DISCUSSION PAPER

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PUBLIC INNOVATION IN BRAZIL: AN OVERVIEW OF ITS TYPES, RESULTS AND DRIVERS

Pedro Cavalcante
Marizaura Camões

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CONTENTS

SINOPSE

Acadêmicos e tomadores de decisões na administração pública parecem ter superado estratégias abrangentes de reforma e estão concentrando suas atenções em pequenas mudanças na gestão pública que geram resultados de curto prazo com menores custos transacionais. Nesse sentido, muitos vêm argumentando que a inovação pode contribuir para melhorar a qualidade e eficiência do serviço público, bem como para aumentar a capacidade do governo na resolução de problemas. No Brasil, especificamente, há certo grau de consenso sobre o aumento das práticas inovadoras de gestão nas últimas duas décadas. No entanto, assim como em outros países, prevalece a falta de conhecimento baseado em evidências empíricas sobre diferentes dimensões da inovação. Uma dimensão importante que deve ser profundamente investigada é a dos determinantes da inovação. Em outras palavras, quais os fatores que influenciam as iniciativas se tornarem inovadoras no setor público? O artigo procura responder a esta importante questão. Os dados originais deste artigo são provenientes do Concurso Inovação da Gestão Pública Federal, prêmio de inovação mais importante do Brasil, realizado pela Escola Nacional de Administração Pública (Enap), para reconhecer práticas inovadoras que melhoraram a capacidade e a prestação de serviços do governo. Todos os anos, vinte iniciativas são indicadas para a final e dez são premiadas como as práticas de gestão mais inovadoras. Utilizando variáveis quantitativas de um banco de dados, construídas a partir de análise de conteúdo dos relatórios das iniciativas de 2007 a 2015, examinamos seus fatores determinantes. Em geral, os resultados da pesquisa confirmam a hipótese de que a inovação não é uma construção isolada, ou seja, seus determinantes tendem a ser também influenciados pelos relacionamentos com os tipos e fases da inovação.

Palavras-chave: Inovação; administração pública; gestão; governo federal.

ABSTRACT

Practitioners and scholars of public administration currently seem to have overcome comprehensive reform strategies and are focusing their attention on minor changes in public administration that generate short-term outcomes with lower transactional costs. In that sense, many have argued that innovation can contribute to improve the public service quality and efficiency as well as to enhance government capacity in solving problems. In Brazil, specifically, there is a certain degree of consensus about the increase of management innovation practices over the last two decades. However, as in

other countries, the lack of evidence-based knowledge regarding different dimensions of innovation prevails. One important dimension that must be deeply investigated is the innovation's determinants. In other words, which factors influence the public sector innovation initiatives? The paper aims to answer this relevant question. This paper's original data comes from the Federal Management Innovation Award (FMIA), the most important innovation prize in Brazil, conducted by the National School of Public Administration (Enap), to recognize innovative practices that have improved government capacity and service delivery. Every year, twenty initiatives are nominated to the final and ten are awarded as the most innovative management practices. Using quantitative dataset, built from content analyzes of these initiatives' reports from 2007 to 2015, we examine their influential factors. The research results confirm the hypothesis that innovation is not an isolated construct, in other words, its determinants tend to be also influenced by the relationships with the types and phases of the innovation.

Keywords: Innovation; public administration; management; federal government.

1 INTRODUCTION

Improving public sector has been a crucial purpose embedded in reform movements since the end of 1970. Practitioners and scholars of public administration currently seem to have overcome comprehensive reform strategies and are focusing their attention on minor changes in public administration that generate short-term outcomes with lower transactional costs.

According to Borins (2014), public innovation has become a field of interest on its own, distinguished from the New Public Management and other similar paradigms, popular in recent decades. These broad reform strategies have been replaced by what Pollit and Bouchaert (2000) called the "micro-improvements".

The theme has also moved from being an exclusive issue for firms and private enterprises to become also relevant in public organizations worldwide. Public sector agencies, therefore, generate or adopt innovations in response to the constant economic, political, social and technological changes in a more globalized and networked world, constrained by rising citizen expectations, complex problems and tight budgets. As Damanpour, Walker and Avellaneda (2009:653) argue "organizations are viewed as adaptive systems that introduce change in order to function effectively".

In that sense, many have claimed that innovation can contribute not only to economic growth, industrial change and competitive advantage, but also to improve the public service quality and efficiency by enhancing the governmental capacity in solving problems.

Nevertheless, despite the increasing interest in the public administration field of study, Pollit and Hupe (2011) argue that innovation's analysis suffers by having the 'magical concept' status, as well as participation, accountability and governance. In other words, the noble and normative nature of innovation, to some extent, hinders the ability of analysts to deepen in its limitations.

Osborne and Brown (2013) support that three flaws hamper understanding innovation in the public services: *i*) understanding the nature of innovation is often regarded, wrongly, as a purely conscious process; *ii*) positioning innovation as a good

'normative' in public policies; *iii*) the adoption of inappropriate reference models of innovation from manufacturing and not in services.

In Brazil, specifically, a certain degree of consensus about management innovations has increased over the last two decades. However, as in other countries, there is a lack of evidence-based knowledge regarding different dimensions of innovation (Bekkers, Edelenbos & Steijn, 2011; Brandao & Bruno-Faria, 2013).

One important dimension that must be deeply investigated is the innovation determinants. In other words, which factors influence the public sector innovation practices? Do the innovations determinants or drivers vary accordingly to the innovation's type or stage? Do the different innovation's drivers affect their goals and results distinctly? The paper aims to discuss these relevant questions. The original data comes from the Federal Management Innovation Award (FMIA), the most important innovation prize in Brazil. The annual award was created by the National School of Public Administration (Enap) to recognize innovative practices that have improved governmental capacity and service delivery. Every year, twenty initiatives are nominated to the final, and ten are awarded as the most innovative management practices in the federal government.

Brazilian federal government launched the FMIA in 1996 within the scope of the New Public Administration movement. During 90s a comprehensive reform was undertaken in order to transform public sector's responsibilities and means, specially, focused on privatization, downsizing and transfer of social policies to the third sector. As a result, the first two strategies were highly successful while the latter was rarely adopted by the Executive branch.

The reform also proposed changes in the way government should perform, including aspects related to accountability, efficiency and focus on outcomes instead of ex ante controls. Although the results have not been precisely evaluated, it is a consensus that these components have been incorporated into the public management in a variety of degrees and forms. In this regard, the Brazilian NPM's movement follows the similar reforms implemented worldwide, which converges with the Pollit and Bouchaert (2011) perception that instead of "big reforms and big ideas", the prevailing outputs were more inclined to management "micro-improvements" or public sector innovations.

Exactly in this debate, the paper discusses important dimension of the innovation processes in government with twofold targets: practitioners and scholars. The first are, normally, concerned in understanding how innovation happens in order to improve the performance capacity of organizations. Scholars, instead, have gone further exploring, grounded on scientific procedures, not only the innovation determinants, but also innovation failures and other aspects of this complex phenomenon. Investigating innovation has contributed to break with the negative perception of public management and policy, spread in the public opinion.

Therefore, this paper belongs to a subfield of public sector innovation studies that uses innovation award as object of analysis. In sum, award programs produce written applications and by judgements process rank and reward those that have most strictly met the program's criteria. Borins (2014) summarizes the subfield literature and divides it based on their methodology and focus of research that also vary considerably regarding the levels of governments and countries. Although case studies continue to be used, recently, the majority of researches has turned to quantitative methods, primarily, focus on surveys data collection. On the other hand, the inquiries cover a diversity of subjects, specially, the innovation itself, public sector entrepreneurship and innovative organizations.

