



## COMPETITIVE DIALOGUE IN PUBLIC PROCUREMENT: AN ANALYSIS FROM THE PERSPECTIVE OF KINGDON'S MULTIPLE STREAMS

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**Abstract:** This article assesses how competitive dialogue in public procurements may contribute to improving Brazilian technological production. A study was developed with the application of Kingdon's multiple streams model (problems, solutions, and policies). Through an exploratory and qualitative methodology, materials available in the Science Direct repository were analyzed after objective criteria backed by the CiteScore metric developed by Scopus. The results indicated the possibility of stimulus to innovation, with the collaboration of the interested parties, sustainability, efficiency, mitigation of the perception of risks, and compensation of administrative deficiencies. Questions regarding the efficiency and efficacy of the public procurement modality were detected. The study was partially sufficient to identify the limits of competitive dialogue as a mechanism for stimulating innovation.

**Keywords:** Competitive dialogue; Technological innovation; Public procurement.

### 1 Introduction

The Brazilian technological development is a priority issue in a scenario where the economy, employment, communications, urban management, and even social relations are ever more dependent on technological innovation. However, various obstacles cause Brazil to present a little-expressive innovation trend, despite being the ninth economy in the world (WORLD BANK, 2019).

In this aspect, poor governance, macroeconomic instability, the negligible cooperation between the market and the scientific research producing poles, the insufficient education indicators, the inapplicability of the existing public policies for fostering innovation and technology, excessive bureaucracy, and difficulties in defending intellectual property are the most commonly mentioned hindrances (UNESCO, 2015; EMERGE BRASIL, 2020; TADEU; SANTOS, 2016; IBGE, 2017; CABRAL; SOUSA; CANÊDO-PINHEIRO, 2020; CARVALHO et al., 2017; FORTEC, 2016).

The technological capacitation agenda becomes even more pressing in the current

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scenario of deindustrialization and reprimarization of the Brazilian productive matrix, guided by the retraction of the role of the industry in the economy and its replacement by the commodities market (OREIRO; FEIJÓ, 2010; CANO, 2012; MARCONI, 2015; MAIA, 2020). Added to this are the signs of productive sparsification (or fraying) in sectors central to technological development such as the informatics, electronics, pharmaceutical, and chemical sectors and the production of vehicles other than automobiles, such as motorcycles, aircraft, naval vessels, and railway equipment (SARTI; HIRATUKA, 2017; MORCEIRO; GUILHOTO, 2020).

Besides the internal factors, there is global evidence in the sense of the return of the production chains from developing countries to the countries of origin, a phenomenon known as reshoring, which may aggravate the Brazilian deindustrialization trend (JOHNSON, 2002).

This scenario coexists with the current moment of structural change in the technological and productive axis that came to be called the Fourth Industrial Revolution or Industry 4.0, the driving force of which is composed by technological transformations of the means of production of the digital revolution and artificial intelligence (WANG et al., 2020).

In this sense, additional difficulties are placed for the adaptation of the Brazilian productive sector, since the research and development of products and services connected to the most promising technologies - the Internet of things and robotics - depend on appropriate infrastructure, insufficient in Brazil (POPKOVA; RAGULINA, BOGOVIZ, 2019; SCHWAB, 2019).

Certain branches of Industry 4.0 represent windows of opportunities for Brazil to carry out the catching-up process, i.e., to reach a level of wealth equivalent to that of nations considered developed (ZAGATO, 2019).

To progress in a converging direction with the developed nations regarding economic and technological terms, in the line of studies on the Schumpeterian model of catching up, Lee (2019) argued that developing countries must seek detours relative to the traditional paths, upon mentioning strategies for creating technological capacitation connected to innovation.

In the Brazilian case, the legal system imposes conditions for executing contracts between the Public Power and the private initiative. Although they propitiate the selection of offers more economically advantageous to the Public Administration, the public procurement rules will not always offer the manager the opportunity to contract products and services that stimulate research, development, or the transferring of technology to the country, which somehow hinders the adoption of the catching-up and leapfrogging strategies proposed by Lee (2019).

