PARTICIPATORY BUDGETING IN COVID-19 TIMES: A PERSPECTIVE FROM PARANA AND PORTUGUESE MUNICIPALITIES

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\textbf{ABSTRACT}

\textbf{Purpose:} The aim of this article is to explore the barriers imposed by the COVID-19 pandemic to Participatory Budgeting (PB), considering the perspective of Brazilian and Portuguese Local Public Administration.

\textbf{Theoretical framework:} Recent literature points out that the barriers imposed on PB processes arising from the crisis of the COVID-19 pandemic are justified by many leaders due to social distancing measures and the expansion of financial constraints.

\textbf{Design/methodology/approach:} An online questionnaire was applied using a Likert-type scale to assess the perception of public officials, in Paraná and Portugal, about the barriers imposed by the COVID-19 pandemic to PB. Through a quantitative approach, data were presented and analyzed using descriptive statistics and the Chi-square test of adherence.

\textbf{Findings:} The survey contributors from the Portuguese municipalities indicated that the crisis caused by the COVID-19 pandemic had a negative impact on the conduct of PB processes. The possible restrictive consequences caused by the COVID-19 pandemic on the realization of PB in the future are not clear, according to the responses obtained in the two contexts analyzed.

\textbf{Research, Practical & Social implications:} Future studies may include the perspective of the participants in the process and the possible reduction in the amounts available for the execution of the PB due to the pandemic of COVID-19.

\textbf{Originality/value:} COVID-19 alone cannot bring citizens to the periphery of public policy decisions. Difficulties prior to the pandemic, such as the absence of an online platform contributed to limiting the participatory space.

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RESUMO

Objetivo: O objetivo deste artigo é explorar as barreiras impostas pela pandemia de COVID-19 ao Orçamento Participativo (OP), considerando a perspectiva da Administração Pública Local Brasileira e Portuguesa.

Referencial teórico: A literatura recente aponta que as barreiras impostas aos processos de OP decorrentes da crise da pandemia do COVID-19 são justificadas por muitos dirigentes devido às medidas de distanciamento social e à ampliação das restrições financeiras.

Desenho/metodologia/abordagem: Um questionário online foi aplicado usando uma escala do tipo Likert para avaliar a percepção dos agentes públicos, no Paraná e em Portugal, sobre as barreiras impostas pela pandemia de COVID-19 ao OP. Por meio de uma abordagem quantitativa, os dados foram apresentados e analisados utilizando a estatística descritiva e o teste Qui-quadrado de aderência.

Resultados: Os colaboradores da pesquisa dos municípios portugueses indicaram que a crise causada pela pandemia de COVID-19 teve um impacto negativo sobre a realização dos processos de OP. Não são claras as possíveis consequências restritivas provocadas pela pandemia de COVID-19 na realização do OP no futuro, de acordo com as respostas obtidas nos dois contextos analisados.

Pesquisa, implicações práticas e sociais: Estudos futuros podem incluir a perspectiva dos participantes no processo e a possível redução dos valores disponíveis para a execução do OP em função da pandemia de COVID-19.

Originalidade/valor: A COVID-19 por si só não pode levar os cidadãos à periferia das decisões de políticas públicas. Dificuldades anteriores à pandemia, como a ausência de uma plataforma online contribuíram para limitar o espaço participativo.


RESUMEN

Propósito: El objetivo de este artículo es explorar las barreras impuestas por la pandemia del COVID-19 a los Presupuestos Participativos (PP), considerando la perspectiva de la Administración Pública Local brasileña y portuguesa.

Metodología: Se aplicó un cuestionario en línea utilizando una escala tipo Likert para evaluar la percepción de los funcionarios públicos, en Paraná y Portugal, sobre las barreiras impuestas por la pandemia de COVID-19 en la PB. Mediante un enfoque cuantitativo, los datos se presentaron y analizaron utilizando estadísticas descriptivas y la prueba de Chi-cuadrado de adhesión.

Conclusiones: Los encuestados de los municipios portugueses indicaron que la crisis provocada por la pandemia de COVID-19 tuvo un impacto negativo en la realización de los procesos del PP. Las posibles consecuencias restrictivas causadas por la pandemia de COVID-19 sobre la realización de la PB en el futuro no están claras, según las respuestas obtenidas en los dos contextos analizados.