To make a contribution to the literature, this article builds a dataset of quantitative variables employing content analysis on runners up and winners initiatives' reports. Subsequently, we examine their influential factors, including environmental, organizational, innovation characteristics and individual/employee levels. Moreover, some exploratory analyzes are undertaken to explain the relationship among these factors and other relevant aspects, such as innovation type, decision process and initiation phase. The research results bring important empirical insights to the debate and help advancing theory and empirical knowledge on innovation processes and outcomes in public organizations.

Besides this introduction, the paper presents a literature review regarding innovation's types, objectives/outputs and influential factors. Based on that, a detailed analysis using a particular protocol is undertaken in order to identify the presence or lack of these factors on the FMIA's initiatives reports from 2007 to 2015. Descriptive statistics are presented on the paper's fourth section. Additionally, final remarks and future research agenda are discussed.

2 INNOVATION IN THE PUBLIC SECTOR

In order to provide theoretical basis to support the paper's analysis, we undertook a comprehensive literature review on innovation in public administration, not only relied on the Brazilian literature, but also on international publications. It focuses, primarily, on the determinants or influential factors that affect the innovation's generation or the decision to adopt an innovative practice in the public sector.

The literature review includes classic books on the subject and publications of multilateral organizations[1] and specialized government agencies. The review also analysis the most important international scientific publications that scored an impact factor above 1.5 in 2014, according to the classification of Thomson Scientific ISI.[2] For the Brazilian literature, we searched articles published in the six most important journals in the administration area, classified by CAPES.[3] The study covers a ten years period (2006-2016). The descriptors used were as follow: i) innovation; ii) innovation and public sector; iii) innovation in public administration. Lastly, we searched for publications frequently cited in order to assure that important references were not omitted.

Based on the complementary searching strategies employed, from hundreds of studies discussing the influential factors of public sector innovation, we add up other specific descriptors: *antecedents*, *determinants*, *drivers* and *facilitators*. As a result, the bulk of publications examined come from international journals (36), followed by multilateral and national organizations reports and studies (25). We also reviewed six classic books, three publications from the Brazilian federal government and sixteen domestic scientific papers.

Management innovation is a multidimensional construct that may vary according to salient aspects, such as types, objectives/outputs, stages and so on. Historically,

1. The list includes Australian Government; British National Audit Office; Center for American Progress (USA); Danish Centre for Studies in Research and Research Policy European Commission; Innovation Unit (UK); National Endowment for Science, Technology and the Arts (Nesta - UK) and; Organization for Economic Co-operation and Development (OECD)

2. The journals selected were Administrative Science Quarterly; Journal of Public Administration Research and Theory; Journal of European Public Policy; Journal of Policy Analysis and Management; American Review of Public Administration; Public Administration Review and; Policy Studies Journal.

3. CAPES Foundation is a Brazilian government agency responsible for supporting students at universities and research centers in Brazil and abroad. The Brazilian journals examined were Brazilian Administration Review; Cadernos EBAPE.BR; Organizações & Sociedade; Revista de Administração Contemporânea; Revista de Administração and; Revista de Administração Pública.

organizational and environmental factors play a dominant role in the debates about the capacity of organizations to innovate. However, their relevance varies in accordance to particular cases and, above all, to the combination of them, not only as a consequence of an isolated factor. As Walker (2007, pp. 591) puts: "configuration theory is proposed as a framework to move away from examining the myriad of individual variables and toward a consideration of the relationships between antecedents and innovation types." The author used multiple regressions on informants' survey data of English local government to demonstrate that relationships between antecedents and innovation types are relatively complex and need to be understood as such.

Considering this assumption, to investigate innovations' drivers or determinants, special attention should be given to these other aspects (e.g., types and initial phase). Hence, initially, we highlight some of these aspects understandings, because they are part of the data collection protocol used by this research.

To begin with, innovation typologies seem to have received a considerable level of attention from scholars. OECD (2005: pp. 57) divides innovation in four types, as follows:

1. *Product*: new or significantly improved service or good with respect to its characteristics or intended uses;
2. *Process*: new or significantly improved method of production or distribution;
3. *Marketing*: new marketing method with significant changes in product design or packaging, in its positioning, promotion or price fixing;
4. *Organizational*: new organizational method in the firm's business practices, in the organization of their workplace or in their external relations.

Despite the fact that OECD's typology was conceived to the private sector innovation, it has been considered an important reference for the public administration debate. Therefore, researchers have introduced many conceptual typologies of innovation, since they realized that innovation's characteristics and its adoptions are affected distinctively by environmental and organizational factors (Damanpour, Walker and Avellaneda, 2009).

In accordance to Walker, Damanpour and Devece (2011), the typologies most frequently used are: *i*) product/service versus process innovations; *ii*) technological versus administrative/managerial innovations; iii) radical versus incremental. The latter, for instance, may be analyzed in three formats, instead of two. Bekkers, Edelenbos and Steijn (2011) argue that innovation process can be *incremental*, small gradual changes; or

radical which is new products or services or significant changes in the way to serve and produce and; lastly, *systematic innovations*, major changes that arise from, for example, the introduction of new technologies. Other similar classification divides innovation in *evolutionary* - incremental changes within the organization and *revolutionary* - innovation not as part of the normal adaptation or change process, but as a great transformation within the sector. Both conditions are perceived as discontinuity with the past, whether by the internal or external environments.

A comprehensive typology suitable to organizational innovations that takes public sector complexity into account is the one formulated by Meeus and Edquist's (2006). We use these four types of innovations in our research's data collection protocol:

1. *Service innovation*: the introduction of new services to existing or new clients or offering existing services to new clients;
2. *Process innovation*: the aim is to increase efficiency and effectiveness of the internal organizational processes to facilitate the production and delivery of goods or services to the citizens (internal focus);
3. *Technological process innovation*: new elements introduced into an organization's production system or service operation for producing its products or rendering its services to the citizens;
4. *Administrative process innovation*: new approaches and practices to motivate and reward organizational members, devise strategy and structure of tasks units, and modify the organization's management processes.

Another dimension that concerns scholars is the innovation stages. According to Jean Hartley (2013), the analytical phases of the innovation process are invention (when ideas are generated); implementation (process of translating ideas into policy) and diffusion (disseminating innovation in the organization or outside). Since the focus is on the innovation determinants already implemented in public organizations, the article relies on two distinguished stages: *generation* and *adoption*. The former, also called innovation development or initiation consists on a process, endogenously incubated, that results in a new outcome to an organizational population. The latter, more examined in literature of managerial innovations (Damanpour & Aravind, 2012), normally, involves three phases: initiation, adoption decision and implementation. In sum, only after regularly accepted by users and employees that the innovation is considered implemented, similarly as an assimilation process (Damanpour & Schneider 2006; 2008; Rogers, 2003; Walker, Damanpour & Devece, 2010).

Generation of innovation is typically slower than adoption, whereas measuring adoption tends to be easier. Studies have also proposed that while generation may be facilitated by higher complexity, and lower formalization and centralization, adoption tend to be facilitated by lower complexity, and higher formalization and centralization. In other words, generation of innovation is easier to occur in an organic structure and adoption in mechanistic one (Damanpour & Aravind, 2012).