The strategic use of the acquisition of products and services as a technological development incentive measure finds a considerable echo in the European community under the name of Public Procurement for Innovation (PPI), a set of solutions aimed to stimulate the market to produce innovation through the governmental purchasing power (EUROPEAN COMMISSION, 2021).

Among the PPI instruments already incorporated within the normative scope of the European Union is competitive dialogue, a public procurement modality in which all the most relevant technical aspects of the products and services to be contracted are preliminarily discussed with the potentially interested companies. On the one hand, the instrument renders the pre-procurement phase more productive, transparent, and participative, and, on the other hand, allows the State to use the technical information resulting from the preliminary dialogues as input for drawing up public notices that seek the contracting of innovative solutions (FEDERAL MINISTRY FOR ECONOMIC AFFAIRS AND ENERGY, 2017).

Law No. 14133 of April 1, 2021, also referred to as the New Law on Public Procurement and Administrative Contracts, introduced competitive dialogue to the Brazilian legal system, with an application, among other hypotheses, to the contracts that involve technological or technical innovation (BRAZIL, 2021a).

Considering the inclusion of competitive dialogue in the list of public procurement modalities in Brazil, the following inquiries direct this analysis: could competitive dialogue contribute to fostering Brazilian technological production? What would the expected results be, and what would be their limits?

To answer the questions, this work was structured so that the next section will address the methodological aspects of the research. After, the theoretical background will be presented through the demonstration of the main aspects of previous studies that tackled the addressed theme. In the end, the implementation of competitive dialogue as a public policy for stimulating technological innovation will be discussed from the perspective of the multiple streams model by Kingdon (2014) and the correlation of each stream (problems, solutions, and policies) with the procurement instrument under study. After, the conclusions and suggestions for future studies will be presented.

## **2 Methodological procedures**

Based on an essentially exploratory and qualitative research methodology, the theoretical background was elaborated to subsidize the analysis and discussion of the theme under the multiple streams method by Kingdon (2014). For such, searches were performed in the Science Direct repository from February 9 to 16, 2021, with English terms "competitive dialogue" and "innovation" and a time frame circumscribed to the last twenty years. After, the articles were classified according to the impact factor of the journals based on the CiteScore metric developed by database Scopus, and the first 35 publications were analyzed. From the analysis and filtering of the articles that were not related to the theme of technological development, a table with the pertinent studies and their main notes regarding the competitive dialogue instrument was elaborated.

Then, competitive dialogue was analyzed from the perspective of the multiple streams

model by Kingdon (2014), a theory developed in 1984 by John Kingdon that comprises the formation of public policy agendas based on the interaction of three streams of actors and processes: problems, solutions (or alternatives), and policies (SABATIER, 2007; MORAN; REIN; GOODIN, 2008; DUNN; 2018; GOTTEMS et al., 2013).

The problem stream involves situations that generate more debate among authorities. Its vectors are indicators, focus-events, and feedback (SABATIER, 2007; GOTTEMS et al., 2013). In turn, the solution stream represents the proposals under discussion for the solution of problems, and its appreciation in the political scenario depends on the technical feasibility, the acceptance by society (or the community), and the tolerance of the costs (KINGDON, 2014; GOTTEMS et al., 2013). And the policy stream handles the most relevant actors in the analysis of the public policies and unfolds in the analysis of the national mood, the organized political forces, and the changes in government (KINGDON, 2014; GOTTEMS et al., 2013).

For the subsumption of the Brazilian reality to the varied analysis criteria of the proposed theoretical tool, we resorted to the analysis of articles from various databases (Scielo, Science Direct, Web of Science, and Google Scholar), the Brazilian federal legislation, international rules including community rules of the European Union, manuals, and technical documents from Brazilian and foreign public agencies, all referenced at the end.

