
<td>Open the innovation cycle to internal and external assets</td>
</tr>
<tr>
<td>Agência Nacional de Energia Elétrica (Aneel)</td>
<td>Ensure a management system that favours the process integration and innovation</td>
<td>Diverging</td>
</tr>
<tr>
<td>Agência Nacional de Saúde Suplementar (ANS)</td>
<td>Promote the knowledge production and diffusion</td>
<td>Diverging</td>
</tr>
<tr>
<td>Agência Nacional de Telecomunicações (Anatel)</td>
<td>Hone the transparency and social participation</td>
<td>Open the innovation cycle to internal and external assets</td>
</tr>
<tr>
<td>Agência Nacional de Transportes Terrestres (ANTT)</td>
<td>Interorganizational technical cooperation</td>
<td>Open the innovation cycle to internal and external assets</td>
</tr>
<tr>
<td>Agência Nacional de Vigilância Sanitária (Anvisa)</td>
<td>Implement a governance model that facilitate the organizational integration, innovation and development</td>
<td>Promote a positive attitude towards public sector innovation</td>
</tr>
<tr>
<td>Banco Central do Brasil</td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td>Caixa Econômica Federal</td>
<td>Promote the citizenship and sustainable development of the country as financial organization, public policies implementer and strategic partner of the Brazilian State</td>
<td>Diverging</td>
</tr>
<tr>
<td>Organization</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td><strong>Câmara dos Deputados - Lab Hacker</strong></td>
<td>Stimulate the development of actions and tools capable of widening the social participation in the legislative process. Produce open tools and software and make them available to other public agencies for free use and coproduction. Promote the experimentation and learning by encouraging the risk taking and new perspectives. Promote conferences and gatherings with specialists and inspiring people in order to leave behind the red tape culture and embrace innovation in the public sector. Open the innovation cycle to internal and external assets. Facilitate risk taking. Promote a positive attitude towards public sector innovation.</td>
<td></td>
</tr>
<tr>
<td><strong>Comissão Nacional de Energia Nuclear (CNEN)</strong></td>
<td>Develop an innovation culture for the department of institutional security of CNEN, including studies, evaluations and applications of new technologies, tactics, techniques and security procedures. Establish the mechanisms and procedures needed to the communication and exchange of information and knowledge within CNEN, observing the necessary measures to the maintenance of the security and secrecy, conserving the current law. Diverging</td>
<td></td>
</tr>
<tr>
<td><strong>Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)</strong></td>
<td>Seek recognition in the promotion of science, technology and innovation as the key-elements of the Brazilian development plan. Promote a positive attitude towards public sector innovation.</td>
<td></td>
</tr>
<tr>
<td><strong>Conselho da Justiça Federal (CJF)</strong></td>
<td>Align the goals from multiple agents involved in the strategy implementation aiming the reach of the programmed results. Strengthen the development and integration of partnerships with other federal courts and organizations from public and private sectors. Open the innovation cycle to internal and external assets.</td>
<td></td>
</tr>
<tr>
<td><strong>Empresa Brasileira de Correios e Telégrafos (Correios)</strong></td>
<td>Unavailable N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Empresa de Tecnologia e Informações da Previdência Social (Dataprev)</strong></td>
<td>Provide technological solutions of IT and communication for the execution and hone of Brazilian public policies. Open the innovation cycle to internal and external assets.</td>
<td></td>
</tr>
<tr>
<td><strong>Escola Nacional de Administração Pública (Enap)</strong></td>
<td>Stand out in the capacitation and development of civil servants, aiming high performance, Open the innovation cycle to internal and external assets.</td>
<td></td>
</tr>
<tr>
<td>Institution</td>
<td>Function Description</td>
<td>Location</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Fundação Cultural Palmares</strong></td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Instituto Brasileiro de Informação em Ciência e Tecnologia (IBICT)</strong></td>