Regarding innovation objectives and results, adoption is dominant in the public sector. In this case, studies include three general goals: to generate efficiency in internal actions (policies and initiatives); to improve services and outcomes for citizens and businesses; to promote innovation in other sectors (De Vries, Bekkers & Tummers, 2014). Just as the analysis of typologies, these studies have also run into multitude of instances or overlapping between results/objectives of the innovative process. Put differently, actions aimed to produce effectiveness and efficiency may also result in higher citizens' satisfaction; or innovations designed to answer to the external environment can cause greater involvement of citizens and private partners.

In order to investigate the determinants of innovation in Brazilian public administration, besides the most common innovations objectives and results, such as efficiency, quality and users satisfaction (Bloch, 2011), we also add up *effectiveness*, *economy*, *response to the external environment* and *social involvement*, all, in different degrees, are found in the literature (Vries, Bekkers & Tummers, 2014).

The decision making processes concerning innovation, either a generated or adopted one, tend to reflect and be reflected by the initiative's drivers or facilitators (European Commission, 2010). Subsequently, there are three approaches that can be prevalent in developing or implementing an organizational innovation: *i*) *top-down* - a result of politicians/officials/top managers' decisions or engagement; *ii*) *horizontal* – a process of co-creation between low and mid level's team/staff with leaders and; *iii*) *bottom up* - innovation undertaken by low-level staff/team without the involvement of leaders.

Finally, before discussing the influential factors of public sector innovation; it is worth mentioning that we also included the variables *thematic area* and *policy sector* in the dataset. Both variables are pre-defined by the candidates.

As stated before, the bulk of the literature about public sector innovation's determinants comes from the main scientific journals, not only in quantitative basis but also in terms of comprehensiveness and quality. These articles analyze innovations in different countries, levels of government and distinct innovations areas/policies. As regards the methodology applied, the researches cover a range of approaches, from single case study to large n comparative inquiries.

In the substantive side, innovation in public administration is affected by a variety of factors that, in most of the cases, are difficult to individually measure their impacts. Due to this complex context, scholars have been separating and framing the innovation drivers/facilitators in groups or levels.

The usual strategy is to classify the influential factors as internal and external and then to examine their impacts. In this way, Luke (2010), investigating three New Zealand state-owned enterprises, finds that the performance demands from outside and internal aspects, such as more flexible culture, investment in people and deliberate application and transfer of knowledge affect entrepreneurial activities.

The combined effects seem to matter as Bloch and Brugge (2013) showed, analyzing innovation in Scandinavian governments. The authors rank innovation drivers, perceived by stakeholders, as follows: internal management; internal staff; political driving forces; public organizations; business (suppliers and users) and citizens.

Hansen (2012) found that leadership of elected politicians as well as professional bureaucrats and organizational size were relevant antecedents of New Public Management (NPM) adoptions in Danish local governments. As presumed, influence degrees tend to vary according to the innovation type, in this particular case, between NPM marketization-type and generic managerial-type.

Leadership and organizational size, along with slack resources, are also innovation determinants identified by Fernandez and Wise (2010) on their research about the adoption of specific Visa requirement to register for public school in Texas. About the leadership, the authors concluded that the managerial leaders behavior and will tend to be positive related to the likelihood of great staff involvement in innovations process. The author's findings also suggest that larger organizations, despite displaying higher

levels of structural complexity and differentiation, have more resources and legitimacy to face the costs of innovation failures. The same fits to slack resources that, logically, tend to increase the probability of an innovation to succeed by securing the necessary inputs.

Likewise, Damanpour and Schneider (2008), studying the adoption of 25 innovations in 725 local governments in the United States, found that leaders are able to influence the workers motivation and job satisfaction by creating an innovation atmosphere in the organization. In doing so, manager attitude added to innovation characteristics effect innovation's adoption. Although the latter is one of the less analyzed influential factor, Damanpour e Schneider (2009) test the influence of innovation cost, complexity, and impact on innovation adoptions. They found that innovation cost and impact had a positive effect; in contrast, complexity did not show a significant effect at all. Furthermore, the paper supports that innovation characteristics were more influential than environmental and organizational factors.

The inquiry of Vigoda-Gadot *et al* (2008) with public service end-users and citizens in eight European countries revealed the public's perception about the relevance of the leader's positive behavior in favor of innovative practices. Leadership definition does not only mean politicians or agency heads; they may also include organization's mid-level managers as Borins (2014) calls "local heroes". The author, on the other hand, reinforces that public innovation is essentially a consequence of collaborative relationships among different players.

Similarly, Choi e Chang (2009) investigate the effects of institutional factors and collective processes, based on the employees, on the innovation effectiveness and implementation. They also conclude that collective processes mediate institutional effects on the innovations implementation and their results.

This comprehensive perspective highlights the role of external factors as well. As already well known in the private sector, public organizations can become prior innovation adopters by using strategically information from networks and communication (Damanpour & Aravind, 2011). The range of influential factors that stems from the external environment is broad, including competition, deregulation, and isomorphism, passing through resource scarcity and customer demands (Damanpour, Walker & Avellaneda, 2009).

At the individual level, Hopkins (2015), grounded on a case study about the Canadian federal government, argues that incentives matter indeed. Agencies that provide incentives to their employees increase their likelihood of implementing innovations. More recently, Walker (2014) developed a meta-analysis of seventeen empirical studies of local government's innovation and found that positive effects of organization size but none related to slack resources. Besides, both researchers have suggested that administrative capacity and organizational learning are both positive influential on innovation.

Other key dimension of innovation promotion is how the staff is structured. In that sense, Puttick, Baeck and Colligan (2014, p. 7) claim that there are six decisive elements, which may be differently combined depending on the innovation features, for a successful innovation team:

i. *Methods:* the tools, techniques, and approaches that the team uses, as well as the outputs produced;

ii. *Team:* the size, skill set, dynamic and culture of the staff, as well as the recruitment and staff development strategies;

iii. *Resources:* how the team is financed, including leveraging funds from external sources, as well as how resources are allocated and spent;

iv. *Leadership:* how the team is led and managed, including by the director, and wider political sponsorship and buy-in;

v. *Partnerships:* the key relationship with government, and external agencies, groups and citizens;

vi. *Impact measurement:* the use of data to inform strategy development, as well as evaluation frameworks to measure impact.

As we showed, scholars investigate innovation determinants from a variety of approaches and find different answers. In order to summarize this knowledge, they have tried to classify influential factors in groups. Damanpour e Schneider (2006), for instance, distinguish them between environmental; organizational; managerial background and; managerial value.

Similarly, the studies and reports from international and governmental institutions have focused on the analysis of drivers and facilitators that make innovation happen. However, generally, they are less worried about scientific inquiry and more concerned on normative recommendations, frequently grounded on innovations champions or cases of success.

In this direction, using experiences from national and sub-national governments available on the Observatory of Public Sector Innovation, OCDE (2015) elaborated an integrated framework for analyzing innovation. Basically, the framework establishes that innovation is a result of the interaction between different levels (individual, organizational, public sector as a whole and society) and factors (people, knowledge, ways of working and rules and processes), although the borders are not normally precise.

Regarding these factors, the people dimension includes not only supportive and engaged political leaders and senior managers, but also human resources management practices that foster and encourage innovation, such as recognition, career advancement, special assignments and competitions. Knowledge is assumed to be an essential aspect of either supporting or hindering innovation; hence the flow of information for new ideas and how it is managed play a crucial role on innovation development. About ways of working, governments have increasingly adopted networks and collaborative strategies with the aim to face wicked problems that are hard to solve by unilateral actions. These include "new ways to work with citizens, the private sector and civil society to "co-design" public services" (OCDE, 2015: 9). Finally, countries are trying to overcome the set of rules and processes, generally seen as innovations barriers, by looking for new approaches to project management focused on the desired outcome and then adapt processes to achieve it, instead of formulating policy around existing structures.