### **3 Theoretical background and bibliographic review**

In view of the criteria established in the previous topic, the results obtained were 57 articles. After the identification of the 35 main articles according to the CiteScore metric, followed by the qualitative analysis of each publication, thirteen documents were excluded for not fitting within the scope of the work (RAMOS et al., 2021; WILLEMS et al., 2020; COLLINS, 2020; VELTER et al., 2020; TAMMI; SAASTAMOINEN; REIJONEN, 2019; SLOOT; HEUTINK; VOORDIJK, 2019; CHEN; ARDILA-GOMEZ; FRAME, 2017; PACHECO-BLANCO; BASTANTE-CECA, 2016; ERNST et al., 2016; KOPPENJAN, 2015; NEČASKÝ et al., 2014; EDITORS-JACCSD, 2013; WINCH, 2013).

The 22 remaining articles, deemed relevant according to the proposed criteria, are presented in Table 1,

**Table 1** – Description of the most relevant articles and their respective contributions

Author(s)	Article	Year	CiteScore
SERGEEVA; ZANELLO	Championing and promoting innovation in UK megaprojects	2018	13
BUSER; KOCH	Emerging metagovernance e as an institutional framework for public private partnership networks in Denmark	2006	13
LIU; WANG; WILKINSON	Identifying critical factors affecting the effectiveness and efficiency of tendering processes in Public–Private Partnerships (PPPs): A comparative analysis of Australia and China	2016	13
LENFERINK; TILLEMA; ARTS	Towards sustainable infrastructure development through integrated contracts: Experiences with inclusiveness in Dutch infrastructure projects	2013	13
WALKER; DAVIS; STEVENSON	Coping with uncertainty and ambiguity through team collaboration in infrastructure projects	2017	13
CUI et al.	Review of studies on the public–private partnerships (PPP) for infrastructure projects	2018	13
CLERCK; DEMEULEMEE STER	An ex ante bidding model to assess the incentive creation capability of a public–private partnership pipeline	2016	13
UYARRA et al.	Barriers to innovation through public procurement: A supplier perspective	2014	11.5
UTTAM; ROOS	Competitive dialogue procedure for sustainable public procurement	2014	10.9
HUFEN; DE BRUIJN	Getting the incentives right. Energy performance contracts as a tool for property management by local government	2016	10.9
SÖNNICHSEN; CLEMENT	Review of green and sustainable public procurement: Towards circular public procurement	2020	10.9
POT	The governance challenge of implementing long-term sustainability objectives with present-day investment decisions	2021	10.9
BRUNO et al.	The promise of Best Value Procurement: governance and (in)stability of specifications within an innovative biogas project	2018	10.9
GOEL; GANESH; KAUR	Sustainability integration in the management of construction projects: A morphological analysis of over two decades' research literature	2019	10.9
UYARRA et al.	Public procurement, innovation and industrial policy: Rationales, roles, capabilities and implementation	2020	10.4
EDLER; GEORGHIOU	Public procurement and innovation—Resurrecting the demand side	2007	10.4

BARLOW;	The private finance initiative, project form and design innovation.	2008	10.4
KÖBERLE- GAISER	The UK's hospitals programme.		
SOE;	Agile local governments: Experimentation before implementation	2018	10.3
DRECHSLER			
KRUCOFF et al.	Medical Device Innovation: Prospective Solutions for an Ecosystem in Crisis: Adding a Professional Society Perspective	2012	9.4
GEORGHIU et al.	Policy instruments for public procurement of innovation: Choice, design and assessment	2014	8.7
O'BRIEN;	Localism and energy: Negotiating approaches to embedding	2010	8.7
HOPE	resilience in energy systems		
BROCK et al.	Light the way for smart cities: Lessons from Philips Lighting	2019	8.7

**Source:** Devised by the authors.

In the methodological aspect, twelve articles were based primarily on case studies, while the others used document analysis and bibliographic reviews. It was possible to notice that the debates about the dialogue involved five specific albeit correlated themes or axes, namely: (i) PPPs and concessions (BUSER; KOCH, 2006; LIU; WANG; WILKINSON, 2016; LENFERINK; TILLEMA; ARTS, 2013; CUI et al., 2018; CLERCK; DEMEULEMEESTER, 2016); (ii) management of contractual risks (GOEL; GANESH; KAUR, 2019); (iii) sustainability (UTTAM; ROSS, 2014; HUFEN; DE BRUIJN, 2016; BRUNO et al., 2018; GOEL; GANESH; KAUR, 2019; POT, 2021; O'BRIEN; HOPE, 2010); (iv) cooperation or collaboration between the contracting parties (SOE; DRECHSLER, 2018; SERGEEVA; ZANELLO, 2018; KRUCOFF et al., 2012; SÖNNICHSEN; CLEMENT, 2020); and (v) innovation fostering (BARLOW; KÖBERLE-GAISER, 2008; EDLER; GEORGHIU, 2007; UYARRA et al., 2020; UYARRA et al., 2014; BROCK et al., 2019; GEORGHIU et al., 2014).