Implicaciones de la Investigación: Los estudios futuros pueden incluir la perspectiva de los participantes en el proceso y la posible reducción de las cantidades disponibles para la ejecución de la PB como resultado de la pandemia de COVID-19.

Palabras clave: Presupuestos Participativos, Gobiernos Locales, Brasil, Portugal, Pandemia COVID-19.
INTRODUCTION

The COVID-19 pandemic is an unprecedented event. It began as a health emergency generated by a new disease that caused a high number of deaths, followed by a social, economic and financial crisis of global proportions (Anessi-Pessina et al., 2020; Chattopadhyay et al., 2022). The impact of this pandemic has altered the daily lives of populations around the world, affected household economies, forced national and subnational governments to manage declining revenues, and transformed patterns of behavior, practices, and processes (Bardovič & Gašparík, 2021).

As a process through which citizens decide or contribute to decision-making on public investments, especially at local level (Cabannes, 2009; Santos, 1998); PB is one of the most important innovations in governance and participatory democracy worldwide (Cabannes & Lipietz, 2015). The cities of Porto Alegre, São Paulo, Palmela, Lisbon, New York or Paris are just a few examples of cities that use PB and foster citizen participation in the discussion and decision-making on local public policies.

The pioneering approach of the PB occurred in the city of Porto Alegre (capital of the state of Rio Grande do Sul) in Brazil, in 1989, followed by national and international repercussions, whether through the development of a complex instrument of dialogue with citizens, or through continuity over time (Avritzer, 2008; Lüchmann, 2014; Sintomer et al., 2012). Portugal was also influenced by this dynamic, with the pioneering experience taking place in Palmela, in the district of Setúbal, in 2002 (Dias & Allegretti, 2009; Falanga & Lüchmann, 2019).

If Brazil is responsible for the wide dissemination of PB since the 1980s, Portugal is currently the country with the largest number of processes in the world, aspects that make these countries paradigmatic in the expansion of the mechanism (Falanga & Lüchmann, 2019). In the context of this research the state of Paraná (Brazil) was selected for data collection as compatible with Portugal in relation to territorial size and number of municipalities.

The goal of this paper is to explore the barriers imposed by the global pandemic of COVID-19 to PB, considering the perspective of Brazilian (Paraná) and Portuguese Local Public Administration. The research considers that the limitations in the realization of the PB during the pandemic caused restrictions, changed the form, caused the suspension or cancellation of processes, causing a negative impact with the potential to cause consequences in the post-health crisis period. From the hypothesis presented, the research intends to answer the following questions: Has the COVID-19 pandemic caused a negative impact on the
performance of PB processes? Are the possible barriers imposed by COVID-19 perceived with the potential to impact the post-pandemic period?

The COVID-19 pandemic is a recent phenomenon that has caused several changes around the world (Bardovič & Gašparík, 2021), including changes in participatory processes. Few authors have so far explored the barriers imposed on PB originating or accentuated by the crisis. In this context, there is a gap to be analyzed regarding the perception of barriers arising from the COVID-19 pandemic in carrying out PB in two countries that are so important for the development of the mechanism, such as Brazil and Portugal. The research intends to contribute theoretically to the broadening of the spectrum of analysis by collaborating with elements about PB. It also intends to contribute to the perspective of the municipalities of Paraná and Portugal by indicating the local governments’ perception of the barriers imposed by the COVID-19 pandemic. Accordingly, it intends to provide elements to improve the understanding of the obstacles to mechanism, both for academics and participants in the process.

Besides this introduction, the article is structured in four more sections. The next section deals with the theoretical contextualization of the research, deals with the development of PB in Brazil and Portugal, gathering the similarities and differences of each case. Then it addresses the barriers caused by the COVID-19 pandemic to the participation mechanism. The third section deals with the methodology of the research, characterizing the sample, the description of the instrument used for the collection and treatment of data. The fourth section presents and discusses the results obtained through the survey sent to the Portuguese municipalities and cities of the state of Paraná in Brazil. The fifth section presents the conclusions and proposes possible approaches for future research on the subject.

THEORETICAL BACKGROUND

Section 2 seeks to identify, by means of the literature on the subject, the similarities, and differences in the context of the development of the participation mechanism in the two environments analyzed, Brazil and Portugal.