The European Commission, another leading institution in this debate, has also engaged on establishing knowledge about innovation drivers. The 2010 edition of the Innobarometer found that the probability of service innovation increases linearly with the size of the institutions, since leading innovators frequently come from large and national or central organizations (European Commission, 2010). Moreover, the report highlights how isomorphism is as an important mechanism to disseminate innovative ideas among public organizations.

The report *Trends and Challenges in Public Sector Innovation in Europe*, an analysis from interviews with public officials and academics from 25 Member States in the European Union, also examines the factors and pre-conditions for public sector innovation. Its conclusions are equally comprehensive, in that matter, showing that success innovation practices stem from a broad set of complex variables, such as culture; strategy; human capital; incentives and rewards; leadership; organizational capabilities and innovative capacity and; good governance (European Commission, 2012).

Other publication, *Innovation in the Public Sector: State-of-the-Art Report*, elaborated on an online survey and in-depth interviews conducted with innovation stakeholders, also divides the innovation influential factors in two broad categories that can either foster or hinder public sector innovation (European Commission, 2013):

i. Internal drivers
    a. Organizational culture;
    b. Organizational leadership and managerial attitude towards change;
    c. Management of human resources (incentives in favor of innovation);
    d. Internal and external communication (communication channels between the public sector innovators and the different stakeholders from the external environment).

ii. *External drivers*
    a. Adequate legislative framework;
    b. Public needs and expectations;
    c. Rapid emergence of new technologies;
    d. Presence of political impetus (decisions, public or not, that have direct influence onto the integration of innovation on the decision making agenda).

It is worth mentioning, however, that these drivers do not affect innovation processes in an isolated form. On the contrary, their influences are often interconnected and some of them can even be framed in two categories, such as financial resources and political will.

Fostering innovation through the public sector has been a priority policy in developed countries, mainly, during the last ten years. Some of them have also played a major role in producing knowledge on innovation determinants, such as Australia, the Scandinavian nations and the United Kingdom. Their conclusions converge, in large extent, to the findings discussed above. The Australian report, *Empowering Change*, in the internal dimension, emphasizes the role of staff, especially frontline employees, as a rich source of innovation. On the external side, partnership with general public, experts, the business sector and the academic community is seen not only as a source of new ideas, but also as a mechanism to overcome resource constraints and risk management. The Scandinavian countries are world leaders in innovation, both in private and public sectors. Publications from these countries (Publin, 2006) and from the United Kingdon (Innovation Unit, 2009) demonstrate how partnerships,

along with leadership, staff involvement, clear management strategy for innovation, communication and an open environment for creativity, are essential to generate and/or implement public administration innovations.

Regarding the Brazilian literature, although innovation has recently become a trending topic, few relevant studies have been undertaking the challenge of mapping its determinants.

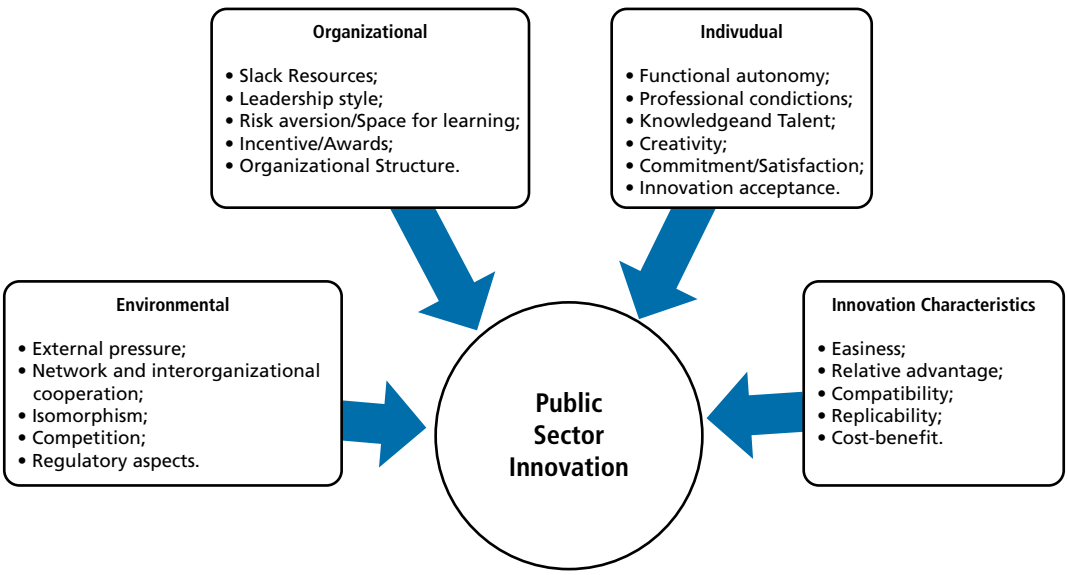
Jacobi and Pinho (2006) organized a book focused on a local government's innovation award (The Public Management and Citizenship Program) that helped to identify and disseminate over 8500 initiatives from 1996 to 2004. In this publication, Spink (2006) outlines how local managers see themselves as problem solvers. They also recognize co-creation aspects, such as social participation and co-management services with other public or private organizations as determinants for flourishing innovations. With a broader perspective, Fahah (2006) examines the innovation in the local government since the 80s, emphasizing the policy content and process. She finds positive effects of new players in the policymaking, partnerships with NGOs and the community engagement as central to success of inter-municipal cooperation.

Investigating the federal level, Ferrarezi and Amorim (2007) and Cavalcante and Camoes (2015) explored how innovative initiatives, awarded by the FMIA, were convergent to the cutting-edge management movements. Ferrarezi, Amorim and Tomacheski (2010) investigated the favorable conditions for the innovations sustainability and demonstrated a doubly endogenous feature of the sustainable initiatives, in other words, they were conceived internally, by the organization´s own staff (mid-level bureaucrats).

Sousa *et al* (2014), also using the FMIA database, from 1995 to 2012, found that organizational innovation was the leading type rewarded, followed respectively by process, marketing and product innovations. Regarding the innovative policy sector, health and education have dominated, mainly because they both require extensive citizen's interaction. In a different period of analysis (2004-2012), Oliveira, Santana and Gomes (2014) argue that the most prominent factor for an initiative to become successful in the Federal Management Innovation Award was the staff engagement, followed by partnerships with other organizations.

Overall, it is evident that the complexity of innovation determinants involves a considerable degree of overlapping among these factors and levels. In order to facilitate our analysis, based on this section discuss and Vries, Bekkers and Tummers (2014) classification, we employ four different levels of influential factors, as follows: i) organizational; ii) environmental; iii) innovation characteristics and, iv) individual/employee level. Figure 1 details them:

FIGURE 1
Levels and influential factors



Source: Enap's FMIA.
Elaborated by the authors.

3 MANAGEMENT INNOVATION IN BRAZIL

3.1. The Federal Public Management Award

Set up in 1996 by the National School of Public Administration, the Federal Management Innovation Award (FMIA) aims to foster and disseminate innovative practices in the Brazilian public management and reward civil servants in order promote practical approaches to improve government effectiveness. Besides the public value's goal, FMIA has also provided a wide source of data for studies and research aimed at increasing knowledge about innovation in public management.