One of the articles signaled that competitive dialogue was relevant for closing public-private partnerships (PPPs) in Denmark (BUSER; KOCH, 2006), which meets the conclusions of the work by Liu, Wang, and Wilkinson (2016), who, upon analyzing various public procurement models used within a global scope, listed competitive dialogue as one of the kinds of competitive public procurement carried out in multiple stages, also highlighting that multiple-stage public procurement is more advantageous in terms of innovation.

Validating the work by Buser and Koch (2006), Lenferink, Tillema, and Arts (2013) pointed out that competitive dialogue constitutes a kind of public procurement that channels the demands of the contracts denominated Design-Build-Finance-Maintain (DBFM) used in the Netherlands, similar to the concession contracts of the Brazilian law. In short, these three studies signal the trend of using competitive dialogue in public procurements involving concessions and PPPs, contracts the subject matter of which is more complex or involves significant figures.

Still on the theme of PPPs, Cui et al. (2018) identified that competitive dialogue was a relevant factor for the more considerable slowness in this kind of contract, while Clerck and Demeulemeester (2016) emphasized the scarcity of academic works on public procurement in the competitive dialogue modality involving PPPs.

Four studies stressed the role of competitive dialogue to stimulate the cooperation between the Public Administration and the bidders (SOE; DRECHSLER, 2018; SERGEEVA; ZANELLO, 2018; KRUCOFF et al., 2012; SÖNNICHSEN; CLEMENT, 2020). It stands out that Krucoff et al. (2012) marked that the preliminary dialogues between the parties may contribute to reducing certain barriers such as the lack of resources, and that professional associations are well-positioned to intermediate and aid the interested parties in carrying out competitive dialogues. When studying the project for constructing an integrated urban traffic project between Helsinki, in Finland, and Tallinn, in Estonia, Soe and Drechsler (2018) mentioned the use of competitive dialogue as a tool for executing the pilot phase of the public procurement, in which drivers, traffic specialists, and authorities were heard by the Public Administration.

Of the analyzed works, six give focus to sustainability (UTTAM; ROSS, 2014; HUFEN; DE BRUIJN, 2016; BRUNO et al., 2018; GOEL; GANESH; KAUR, 2019; POT, 2021; O'BRIEN; HOPE, 2010). In this regard, from a case study related to the use of the competitive dialogue procedure for the construction of the *Kvarnholmen link* bridge in Stockholm, Sweden, Uttam and Ross (2014) concluded that competitive dialogue might function as a mechanism for including sustainability in public procurements, and recommended that the Public Administration use provisional procurement objects (provisionally preferred solution, PPS) to stimulate the bidders to adhere to the desired sustainability standards.

The correlation between competitive dialogue and green procurement was also addressed by Hufen and De Bruijn (2016), who, in a case study about contracts for energy conservation products and services in the Dutch city of Rotterdam, concluded that competitive dialogue, associated with the formation of public-private partnerships and the execution of management and performance contracts (MPC), presented improvements relative to the previous contract executed by Rotterdam relative to the energy conservation infrastructure. Lastly, two other works analyzed refer to competitive dialogue as an example of an instrument for sustainable procurements (BRUNO et al., 2018; GOEL; GANESH; KAUR, 2019).

Notwithstanding, one of the analyzed articles refutes the conclusions of the mentioned works based on the premise that the concept of sustainability is ambiguous, which hampers its implementation through public procurements. It also concludes that the budgetary restrictions imposed at the political level also stimulate the manager to seek non-sustainable products or services (POT, 2021).