In addition to addressing some of the effects of the crisis triggered by the COVID-19 pandemic, an event of global dimensions that added to or emphasized the barriers of PB. This section addresses the aspects triggered by the COVID-19 pandemic on PB processes. In an uncertain environment, the barriers imposed by the health crisis caused restrictions to the realization of the mechanism (Bardovič & Gašparík, 2021; Bhusal, 2020; Cho et al., 2021; Poplawski, 2020).
PB in Brazil and Portugal

Brazil and Portugal have similarities and differences regarding the expansion environment of PB processes. Both countries alternated from dictatorial regime to democracy. Portugal in the mid-1970s and Brazil in the mid-1980s, both of which provided for in their new National Constitutions instruments to promote citizen participation in politics (Falanga & Lüchmann, 2019).

The city of Porto Alegre, capital of the state of Rio Grande Sul, stood out in Brazil due to the organizational capacity of civil society and the degree of use of the legal framework provided by the new Federal Constitution (Avritzer, 2006). In this environment, the first PB in Brazil was started in 1988 through a coalition of left-wing parties called “Frente Popular”, composed by “Partido dos Trabalhadores” and the former Brazilian Communist Party, now denominated “Partido Popular Socialista” (Falanga & Lüchmann, 2019). Although the “Partido dos Trabalhadores” is responsible for most cases of PB in absolute numbers, between 1989 and 2012, the mechanism was adopted by 256 municipalities from different political parties across the ideological spectrum, for at least one administration (Bezerra, 2017).

Porto Alegre's PB introduced regional and thematic assemblies, the Participatory Budget Council, and deliberation on the constitution of the participatory process by the participants themselves (Avritzer, 2006). The OP's pioneering experience aimed to allocate a portion of public resources to the neediest sectors of society (Baiocchi, 2001; Touchton & Wampler, 2014).

The highest incidence of PB processes in Brazilian municipalities occurred between 2000 and 2004, followed by a continuous decrease until 2012 (Spada, 2012). There is a decrease in PB processes in Brazil that is more intensely perceived after the 2016 elections (Dias et al., 2019). Falanga and Lüchmann (2019) suggest that there is a slow decline in the number of PB processes in the country, due to the reduced participation of “Partido dos Trabalhadores” in the government of municipalities after 2016, while at the same time they perceive the adoption of the mechanism by other left and right-wing parties.

As for the decrease in PB processes in Brazil, another approach suggests that in the early 1990s, Brazilian municipalities had greater capacity to make investments and execute the proposals defined in the participatory process, even if by increasing debt without long-term support (Bezerra, 2017). For the author (Bezerra, 2017), and among the reasons for the decline in the number of PB processes in Brazil, are the set of subsequent norms that aimed at the fiscal and financial balance of municipalities, such as the Fiscal Responsibility Law (LRF) of 2000, and social policy legislation that established links between revenue and expenditure, which
guaranteed resources for the social area, but reduced discretion and limited the possibility of spending.

According to data from the year 2016, Brazil had 435 PB processes in local governments (Dias et al., 2019). According to the Brazilian Network of Participatory Budgeting, in 2014 Paraná had 13 cities using PB (RBOP, 2016). During the COVID-19 pandemic, 32 active PB processes were observed in local governments in Brazil in 2020 (Dias et al., 2021).

In Portugal, the end of the dictatorial period (1933-1974), marked by the Carnation Revolution of April 25, 1974, and the social pressure for the promotion of a democratic regime favored the definition of the national Constitution of 1976 (Falanga & Lüchmann, 2019). The transformations resulting from the transition to democracy were fundamental for the expansion of participatory spaces established in the legal-institutional framework presented in the country's Constitution (Gurgel, 2013).

Portugal's sociopolitical environment, from the perspective of citizens' discontent with representative democracy, explains the dissemination of PB as a way of bringing the population and elected representatives closer together (Falanga & Lüchmann, 2019). The expansion of participatory processes in Portugal was substantially influenced by Porto Alegre's PB, which was widely disseminated at the World Social Forums held in Latin America in the 1990s (Falanga & Ferrão, 2021).

Initially, most PB experiences in Portugal were of a consultative nature, such as the implementation of the first process by the Communist Party in 2002, in the small municipality of Palmela, near Lisbon (Dias & Allegretti, 2009; Falanga & Lüchmann, 2019). The second generation of PB in the country is characterized by the expansion of deliberative processes, in which citizens provide proposals and vote on projects (Dias & Allegretti, 2009). This second stage of PB in Portugal focuses on regaining citizens' trust and has adhesion from both left and right-wing parties (Falanga & Ferrão, 2021; Falanga & Lüchmann, 2019).