The prize is a result of the reform movement that Brazil experienced during 1990s, highly influenced by New Public Management's assumptions. Over the years FMIA has gone through some modifications and, since 2007, recognizes innovation as changes in previous practices, by incorporating new elements of public administration or a new combination of existing mechanisms that produces significant results in the public service (Ferrarezi, Amorim and Tomacheski, 2010). The reports of the winning initiatives are available an online database that, during the last two decades, has been used by researchers as a secondary source for a variety of studies and publications (Camoes, Cavalcante and Severo, 2016).

FMIA has a primary focus: public management activities, projects and programs at the federal level that include the whole diversity of public organizations. The award has three additional goals: i) to encourage the implementation of innovative management initiatives in the federal agencies that contribute to the improvement of public services; ii) to disseminate innovative solutions that serve as inspiration or reference for other initiatives and collaborate to strengthen the state capacity and, iii) to recognize and value civil servants that work creatively and proactively in their activities for the benefit of the public interest.

Generally, the award includes a set of steps. First, the contest invitation is mailed to all federal government agencies and also released by email and social media. Secondly, applications take place usually form June to August by filling in a form with descriptive questions and a self-evaluation of results and contribution. On average, over one hundred of applications are made nationwide. Then, the assessment processes begin. The members of the judging committee, composed by senior civil servants, scholars and consultants specialized in public sector innovation; evaluate every validated initiative, based on the following rating criteria:

- Efficient use of resources;
- Sustainability degree of the initiative implementation and results;
- Impact of the initiative outputs in terms of: problem solving, meeting the demand of the target audience or the citizens' rights;
- Innovation over previous practices (new elements and processes);
- Integration with other internal initiatives, external or partnerships;
- Civil servants' participation and involvement;
- Promotion of transparency, participation or social control.

This is followed by the selection of 20 initiatives the year's finalists that are visited by members of the technical committee, in this case, composed by selected civil servants with graduate degree and considerable practical experience in different fields of public administration. During the visit, the innovation's leaders are demanded to answer several questions previously formulated by the judging committee and to demonstrate the initiatives' outputs. In the end of the year, both committees meet and discuss all twenty nominees and, finally, the judging committee selects the ten most innovative initiatives. By March, an official ceremony takes place with the presentation of the winners and the final classification. Besides their trophies, the best-ranked normally are rewarded with international technical visits offered by foreign embassies.

3.2 An overview of innovation types, results and determinants

To analyze innovation determinants, we formulated a particular protocol aimed at identifying the presence or lack of a range of aspects in the Federal Public Management Award runners up and winners' reports. The prize methodology underwent a number of changes (Ferrarezi and Amorim, 2007), but since 2007 it has been following the same criteria, categories and processes, so the paper covers the last nine years (2007 to 2015).

The reports were categorized by content analysis, based on three steps: *i*) construction of categories and variables; *ii*) analysis and categorization of each initiative by three research assistants, separately and guided by protocol description; *iii*) validation by the authors in case of disagreements. The protocol[4] includes the following variables: thematic area; policy sector; stage; decision making approach; type; organization's location; objectives, results and, overall, the influential factors (drivers or facilitators) listed in Figure 1. The database is composed of dummy variables (binary dichotomous) with 0 (zero) if the characteristic is not reported and one (1) in case of presence. Tables 3 to 6 in the appendix present the most important aspects and their descriptions. Then, the paper employs descriptive analyzes to assess how likely it is that any observed difference between the sets of data arose by chance.

Table 1 shows the distribution of FMIA's nominees and awardees by innovation stage, location, decision-making approach, and thematic area. To begin with the innovation stage, surprisingly, almost 60% of the initiatives were generated inside the

4. The detailed information about decision making, type, goals/outcomes and influential factors are presented in the paper's appendix.

organization. Innovations implemented because of diffusion processes, *i.e*. external ideas incorporated by federal ministries and agencies, in total, represent around 30%. Comparing the shortlisted and winners, a substantial difference is evident. The latter presents a higher concentration of generated innovations than the former. Although, the finding differs from the literature view on adoption's predominance (De Vries, Bekkers & Tummers, 2015), it is reasonable to consider that some reports may overemphasize the initiatives uniqueness in order to increase their winning chances.

The majority of the initiatives are highly concentrated in the Federal District - DF (75%), whereas 25% are undertaken in federal agencies spread over the other twenty-six states. Even though a significant part of the Brazilian civil service works outside DF, the result seems reasonable due to the fact that the most important departments and agencies, consequently, the top officials, are located in Brasília, the Capital. This explanation is reinforced by the fact that the prized innovations tend to be even more concentrated in DF, over 80%. The difference between the percentage of applicants from DF and other states, detailed in the paper's Annex, supports this explanation, since it is almost a fifty-fifty ratio. Additionally, it also breaks up a possible argument that the federal agencies outside the Federal District were misinformed about the FMIA.

TABLE 1
Distribution by stage, location, approach and thematic area

Aspect		Awarded		Nominee		Total	
		N	%	N	%	N	%
Innovation Stage	Generation	52	58	77	86	129	72
	Adoption	38	42	13	14	51	28
Location	DF	73	81	62	69	135	75
	Other State	17	19	28	31	45	25
Approach	Top-Down	49	54	25	28	74	41
	Horizontal	38	42	56	62	94	52
	Bottom-Up	3	3	9	10	12	7
Thematic Area	Institutional Arrangements	28	31	19	21	47	26
	Process Improvement	18	20	19	21	37	21
	Information Magagement	16	18	18	20	34	19
	Citizen Service	14	16	9	10	23	13
	Evaluation and Monitoring	8	9	7	8	15	8
	Planning and Budgeting	3	3	12	13	15	8
	HR Management	3	3	6	7	9	5

Source: Enap's FMIA.
Elaborated by the authors.

Concerning the underlying decision processes, the results converge with the main approach about developing or implementing these organizational innovations, since 93% of all initiatives analyzed stemmed from politicians/officials/top managers' decisions (*top-down*) or from processes of co-creation between low/mid level's staff and leaders (*horizontal*). On the other hand, only a reduced number of innovations were conceived by the engagement of low-level staff/team without leaders' involvement. This finding reinforces the relevance of leadership highlighted by many scholars (Damanpour and Schneider, 2008; Vigoda-Gadot *et al*, 2008; Fernandez and Wise, 2010; European Commission, 2012; Hansen, 2012; Borins, 2014; Puttick, Baeck and Colligan, 2014; OCDE, 2015). Similarly, the considerable presence of the horizontal approaches both in the awardees (42%) and nominees (62%) shows the collective processes influence on public sector innovation (Choi and Chang, 2009).