From a case study related to the use of a Private Finance Initiative (PFI) contract, similar to the Brazilian concession contract, with the objective of building or renovating homes for senior

citizens in northeast England, O'Brien and Hope (2010) observed that competitive dialogue started to draw the attention of some of the energy market innovation developers and, in the studied case, allowed the managers to explain to the bidders the reasons why the projects required the use of clean energy and offer them specific information about the local reality and the available resources.

Under the innovation fostering prism, based on a case study related to the building of six hospitals in the United Kingdom in partnerships closed by the Public Administration with private companies, Barlow and Köberle-Gaiser (2008) concluded that using the State's purchasing power to stimulate innovation - which may be done through competitive dialogue - does not provide automatic benefits in either innovation nor efficiency. It is important to emphasize that this study does not dismiss the role of competitive dialogue in fostering innovation but suggests that the importance of PPIs, in general, must be contextualized with other contractual aspects that limit innovation, especially the risk reduction clauses.

In a study on Directives 2004/17 and 18/2004 of the European Community, Edler and Georghiou (2007) listed competitive dialogue as an instrument that enables preliminary debates between the Public Administration and the suppliers about technical and competitive aspects of the subject matter of the public procurement, constituting an innovation fostering instrument. In turn, Uyarra et al. (2020) studied the various roles played by the acquisition of products and services by the Public Administration, among them the stimulus to innovation, and mentioned competitive dialogue as an example of a form of early relationship with the market for incentivizing the development of innovative solutions.

Based on a case study on the implementation of technological solutions for intelligent cities in four Dutch municipalities, Brock et al. (2019) reported that the city of Eindhoven, aware of the difficulty in defining all necessary requirements for an intelligent city in the initial proposals of the public procurement, used a competitive dialog procedure that proved to be successful and allowed the contracting of a consortium that was capable of implementing a lighting system that remains open for other suppliers to carry out incremental improvements. In the opposite direction, supported by the analysis of the instruments used by the OECD for incentivizing innovation and also the analysis of a survey with 800 suppliers of the United Kingdom public sector, Georghiou et al. (2014) concluded that innovation incentive policies, among them the use of public procurement in the competitive dialogue modality, were not sufficient to remove the existing barriers.

Under the premise that competitive dialogue constitutes an appropriate instrument for fostering innovation, Uyarra et al. (2014) exploited data collected in a survey with suppliers of the Public Administration in the United Kingdom to express the correlation between the lack of capacitation and the use of this public procurement modality.

Regarding the theme of risk perception, three of the analyzed articles support the



conclusion that competitive dialogue may contribute to the perception and management of hindrances in public procurements due to the communication established between the parties (GOEL; GANESH; KAUR, 2019; SÖNNICHSEN; CLEMENT, 2020). However, one of the observed studies refuted this conclusion, emphasizing other instruments for this purpose, such as compliance with the budget and the need to impose targets (POT, 2021).

Among other topics debated in the analyzed studies, from an assessment of megaprojects in the United Kingdom, specifically the Bank Station Capacity Upgrade, Sergeeva and Zanello (2018) mentioned that competitive dialogue allowed, from the beginning, the exploration of new ideas for the best strategy for delivery of the work and maximization of its benefits, besides providing the necessary time for obtaining the collaboration of suppliers in the supply chain. In turn, Sönnichsen and Clement (2020) highlighted that pre-commercial procedures, public-private partnerships, and competitive dialogue are instruments that facilitate the non-discriminatory selection of suppliers in public procurements of complex and large-scale projects, also assessing that competitive dialogue must be used in contracts that are particularly complex as for the technical, physical, financial, and legal aspects, in which case it may amplify the assertiveness of the managers upon allowing the creation of productive relationships with the possible suppliers, besides mitigating the perception of risk and indicating the most innovative solutions. One of the analyzed works identified competitive dialogue as an example of an adaptation of the Integrated Project Delivery (IPD) project management model, characterized by the high level of collaboration between the involved parties (WALKER; DAVIS; STEVENSON, 2017).

## **4 Analysis and discussion of results**

### **4.1 Problem stream**

The problem stream or flux is based on the premise that not all socially relevant matters draw the attention of the persons responsible for managing the governmental agenda, depending, according to Kingdon (2014), on governmental indicators, crises, and the feedback on government actions.