<td>Promote the competence, development of resources and information infrastructure in science, technology with the focus on the production, socialization and integration of scientific and technological knowledge</td>
<td>Promote a positive attitude towards public sector innovation</td>
</tr>
<tr>
<td><strong>Instituto de Pesquisa Econômica Aplicada (IPEA)</strong></td>
<td>Formulate prospective studies in order to guide strategies of development of medium and long term</td>
<td>Open the innovation cycle to internal and external assets.</td>
</tr>
<tr>
<td><strong>Instituto Federal de Brasília (IFB)</strong></td>
<td>Unavailable</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Justiça Federal de Primeiro Grau em São Paulo (JFSP)</strong></td>
<td>Raise data from core functions and administrative support for its utilization in collaborative governance network</td>
<td>Open the innovation cycle to internal and external assets.</td>
</tr>
<tr>
<td><strong>Ministério da Ciência, Tecnologia, Inovações e Comunicações (MCTIC)</strong></td>
<td>Articulate with states government, local governments, civil society and with another federal agencies in order to establish the strategies to the national policy of science, technology and innovation.</td>
<td>Open the innovation cycle to internal and external assets.</td>
</tr>
<tr>
<td>Ministry</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Ministério da Cultura (MinC)</td>
<td>Stimulate the informational interoperability between public organizations. Mitigate the information asymmetry between government and society. Promote the social participation and innovation. Open the innovation cycle to internal and external assets. Promote a positive attitude towards public sector innovation.</td>
<td></td>
</tr>
<tr>
<td>Ministério da Defesa (MD)</td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td>Ministério da Educação (MEC)</td>
<td>Promote the expansion and the adequate functioning of schools and universities. Diverging</td>
<td></td>
</tr>
<tr>
<td>Ministério da Fazenda (MF)</td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td>Ministério da Indústria, Comércio Exterior e Serviços (MDIC)</td>
<td>Develop organizational intelligence supported by the best practices. Open the innovation cycle to internal and external assets.</td>
<td></td>
</tr>
<tr>
<td>Ministério da Justiça e Cidadania (MJ)</td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td>Ministério da Saúde (MS)</td>
<td>Promote the health of the citizen through the integration and the construction of partnerships with other federal agencies, state governments, local governments, private sector and society so that it contributes to improvements in quality of living and citizenship. Diverging</td>
<td></td>
</tr>
<tr>
<td>Ministério da Transparência, Fiscalização e Controle (CGU)</td>
<td>Widen the appropriation of results from CGU works to all stakeholders. Strengthen the partnership with the actors involved in the defence of public property, management improvements and confrontation of corruption. Develop innovative mechanisms for the improvement of public management, the elevation of quality of living and confrontation of corruption. Ensure that the work processes and their outputs are timely and focused on quality, with intensive use of technology. Open the innovation cycle to internal and external assets. Promote a positive attitude towards public sector innovation.</td>
<td></td>
</tr>
<tr>
<td>Ministério das Relações Exteriores (MRE)</td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td>Ministério do Desenvolvimento Social e Agrário (MDS)</td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td>Ministério do Meio Ambiente (MMA)</td>
<td>Formulate and implement national environmental public policies through an articulated model. Diverging</td>
<td></td>
</tr>
<tr>
<td>Ministry/Entity</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td><strong>Ministério do Planejamento, Desenvolvimento e Gestão (MP)</strong></td>
<td>aligned with the different public actors and the society for the sustainable development. Widen the state capacity of providing the public services to the population responsively, with superior quality and sustainability by improving the management of resources and processes. Promote an increase of the state action through the integration of IT and management improvements, contributing to the information, communications and cybernetic security. Open the innovation cycle to internal and external assets. Promote a positive attitude towards public sector innovation.</td>