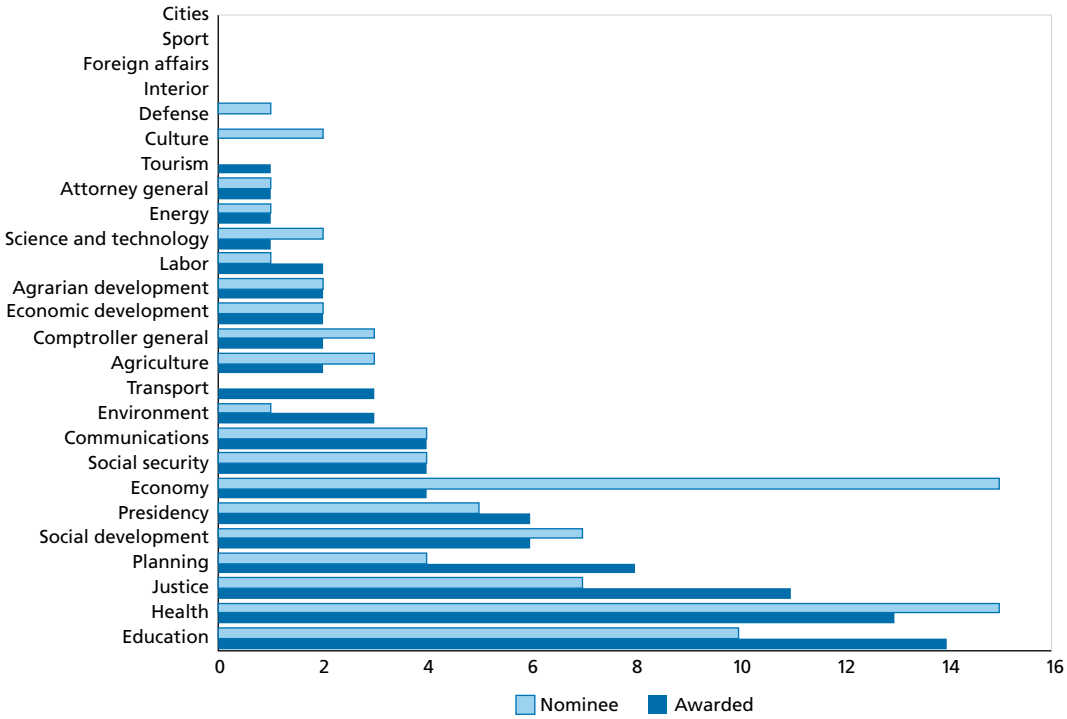
Finally, about the thematic area, on one side, we observe a predominance of initiatives related to institutional arrangements, process improvement and information management. On the other side, areas such as planning and budgeting and human resources management are are less commom. Different from the previous aspects, a similar pattern between the nominees and awardees innovations prevails.

When we examine innovations by policy sector, as illustrated in Figure 2, the data hightlighs a significant diversity. Twenty two ministries were nominated and won the prize at least once along the analyzed period. However, the distribuitions are far from equal.

As the literature advocates, organizational size and complexity matter (European Commission, 2010; Fernandez & Wise, 2010; Hansen, 2012). In this specific case, education, health and justice, that not only have the biggest structures in the Brazilian cabinet but also are one of the eldest ministries, leads the ranking with 14, 13 and 11 winner practices over the last nine years.

On the contrary, smaller and newer ministries, such as cities and sports, have not won at all. We also note that normally the number of nominees and awardees initiatives are relatively close. Nevertheless, some ministries have a higher rate of success (more winners than shortlisted), such as education and environment, whereas others are in the opposite side, such as economy and culture.

FIGURE 2
Policy sectors



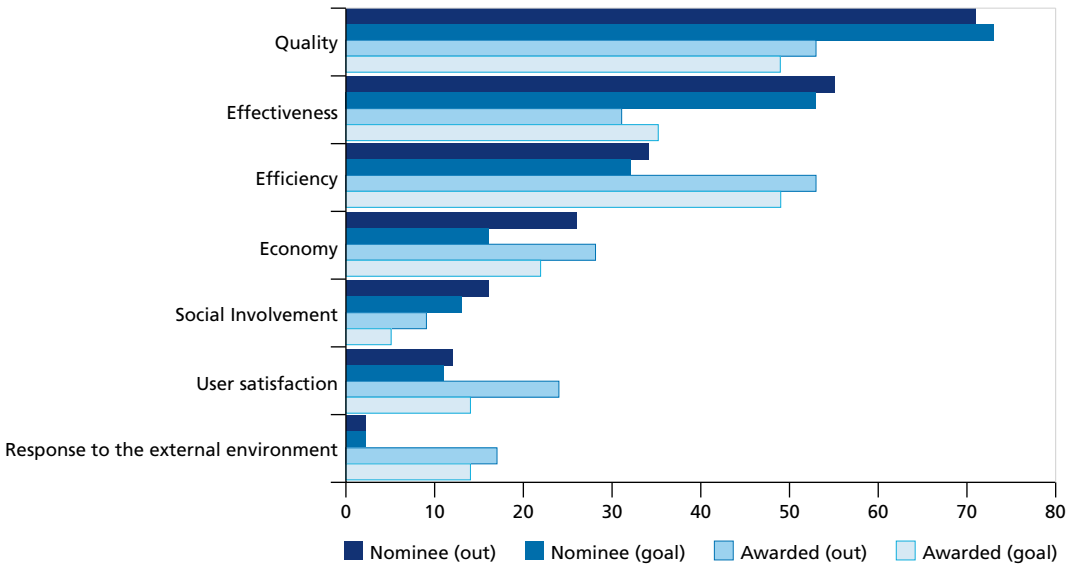
Source: Enap's FMIA.
Elaborated by the authors.

The applicantion overview by sector, described in the paper's Annex, supports the argument that organizational size and complexity matter, considering that the difference from applicants and semifinalists are is the majority of the cases very residual, except for few ministries. For instance, at one end, Social Development has applied twenty initiatives with thirteen of them reaching the final judment step, on the other extreme, ministry of Defense has submmited fifty-two practices with just one nominee. The latter along with the Foreign Affair are well-known for their profissionalized bureucracy, however, it does not seem relevant in terms of innovation capacity. Lastly, it is worth mentioning how ministeries that naturally work fostering innovation in private sector, such as Science And Technology, Energy and Defense, performance poorly.

Interesting and expected findings concern innovations' goals and outcomes. Figure 3 demonstrates how converging these two dimensions were in almost all cases. Exceptions were noticed in regards to social involvement and user satisfaction (awarded) and economy (nominee). Besides visually suggestion, we also employed Person chi-squared tests and confirmed that the relationships between goals and outcomes presented significant results.

As projected, the most common objectives, identified in the literature (De Vries, Bekkers & Tummers, 2015), are also the most mentioned outcomes for innovation in FMIA's winners and runners up. Innovation goals linked to improving organizational performance, such as quality, are cited by the majority of the initiatives. The same happens to effectiveness for the nominees and efficiency for the innovations awarded. In the latter case, response to external environment is present in 14 cases or 16%, followed by user satisfaction with 13 (14%). On the other end, the objective related to social involvement is rarely mentioned in the winners' innovation reports, only 4% referred to it as an initial goal. This result draws attention because the Brazilian public administration is well known by its participative policymaking, in the other hand, it may be explicated by the fact that the FMIA is an award more dedicated to management initiatives than public policy strict sense or because social participation has been so long in the government agenda, since the democratization process back in the 80´s, that it is not seen as innovative anymore. Regarding the classified initiatives, quality (73 cases) and effectiveness (53) are the most mentioned, while response to external environment was cited only in 2 experiences which can also be explained by the previous argument.

FIGURE 3
Innovation outcomes and goals



Source: Enap's FMIA.
Elaborated by the authors.