Various indicators point to the need for adopting public innovation incentive policies in Brazil. The latest Innovation Survey (PINTEC) by the Brazilian Institute of Geography and Statistics (IBGE) referring to the 2015-2017 period revealed a reduction from 36% to 33.6% in the innovation rate compared to the previous survey, for 2012-2014 (IBGE, 2017; DE NEGRI et al., 2020). De Negri et al. (2020) pointed out that relevant indicators of the PINTEC denote a drop in the innovation scenario, such as in investment in research and development (R&D) relative to the gross domestic product (GDP) and investments in R&D relative to the net sales revenue (NSR). Based on the data disclosed in 2017 by the Brazilian Ministry of Science, Technology, Innovation, and Communications (MCTIC), Koeller (2020) stressed the significant reduction in governmental investments in R&D, with the decrease in investments of capital made available to

the budget of the Coordination for the Improvement of Higher Education Personnel (CAPES) and the National Council of Scientific and Technological Development (CNPq).

The economic recession that occurred in Brazil stemming from the political and fiscal crises experienced in the country from 2014 constitutes a relevant event for the stimulus to a technological innovation agenda, given that there is an evident correlation between technological development and growth of productivity indices (VELOSO, 2017).

Nowadays, the global health crisis stemming from the COVID-19 pandemic imposes the governmental stimulus to the research of vaccines, medications, diagnostic tests, and medical equipment such as respirators and protective equipment (DE NEGRI; KOELLER, 2020).

Such events were capable of influencing the political debate in the sense of the adoption of reforms within the scope of public procurements, and they may somewhat justify the fast processing of Bill No. 4253/2020 by the Chamber of Deputies (BRAZIL, 2020), which gave origin to the effective Law No. 14133/2021, stressing that the novel legislation started to list the incentive to technological innovation and socioeconomic development as objectives of the public procurement procedure (BRAZIL, 2021a).

Regarding the feedback on governmental actions, various studies expatiate on the need to modernize the old Law on Public Procurement and Contracts - Law No. 8666/1993 (BRAZIL, 1993) to improve the integrity rules (DIAS, 2020; SANTOS; SOUZA, 2016), render it more flexible in specific situations (JUSTEN FILHO, 2020), reduce inefficient formalisms or rites (FIUZA; MEDEIROS, 2013), and explore atypical roles of the public procurements, such as their regulatory role (OLIVEIRA, 2012; FERRAZ, 2009).

#### **4.2 Solution stream**

Upon addressing the solution stream, Kingdon (2014) mentioned the set of ideas or proposals suggested by governmental and academic agents and interest groups to solve problems. This aspect is governed by chaotic movements of emergence, modification, and recombination, in view of the contingencies and peculiarities of the public debate, so some ideas are discarded while others are elevated to the level of policy. However, the technical viability, the acceptance by the community, and the tolerable costs are factors that help explain the debacle or success of specific solutions.

In the field of technical viability, one may state that competitive dialogue finds a legal, economic, and social backing, being an instrument fit for use in the country. In the legal aspect, it is found that there is material compatibility between the Federal Constitution and the provisions of Law No. 14133/2021 that included competitive dialogue in the system, insofar as the Constitution itself determines the adoption of public procurement procedures to carry out public procurements and has an extensive body of programmatic rules for incentivizing science, technology, and innovation. Under the legal, economic, and social perspectives, both Senate Bill

No. 559/2013 by the Federal Senate (FS) and the project to which it was appended upon arriving at the Chamber of Deputies (Bill No. 1292/1995) received favorable opinions as a result of the joint work by the Committee for Constitution, Justice, and Citizenship (CCJ/FS), the Committee for Economic Affairs (CAE/SF), and the Committee for Services and Infrastructure (CI/SF) of the Federal Senate (BRAZIL, 2013b), and the Select Committee of the Chamber of Deputies (BRAZIL, 2018).