The diffusion of PB in Portugal, which began in 2000s, continued its expansion after the financial and socio-political crisis of 2008 (Falanga & Ferrão, 2021). According to the same authors (2021), the country has one of the highest rates of local PBs in the world and implemented the first on a national scale in 2017. Portugal had in 2019, 124 PB processes in municipalities (Dias et al., 2019). During the pandemic of COVID-19, in the year 2020, 122 processes were observed in local governments in the country (Dias et al., 2021).

Among the differences that mark the dissemination of PB between the two countries are the reduction in the number of municipalities that adopt the mechanism in Brazil (Bezerra, 2017) and the expansion in Portugal (Falanga & Ferrão, 2021). Another feature refers to the
mechanism’s goals, in Brazil, the search for the expansion of social justice through the inclusion of the poorest at the center of the participatory process was one of the main motivators (Touchton & Wampler, 2014), while in Portugal PBs represent a way to improve the relationship between voters and elected officials, to regain the trust of citizens (Falanga & Lüchmann, 2019).

**Barriers of PB related to COVID-19 pandemic**

The global crisis caused by COVID-19 has led governments around the world to adopt Public Administration measures to contain the spread of the disease. The capacity of national health systems has a limit to attend to those infected by the disease, to avoid the possibility of not serving all patients in a given period, many national and local governments have adopted measures so that the number of infected does not exceed the maximum of the capacity supported by the health system (Vidal, 2020). Among the barriers imposed by the crisis are restrictions on circulation and face-to-face meetings, resulting from measures adopted by governments to combat COVID-19 (Bardovič & Gašparík, 2021; Bhusal, 2020).

Governments have been forced to provide immediate responses for the health sector, in addition to providing support for families, workers and businesses (Bresser-Pereira, 2020). A large portion of the countries affected by COVID-19 will experience high government deficits and debt, putting the budget in a central role in the face of the crisis (Anessi-Pessina et al., 2020; Bresser-Pereira, 2020). A key aspect for carrying out the PB is the availability of resources for its funding (Bardovič & Gašparík, 2021). Restrictions on face-to-face meetings and reduced revenue are among the reasons used by local governments to suspend, cancel, change the deadline or in-person format of the PB process (Bardovič & Gašparík, 2021; Bhusal, 2020; Cho et al., 2021; Poplawski, 2020). Barriers of PB process arising from the COVID-19 pandemic were analyzed by researchers in Slovakia, France, Poland and Nepal.

In Slovakia, most local governments have chosen to suspend the PB (Bardovič & Gašparík, 2021). According to Bardovič and Gašparík (2021), among the actions taken by municipalities that decided to suspend the process, was to change the PB cycle to two years. A similar measure was adopted in some Polish municipalities, since the pandemic caused a change in the calendar, allowing more time for adaptations to the new reality (Poplawski, 2020). In France, it was verified that some PB processes were postponed for several months, others canceled; in the municipalities where they were carried out, there was a reduction in the number of proposals presented, and in others there were increases in the initiatives (Cho et al., 2021).
In Nepal, it was found that the COVID-19 pandemic played a relevant role in the postponement of the annual PB drafting process (Bhusal, 2020).

In Poland, many local governments waited for central government guidance seeking to postpone PB processes and avoid using a possible online solution (Poplawski, 2020). Even with the evidence of obstacles to adopting technological solutions, the use of online tools was one of the main facilitators of holding PB in Slovakia and Poland (Bardovič & Gašparík, 2021; Poplawski, 2020). However, in Nepal none of the surveyed municipalities used digital platform to implement PB. In addition to this aspect, the local governance project does not foresee online participation due to possible resistance from politicians and local government officials (Bhusal, 2020).

The barriers imposed on PB processes arising from the COVID-19 pandemic crisis are justified by many leaders due to social distancing measures and the expansion of financial restrictions (Bardovič & Gašparík, 2021; Bhusal, 2020; Cho et al., 2021; Poplawski, 2020). Meanwhile, other inherent barriers to PB are accentuated by the crisis caused by the pandemic. Research about Nepal identified that there appears to be no mechanism in the PB processes to ensure that the proposals of citizens are expressed and genuinely reflected in decisions; another aspect detected concerns the participation of the population not being perceived as important by local leaders (Bhusal, 2020).