The same pattern is observed in the outcomes, similarly to recent scholar's findings (De Vries, Bekkers & Tummers, 2015), better public services and policies - perceived by efficiency; quality; effectiveness and economy lead the ranking of innovation outcomes

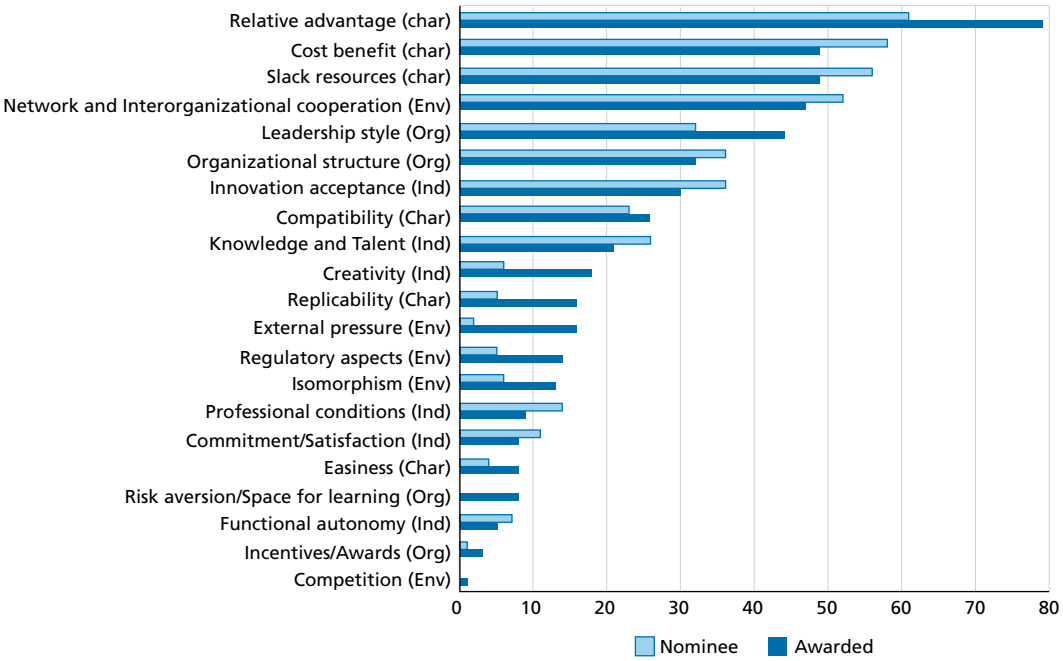
in the Brazilian federal government. It is also worth highlighting that user satisfaction is identified as an outcome in 27% of the winners' initiatives, even though it was not mentioned as a goal in almost half of them, this converges with Osborne and Brown (2013) assumption that the innovation nature is not a virtuously conscious process. The result for the winners differs from the shortlisted ones since user satisfaction does not seem to be so relevant for the last group, as it was identified in just 13% of them.

The comparison also demonstrate that efficiency and economy are considered more important by the prize judges when assessing the initiatives, since they are regularly mentioned by the winners' report, while quality and effectiveness are highlighted in the nominees ones.

About the innovation's determinants, the main goal of this paper, we depicted the data in two ways, aggregating by winners/nominees (figure 4) and by innovation types (table 2). To begin with, every influential factor, used to fill the data protocol, was identified in the FMIA's finalists. Obviously, the results are highly diversified. Overall, aggregating by levels, factors linked to innovation characteristics are in the reports of almost all cases. This is unexpected, considering that knowledge about innovation characteristics as predictors is scarce (Damanpour & Schneider, 2008). Then, drivers from the organizational, environmental and individual levels come. This demonstrates how suitable to the Brazilian government is the assumption that innovation is a consequence of the factors combination, not an isolated construct, as discussed in the previous section.

Analyzing the determinants grouped by winners/nominees (Figure 4), some similarities of influential factors among them become very clear. However, we also observe distinctions in some approaches. First, the awarded initiatives aggregate a greater number of influential factors cited in their reports (496) than the runners up (429), indicating that the higher the amount of drivers the higher will be the chances of becoming an innovation recognized. Secondly, the five most frequently mentioned factors show different pattern. While relative advantage and leadership are more mentioned in the winners' innovation reposts; cost benefit, slack resources and network/cooperation are highlighted in the nominees' reports. Besides, creativity, replicability, external pressure, regulatory aspects and isomorphism tend to be more important for the practices to be awarded. At the other extreme; competition; incentives/awards; functional autonomy and; risk aversion seem to residually affect public sector innovations.

FIGURE 4
Influential factors



Source: Enap's FMIA.
Elaborated by the authors.

Other relevant assumption consists on the configuration theory that advocates that innovation is, normally, a consequence of relationships amongst drivers and innovation types (Walker, 2007). Therefore, table 2 shows how the influential factors vary among the four types of innovation collected by the protocol: service; process; technological process and administrative process. The most mentioned type, technological process (38 winners and 29 runners up) is also very influenced by the four emphasized factors above; however, two individual drivers, innovation acceptance and knowledge/talent are also relevant in this particular type. It also worth mentioning that there were significant differences between winners and nominees in most of the others drivers of the technological process innovations.

Service innovations, with 21 cases in each situation (winners and nominees), seem to be affected by several levels of factors as well. Relative advantage, network/cooperation and leadership are present in a majority of these initiatives. Nevertheless, some drivers from the individual and organizational level, such as commitment/satisfaction, functional autonomy and incentives/awards were rarely cited. Although in service innovation we observe more similarities among factors in the technological process type, leadership and organizational structure, for instance, show how different they are perceived in the reports.

Regarding innovation in processes inside the organizations, a similar pattern of facilitators is observed as the most cited factors that are highly influential. These drivers seem to be more influential to the awardees, while the impact of the second most important group of factors (knowledge and talent; acceptance; organizational structure and; compatibility) is quite homogenous between winners and nominees.

Finally, administrative process innovations correspond to less than 15% of FMIA's winners and 30% of nominees. In that sense, we could assume that intraorganizational innovations appear to be less valued by the prize committees among the four types.

TABLE 2
Influential factors and innovation types

	Technological Process Innovation		Service Innovation		Process Innovation		Administrative	
	Awarded	Nominee	Awarded	Nominee	Awarded	Nominee	Awarded	Nominee
Relative advantage (Char)	32	20	18	14	16	10	13	17
Slack resources (Org)	19	23	8	10	12	6	10	20
Cost benefit (Char)	23	15	6	8	10	4	10	11
Network and interorganizational cooperation (Env)	20	16	13	15	11	9	3	12
Leadership style (Org)	16	8	14	5	10	5	4	14
Knowledge and Talent (Ind)	11	14	4	5	4	4	2	3
Innovation acceptance (Ind)	15	16	6	8	8	8	1	2
Organizational structure (Org)	17	15	4	9	7	7	4	12
Compatibility (Char)	10	4	6	7	7	6	3	6
Creativity (Ind)	9	2	4	2	3	0	2	2
Isomorphism (Env)	6	2	2	2	3	0	2	2
Replicability (Char)	9	1	1	2	3	1	3	1
Regulatory aspects (Env)	3	1	4	1	1	2	6	1
External pressure (Env)	4	1	6	1	4	0	2	0
Easiness (Char)	2	2	2	1	2	0	2	1
Professional conditions (Ind)	5	7	1	2	1	2	2	3
Commitment/Satisfactlon (Ind)	4	4	0	1	3	4	1	2
Risk aversion/Space for learning (Org)	5	0	0	0	0	0	3	0
Incentives/Awards (Org)	0	1	1	0	1	0	1	0
Functional autonomy (Ind)	1	2	0	0	2	2	2	3
Competition (Env)	1	0	0	0	0	0	0	0

Source: Enap's FMIA.
Elaborated by the authors.

4 FINAL REMARKS

The main purpose of this paper was to investigate crucial aspects concerning public management innovation, primarily, its influential factors or drivers. Essentially, this objective is far from simple, since innovation is a complex construct.