The Brazilian legal literature presents comments favorable to the institution, such as the legitimization of practices that already occurred informally (NIEBUHR et al., 2020; LOUREIRO, 2019), the gains in versatility and margin of action for managers (NOHARA, 2018; OLIVEIRA, 2017; ROCHA, 2017; VAZ, 2020), the possibility of the solution of specific or complex administrative demands (SILVA, 2020; ROCHA, 2017; ZAGO; RODRIGUES, 2019; LOUREIRO, 2019; ROSILHO, 2021), and the effective implementation of a mechanism for discussion and dispute among the bidders themselves (JUSTEN FILHO, 2015). A pertinent criticism was vented by Rosilho (2021), to whom the opinion of control agencies, provided for in article 32, §1, XII of Bill No. 4253/2020, would end up acquiring a binding quality and would hinder the procurements, implicating in the sequestration of the administrative activity by the inspection activity. Such criticism was partially adopted by the Brazilian Presidency, which vetoed the provision under the argument that the proposition harmed the distribution of competences provided in article 71 of the Federal Constitution, besides violating the principle of the separation of branches of government (BRAZIL, 2021b).

Regarding the criterion of acceptance by the community, one could argue that the legislative activity itself is an indication that society, through its democratically elected representatives, agreed with the debated institution. Besides, the commented kind of public procurement is applied in the European Community, in which it finds statutory provision since 2004, the year in which the European Parliament adopted Directive No. 2004/2018.

Moreover, competitive dialogue has tolerable costs insofar as it is an essentially instrumental public policy that does not impose major expenses, except for expenses associated with the bureaucracy for carrying out and registering the preliminary debates, preselecting the bidders, and the occasional contracting of professionals to technically advise the procurement committee (article 32, §1, VI and XI of Law No. 14133/2021) (BRAZIL, 2021a). Studies mentioned in the systematization of literature indicate that competitive dialogue may amplify the assertiveness of the manager (SÖNNICHSEN; CLEMENT, 2020; GOEL; GANESH; KAUR, 2019), promote efficiency (KRUCOFF et al., 2012), and propitiate sustainable adjudications (UTTAM; ROOS, 2014; HUFEN; DE BRUIJN, 2016; BRUNO et al., 2018), from which is concluded, by logical unfolding, the likely reduction of public expenses inherent to the contracts executed through competitive dialogue.

### 4.3 Policy stream

The policy stream tackles the dynamics of power, i.e., the varied plexus of organized political forces or events that influence congress members and rulers (KINGDON, 2014; CAPELLA, 2005). Its systematization in the multiple streams model occurs through (i) the national mood, something like the sense or feeling of the civil society, one may say the public opinion; (ii) the action of the organized political forces, which comprise the action of pressure groups, the mobilization, and the political behavior of the elites; and (iii) the changes in government, a complex component that encompasses from alterations to the board of managers/legislators to the form of action of government bodies, agencies, or committees (KINGDON, 2014; GOTTEMS et al., 2013).

Demands from society, political elites, and pressure groups for reformulations in the revoked Law No. 8666/1993 date back to the beginning of its effectiveness. From 1993 to 1995, the Law was the subject matter of 28 legislative proposals for amendment and, in its total effectiveness period (twenty-eight years), 648 proposals. For comparison purposes, the Portuguese Code of Public Contracts had sixteen modifications promoted by various species of rule since coming into effect (January 29, 2008), while Law No. 8666/1993, in the same period, was the object of 47 amendments (PORTUGAL, 2008; BRAZIL, 1993).

This demanded changes in the Law on Public Procurement that would converge with the government stimuli to technological innovation, which propitiated the edition of an expressive set of rules, notably Laws No. 9648/1998, 10973/2004, 11107/2005, 11196/2005, 12715/2012, 12873/2013, 13204/2015, and 13243/2016 (BRAZIL, 1998; BRAZIL, 2004; BRAZIL, 2005a; BRAZIL, 2005b; BRAZIL, 2012; BRAZIL, 2013a; BRAZIL, 2015; BRAZIL, 2016) and Provisional Presidential Decree No. 495/2010, converted into Law No. 12349/2010 (BRAZIL, 2010a; BRAZIL, 2010b).