The occurrences, verified in Nepal, about the local government's perception of the importance of the participants is a recurring barrier. Other authors had already pointed to this aspect, demonstrating that the local political power was not in fact interested in citizen’ participation and that they adopted the measures they intended, regardless of the population's proposals (Zepic et al., 2017). In Poland it was evidenced that digital exclusion remains an important barrier and mainly affects the elderly (Poplawski, 2020). In summary, Table 1 presents the main barriers caused or accentuated by COVID-19 pandemic, properly identified in recent literature.

<table>
<thead>
<tr>
<th>Main barriers arising from or accentuated by COVID-19 pandemic</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Restrictions on face-to-face meetings.</td>
<td>Slovakia, France, Poland and Nepal</td>
</tr>
<tr>
<td>2. Budgetary restrictions due to the crisis.</td>
<td>Slovakia, France, Poland and Nepal</td>
</tr>
<tr>
<td>3. Absence of an online platform.</td>
<td>Nepal</td>
</tr>
<tr>
<td>4. Restrictions to the use of online technologies to carry out the PB process</td>
<td>Poland, Nepal</td>
</tr>
<tr>
<td>5. Technology access restrictions.</td>
<td>Poland, Nepal</td>
</tr>
<tr>
<td>6. Citizen participation is perceived as not being relevant.</td>
<td>Nepal</td>
</tr>
</tbody>
</table>

Source: the authors.
The pandemic alone cannot lead citizens on the periphery of public policy decisions. Difficulties related to institutional design, planning, imbalance of power and the absence of an online platform contributed to limiting the public space for the population (Bhusal, 2020). According to Bardovič and Gašparík (2021), the use of innovative methods through technological solutions can be considered effective in the participatory process in an online environment, an aspect that suggests a possibility of use beyond the pandemic period. To Poplawski (2020) most Polish cities do not intend to change regulations to permanently adapt PB processes to the online format, intending to return to face-to-face format after the pandemic.

METHODOLOGY

This section presents the sample, the characterization of the research collaborators, the collection instrument, and the way the data was handled. Initially, the two research contexts are presented. Then, the population and the sample are identified, based on the survey respondents, through a survey of which municipalities have performed PB at some point. Finally, this section describes how the data collection and treatment tools were structured.

Sample

To answer the research questions about the perception of the possible negative impact of COVID-19 pandemic on the performance of OP processes and the possible effects of the restrictions imposed by the crisis over the next few years, online survey was sent to the public administration officials responsible for carrying out the mechanism in the municipalities of Paraná and Portugal.

It is important to note that Brazil is a country of continental dimensions. According to the Brazilian Institute of Geography and Statistics (IBGE), the country has a territorial area of 8,510,345,538 km², an estimated population (2020) of 211,755,692 people, and 5,570 municipalities distributed in 26 states and the federal district (IBGE, 2021).

And Portugal has an area of 92,152 Km² divided into 18 districts on the mainland and 2 Autonomous Regions (Azores and Madeira) (Portugal, 2021). The country has an estimated population (2019) of 10,286.3 million people and has 308 municipalities, 278 in mainland Portugal, 11 in Madeira and 19 in the Azores (PORDATA, 2021).

Considering the territorial size, population, and number of local governments in both countries, in Brazil, the state of Paraná was selected, which has a territorial area of 199,298,982
km², divided into 399 municipalities and an estimated population of 11,516,840 people (2020) (IBGE, 2021), proportionally compatible with Portugal.

In the state of Paraná, this research initially consulted the municipalities if they had implemented any PB process in some period. The consultation was carried out online in the electronic portals of the 399 municipalities through Federal Law No. 12.527/2011, known as the “General Law on Access to Public Information”. In response to the consultation, 14 municipalities responded that they had realized PB in some period.

In Portugal, consultations were made on the Electronic Portal “Portugal Participa”, from which 149 municipalities were identified that carry out or have carried out at some point the PB process. Table 2 presents the research population and sample.

<table>
<thead>
<tr>
<th>Local</th>
<th>Population (executed the PB at some point)</th>
<th>Sample (answered the questionnaire)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraná (Brazil)</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Portugal</td>
<td>149</td>
<td>78</td>
</tr>
</tbody>
</table>

Source: the authors.