<td></td>
</tr>
<tr>
<td><strong>Ministério do Trabalho (MT)</strong></td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td><strong>Ministério do Turismo (MTur)</strong></td>
<td>Strengthen the decentralized decision-making, the partnerships and social participation. Provide integrated technological solutions of secure and high-performance communication. Open the innovation cycle to internal and external assets.</td>
<td></td>
</tr>
<tr>
<td><strong>Ministério Público Federal (MPF)</strong></td>
<td>Implement the knowledge management process. Stimulate interfaces with the stakeholders. Officialise a strategy capable of honing the internal and external communication (press and society). Open the innovation cycle to internal and external assets.</td>
<td></td>
</tr>
<tr>
<td><strong>Pólo de Inovação Campos dos Goytacazes (PICG), do Instituto Federal de Educação, Ciência e Tecnologia Fluminense</strong></td>
<td>Unavailable (the strategic plan under construction when the data was raised).</td>
<td></td>
</tr>
<tr>
<td><strong>Procuradoria-Geral da Fazenda Nacional (PGFN)</strong></td>
<td>Develop the culture of innovation, transparency, participation and results-orientation. Provide integrated and adequate resources and solutions that can optimize the work processes. Open the innovation cycle to internal and external assets. Promote a positive attitude towards public sector innovation.</td>
<td></td>
</tr>
<tr>
<td><strong>Secretaria de Governo da Presidência da República (SGPR)</strong></td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td><strong>Secretaria do Tesouro Nacional (STN)</strong></td>
<td>Unavailable</td>
<td></td>
</tr>
<tr>
<td><strong>Senado Federal</strong></td>
<td>Represent the states of the Brazilian federation and the legislative and enforcement functions, so that it strengthens the democratic federative model, stimulating the participation of the citizens and the integration of different states, promoting, with social justice, the quality of living of the Brazilian population. Open the innovation cycle to internal and external assets.</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Commit with free circulation of ideas</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Serviço Federal de Processamento de Dados (SERPRO)</td>
<td>Leverage the innovation by strengthening the cocreation to deliver at least seven digital solutions until the end of 2018</td>
<td></td>
</tr>
<tr>
<td>Serviço Florestal Brasileiro (SFB)</td>
<td>Use, fully, the knowledge consolidated, aim the continuous learning, public management innovation, respect the diversity of points of view and value the teamwork and organizational interactions. Promote opportunities of interaction and wide participations guided by public interests</td>
<td></td>
</tr>
<tr>
<td>Tribunal de Contas da União (TCU)</td>
<td>Hone the public Administration in benefit of the society through the external enforcement. Improve the governance and the management in public organizations and public policies. Intensify the national and international information exchange for sharing the best enforcement practices. Improve the knowledge management processes</td>
<td></td>
</tr>
<tr>
<td>Tribunal Regional Federal da 1ª Região (TRF1)</td>
<td>Innovation as a strategic value</td>
<td></td>
</tr>
<tr>
<td>Tribunal Superior do Trabalho (TST)</td>
<td>Act proactively, promoting the innovation and the continuous improvement of the service procedures</td>
<td></td>
</tr>
<tr>
<td>Universidade Federal de Goiás (UFG)</td>
<td>Support the Science, Technology and Innovation initiatives, promoting the expansion of the demands matching of other universities, research centres, governments and productive sector.</td>
<td></td>
</tr>
<tr>
<td>Valec Engenharia, Construções e Ferrovias S.A. (Valec)</td>
<td>Incorporate management and services production techniques so that the performance improves.</td>
<td></td>
</tr>
</tbody>
</table>
Objectives as “articulate with states government, local governments, civil society and with another federal agencies in order to establish the strategies to the national policy of science, technology and innovation” demonstrate commitment with the pluralism and the inclusion of ordinary citizens in the decision-making processes as defended by Ostrom (1996).