The phenomenon's status has escalated in public administration in the last twenty years, especially, because governments have been strategically prioritizing "micro-improvements" solutions to public issues instead of broad reform. In such a context, public organizations have adapted themselves in order to deal with frequent changes in a more globalized and networked world, constrained by rising citizen expectations, complex problems and tight budgets. Their strategic focuses may vary, but generally governments aim to perform better, improving their deliveries.

On one side, it seems to be a hot topic in public administration, on the other, a lack of evidence-based knowledge about different dimensions of innovation prevails, which hampers the state capacity to innovate and, then, provide better services. With the intention to contribute to this relevant debate, we developed a systematic investigation on what are the types, underlying decision-making processes, objectives/results and, mainly, innovation determinants.

To do so, we created a data protocol that quantified the FMIA finalists' reports and found how diverse they were in the last nine years. After employing descriptive analyzes, the research's findings confirm that innovation is a consequence of the combination of factors and not an isolated construct. These innovation drivers have different levels of impact, depending on the innovation type; however, all four levels of influential factors are common in the Brazilian case. In sum, the most recurrent ones are relative advantage; cost benefit; slack resources; network/cooperation and; leadership. We also observed that, contrarily to common sense, the majority of management practices were generated inside the public organizations. They are highly concentrated in the agencies and ministries located in the Capital, Brasilia. Finally, as the literature predicts; organizational size and complexity matter indeed.

Obviously, the inquiry, as any scientific investigation of complex social science phenomenon, faces constraints. First, the empirical basis come from the initiatives teams which naturally tend to overemphazise positive aspects of the innovation and understimate

negative ones. Secondly, the results of the content analysis are fruitful, however not enough quantitative variability to allow undertaking more sofisticated statistic analyzes. The last aspect that deserves consideration regards the subject of analysis. Instead of considering innovation based on award's finalists or *´champions´* as biased research, we strongly believe that is an investigationchoice. We must recognize that award' finalists are not the only innovations in government, since not all agencies, bureaucrats and public officials are willing to apply for it, due to a variety of reasons. However, following a robust subfield of innovation study that has gone in this direction, Borins (2014) argues that focus on *´champions´* may not be the only strategy of analysis, but it is definitely a fruitful subject of investigation to better understand innovation in the public sector.

In that sense, we conclude that the paper has accomplished its objective and, subsequently, has produced some important empirical knowledge and insights to the public management debate. Nonetheless, the results must be treated as preliminary in this broader line of research and, therefore, deserve further investigation. They, certainly, confirm our perception that innovation in public sector is a complex and challenging subject in this comprehensive research field. In order to advance on the innovation determinants, the inquiry next steps should be to comparatively analyze all FMIA candidates, to investigate management trends over the last decade and to examine innovation in other branches and levels of government.

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ANNEX

TABLE A.1
FMIA's initiatives by thematic area and policy sector

Aspect		Entrants		Awarded		Nominee	
Location		N	%	N	%	N	%
	DF	577	56	73	81	62	69
	Other State	457	44	17	19	28	31
Thematic area	Institutional Arrangements	210	20	28	31	19	21
	Process Improvement	260	25	18	20	19	21
	Information Magagement	159	15	16	18	18	20
	Citizen Service	99	10	14	16	9	10
	Evaluation and Monitoring	50	5	8	9	7	8
	Planning and Budgeting	114	11	3	3	12	13
	HR Management	141	14	3	3	6	7
Policy sector	Education	154	15	14	16	10	11
	Economy	112	11	4	4	15	17
	Health	159	15	13	14	15	17
	Social Security	54	5	4	4	4	4
	Presidency	56	5	6	7	5	6
	Communications	71	5	4	4	4	4
	Defense	52	5	0	0	1	1
	Justice	58	6	11	12	7	8
	Planning	47	5	8	9	4	4
	Labor	30	3	2	2	1	1
	Energy	29	3	1	1	1	1
	Agriculture	29	3	2	2	3	3
	Economic Development	35	3	2	2	2	2
	Environment	24	2	3	3	1	1
	Science And Technology	20	2	1	1	2	2
	Agrarian Development	12	1	2	2	2	2
	Transport	14	1	3	3	0	0
	Social Development	20	2	6	7	7	8
	Culture	11	1	0	0	2	2
	Interior	4	0	0	0	0	0
	Tourism	9	1	1	1	0	0
	Foreign Affairs	4	0	0	0	0	0
	Sport	4	0	0	0	0	0
	Cities	4	0	0	0	0	0
	Comptroller General	6	1	2	2	3	3
	Attorney General	16	2	1	1	1	1

Source: Enap's FMIA.
Elaborated by the authors.

TABLE A.2
Decision making approaches' descriptions
APPENDIX

Decision making	Description
Top-Down	Innovation as a result of politicians/officials/top managers' decisions or engagement
Horizontal	Innovation as a process of co-creation between low and mid level 's team/staff with leaders
Bottom up	Innovation under taken by low-l evel staff/team without the involvement of leaders

Source: Enap's FMIA.
Elaborated by the authors.

TABLE A.3
Types' descriptions

Type	Description
Service innovation	The introduction of new services to the existing or new clients and offer of existing services to new clients.
Process innovation	Internal focus and it aims to increase efficiency and effectiveness of the internal organizational processes to facilitate the production and delivery of goods or services to the customers
Technological process innovation	New elements introduced into an organization' s production system orservice operation for producing its products or rendering its services to the citizens
Administrative process innovation	New approaches and practices to motivate and reward organizational members, devise strategy and structure of tasks and units, and modi fy the organization's management processes

Source: Enap's FMIA.
Elaborated by the authors.

TABLE A.4
Objective and outcome's descriptions

Objective/Outcome	Description
Effectiveness	The degree to which something is successful in producing a desired result
Efficiency	Maximum results with minimum resources, energy or time - Productivity
Quality	The degree of excellence of some action (high standards or improved results)
Economy	Minimizing the costs of an activity without compromising the quality standards
Response to the external environment	Meet external demands to the organization
User satisfaction	Improve the perception of service
Social involvement	Engaging sectors outside the organization (citizens, businesses or third sector)

Source: Enap's FMIA.
Elaborated by the authors.

TABLE A.5
Levels and influential factors' descriptions

Level	Factor	Description
Organizational	Slack resources	Availability of financial personnel, time, structure and/or technology resources
	Leadership style	Support and vision of leaders
	Risk aversion/Space for learning	Organizational culture that values "trial and error"
	Incentives/Awards	Policy of continuous incentives and/or awards for staff
	Organizational structure	Organization with clear and effective structuring goals
Environmental	Extemal pressure	Media attention and/or political/social demands
	Network and interorganizational cooperation	Innovation as a resutt of networks participation and/or other relationship between organizations
	Isomorphism	Similar organization adopting the same innovation
	Competition	Cornpetition between organizations
	Regulatory aspects	Need to adapt to changes in the legal system
Innovation characteristics	Easiness	Easy to implement, low complexity
	Relative advantage	More advantageous than lhe previous process/service
	Compatibility	Compatible with the organization/policy's modus operandi
	Replicability	Possibility of replication in other institutions
	Cost benefit	Relatively low cost compared to the benefits oi innovation
Individual	Functional autonomy	Empowerment, voice and influence of the staff
	Professional conditions	Stability, mobility and flexibility at work
	Knowledge and Talent	Experience and Professional Qualification
	Creativity	Ability to create new ideas/solutions to solve problems
	Commitment/Satisfaction	Staff committed and/or satisfied in the workplace
	Innovation acceptance	Satisfaction with the results

Source: Enap's FMIA.
Elaborated by the authors.

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