The political dynamics may also be explained by the perception of the congress members that the previous Law on Public Procurement constituted a hindrance to innovation. This conclusion, corroborated by jurists (JUSTEN FILHO, 2010; OLIVEIRA, 2012; FERRAZ, 2009; RAINHO, 2018), echoed in the debates carried out throughout the parliamentary works that culminated in the approval and subsequent promulgation of Law No. 14133/2021, as per below:

Now we also have a new modality, which is competitive dialogue. This competitive dialogue comes to add to the other already existing modalities. It will facilitate the contracting of companies that have proposals that come to resolve problems identified by the federative entities. It is very good; it is a very significant advancement. This is already practiced in other First World countries (ROCHA, 2019, p. 59).

Lastly, the most important thing for me is that we are going to, once and for all, render the Brazilian State capable of purchasing innovation. Through competitive dialogue provisions and procedures for the expression of interest, we will manage to contract startups, contract solutions to problems the

solutions of which we do not yet know. This will render it much easier to get the collective intelligence of Brazilian society to help the Government resolve its own problems. As I said, we have been trying to modify this law for 24 years. So I ask all those here that, yes, let us discuss this matter, but let us vote on it soon because it is very important. The whole of Brazil is waiting for a new Law on Public Procurement and a new public procurement system (RIGONI, 2019a, p. 242).

And the most important of all to me: the Brazilian State was so far incapable of purchasing innovation because of Law No. 8666. With this new Law on Public Procurement, through competitive dialogue and the proposals of expression of interest, which are two very important provisions that we bring and that are innovations, we will have the possibility to contract innovation. And it will be much easier for Mayors, Governors, and, obviously, all public managers to contract innovation and be more efficient (RIGONI, 2019b, p. 257).

The political and social commitment to modernizing the public procurement legislation, associated with the publicity in the sense that competitive dialogue could grant the flexibility necessary for promoting innovation incentive policies, explains the fast processing in 2019 and 2020 of Bill No. 4253/2020, which was approved by the Brazilian President with seventeen vetoes in April of this year.

## 5 Conclusion

This study sought to analyze the institution of competitive dialogue in public procurements as a technological innovation fostering measure in Brazil upon investigating the expected results and the limits to applying this instrument for this purpose. From the systematic literature review, it was concluded that competitive dialogue will be able to stimulate innovation, the collaboration between the parties involved in the public procurement, sustainability, the non-discriminatory selection of the bidders, and efficiency, besides amplifying the assertiveness and mitigating the perception of risk by managers, along with compensating administrative deficiencies

Within the scope of the adopted methodological cutout, some studies questioned the efficacy or efficiency of competitive dialogue as an instrument capable of fostering innovation and sustainability or reducing the perception of risks by managers. This perception merits prominence to demonstrate that there is no unanimity or consensus on the theme, so the improvement of the discussions allows for future debates and studies regarding the conclusions of these works.

Hence, it was identified that vectors in the three proposed theoretical streams contributed to the legislative adoption of competitive dialogue in Brazil as an innovation stimulus measure. In the problem stream, low innovation indicators in Brazil, associated with the economic recession faced by the country since 2014, the health crisis derived from the COVID-19 pandemic, and the feedback by specialists in the field of public procurement regarding the need

for modernizing the revoked Law on Public Procurement, gathered to form the agenda around the adoption of administrative instruments more appropriate to the innovation market.

Regarding the solution flow, it was verified, based on the legislative analysis in public documents relative to the processing and legislative debates of Bill No. 4253/2020, that competitive dialogue finds legal, economic, and social backing for its implementation in the country, is socially tolerated, and presents a perspective of the reduction of costs to the Public Administration.

As for the policy flow, the dynamic of considerable rejection by society, political elites, and pressure groups to the system of Law No. 8666/1993, as well as the search by these same groups for legislative solutions to incentivize innovation, contributed to explain the quick approval in the past two years of Bill No. 4253/2020.

The systematic literature review and the analysis of the theme by Kingdon's multiple streams theory were partially sufficient to identify the limits of competitive dialogue as an innovation stimulation tool. Hence, the possibility of devising case studies focused on analyzing the occasional limitations of the discussed instrument is pointed out.

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