Even though, other examples of organizational goals as “ensure a management system that favours the process integration and innovation” suggest to consider innovation as closed system that should take place inside the public organization, diverging from what is preconized by authors as Eggers and Singh (2009) whom claim that open innovation in public organizations promotes superior performance and a wider scope so that it provokes an increase of the quality level of public services.

After analysing the data presented above, we could identify that only 2 of 52 public organizations signatory of InovaGov agreement demonstrated – through their strategic and explicit goals and directrices – convergence between their objectives and the three collaborative innovation criteria idealized by Bommert (2010). Therefore, we highlight that these two organizations were Escola Nacional de Administração Pública - ENAP (National School of Public Administration) and LabHacker (i-lab associated to the House of Representatives).

In both cases, we observed that strategic inclination towards opening the innovation cycle to external sources, the stimulus of the experimentation of new technologies of management and production of services facilitating the risk taking and the incentives to the adoption of new techniques over the public sphere (Bommert, 2010).

We must underline that the facilitation of risk-taking as a criterion was identified solely in both cases reported above. This make us think about the necessity of incorporation to the strategic plans of other InovaGov organizational members objectives that could encourage medium-level public managers to lead risk-taking all through their departments (Bommert, 2010).

Half of the strategic plans showed a collaborative conception once they contain objectives that suggest propensity to exchange knowledge with other actors outside the organizational borders and assimilate ideas generated from other public organizations or society, in general (Bommert, 2010).

Moreover, 23% of the public organizations analysed assume, through their strategic plans, that they seek to incentive initiatives capable of promoting the innovation within government.
5 Conclusions

This study aimed to analyse, qualitatively, the documents of the strategic planning of all 52 public organizations that take part in the InovaGov network in order to identify convergences between the goals established by these organizations and the qualifying parameters of open innovation (Bommert, 2010).

We must recognize as one of the limitations of this study the fact that we undertook the documental research as the main source of information, even though authors as Godoy (1995) and Vergara (2000) alert that this kind of research would work better when combined with other ways of collecting empirical data as interviews. This happens because formal documents can omit several actions, decision patterns or even undesirable information about the public organizations. Therefore, the documents – those analysed in this study - might not show the managerial practices adopted inside these organizations.

The promotion of a positive attitude towards public sector innovation and facilitation of risk-taking were poorly identified during the investigation of the strategic plans. In such situations it is clear the lack of the “innovation sponsor” that could actively stimulate the innovative behaviour – at the political and/or organizational level - through which the civil servants could feel capable of taking the risks of trying a new practices (Borins, 2001) and dodging from the principle of legality without breaking the rules or being prosecuted by control oriented agencies (Borins, 2002).

The absence of alignment identified between the qualifying criteria of open innovation (Bommert, 2010) and the content of the strategic planning in most of the analysed organizations indicates that isomorphism must have taken place, due to the fact that there is no evidence that it has generated the expected outcomes (Dimaggio & Powell,1981) and considering the pressure for legitimacy from international agreements as Open Government Partnership (Freitas e Dacorso, 2014).

Opening of the innovation cycle to external assets (Bommert, 2010) goes beyond merely crowdsourcing information (Taeihagh, 2017) or even gathering ideas that will never be implemented effectively (Laurence and Lynn, 2013). In general, the strategic goals presented through Table 2 – with the exception of ENAP and LabHacker – do not represent a solid basis that could encourage tactical public managers - and other civil servants – to innovate and take risk involved in approaches such as service as a system (Latinen, Kinder e Stenvall, 2017), innovation prizes (Williams, 2012), play at the workplace (Kinder, Stenvall e Memon, 2018), situational contracting (Wolfson, 2012).
We must consider that the misalignment between the collaborative and open governance proposed by InovaGov network and the strategic plans of its members configures the situation showed by Mergel (2018) in which the author suggest that this kind of divergence limits the openness of the innovation cycle to other sources.

Thus, Brazilian public organizations could improve their open innovative process by “creating supportive climate for bottom-up innovation by consulting staff and instituting formal awards and informal recognition for innovators” (Borins, 2002, p. 467).

Hypothetically, if you were a Brazilian civil servant, would you feel motivated to take the risk of being innovative and opening the innovation cycle to external ideas?

6 References


Bardin, L. (2009) Análise de Conteúdo. Lisboa, Portugal; Edições 70, LDA.