From the identification of the municipalities of Paraná and Portuguese that implemented, at least once, the PB process, it was possible to send the survey by e-mail to local governments, between October 4th, 2020, and June 18th, 2021.

In Paraná, out of 399 municipalities consulted, 14 indicated that they had carried out the PB process at some point in time, of which 2 incomplete answers were obtained, 4 did not answer, and 8 completely answered the questionnaire.

In Portugal, out of 308 municipalities 149 had already carried out the PB process at some point in time. Among those that confirmed the execution of the mechanism, 42 incomplete answers were obtained, 29 did not answer, and 78 completely answered the questionnaire.

Most of the survey employees in Paraná are male (62.5%), while in Portugal the majority is female (55.13%). As for the position, the majority has a technical position in both contexts analyzed. Regarding the age profile, in Paraná most of the respondents of the survey are between 36 and 55 years old, while in Portugal half are between 36 and 45 years old. Regarding the number of years of experience in the PB processes, most have between 1 and 5 years of experience with the application of the mechanism in the two contexts analyzed.

Survey

The research is quantitative, from the theoretical and conceptual construction seeks the development of instruments for empirical observation (Araújo, 2012). In this sense, an online
questionnaire was structured by means of a Likert-type scale, developed from the literature on the subject, so far, involving the barriers to PB triggered by the pandemic. Among the several scales available to measure perception or attitudes, one of the most common in research is the Likert scale. Elaborated by educator and psychologist Rensis Likert, in 1932, through his thesis, the researcher constructed a survey using a five-point scale that resulted in a research scale to measure attitudes more efficiently than other methods (Bermudes et al., 2016). Likert scales should be used whenever the researcher seeks to obtain answers that can be compared to each other (Alreck & Settle, 1995).

The survey questions used a Likert-type scale, providing the respondents with four statements: (1) The pandemic of COVID-19 imposed restrictions on the realization of the PB in the municipality in the year 2020; (2) The pandemic of COVID-19 changed the structure and operation of the PB process in the municipality in the year 2020; (3) The pandemic of COVID-19 caused the cancellation of the PB process in the municipality in the year 2020; and ((4) Possible restrictions on the realization of the PB in the municipality arising from the COVID-19 pandemic may impact the realization of the process in the coming years..

The statements were accompanied by the following options: Strongly Disagree (1), Disagree (2), Agree (3), Strongly Agree (4), and Do not know (5). At the end of the questionnaire an open field was provided for possible comments regarding the restrictions or changes due to the COVID-19 pandemic on the performance of the PB processes.

Hypotheses and data treatment

From the theoretical contributions about the pandemic of COVID-19, it was possible to identify that among the barriers triggered by the pandemic are restrictions on movement and face-to-face meetings, due to measures adopted by governments to deal with COVID-19 (Bardovič & Gašparík, 2021; Bhusal, 2020). Limitations on face-to-face meetings and reduced budget revenues are among the reasons used by local administrators for suspending, canceling, changing the time frame, or changing the face-to-face format of the PB process (Bardovič & Gašparík, 2021; Bhusal, 2020; Cho et al., 2021; Poplawski, 2020). From the constraints possibly imposed on the realization of PB processes occasioned by the COVID-19 pandemic, the following hypotheses are provided:

H1: The crisis caused by the COVID-19 pandemic had a negative impact on the realization of PB processes.

H2: The Barriers to PB imposed by the COVID-19 pandemic are perceived with the potential to impact the post-pandemic period.
The research data was organized and analyzed using descriptive statistics, then the Chi-square test for adherence was applied. One way to present quantitative descriptions is by using descriptive statistics, variables are presented in isolation or through associations (Babbie, 1999).

Through the chi-square test of adherence (Morettin & Bussab, 2017) it is possible to verify if the frequencies of each category are equal to 50%, being used to test the hypotheses related to COVID-19 barriers that have categorical qualitative variables. The Chi-square test has the requirement of relatively large samples (n>30) (Campos, 1983; Morettin & Bussab, 2017), for this reason it was applied only in the Portugal sample.

RESULTS

This section presents the absolute frequency and relative frequency tables to characterize the perception of the research collaborators about the impacts on PB processes arising from the COVID-19 pandemic. Then the result of the Chi-square test of adherence is presented to test the hypotheses listed in the research.

Perception about the barriers related to the Covid-19 pandemic: descriptive analysis

When analyzing the perception of research respondents in Brazilian municipalities of state of Paraná (see Table 3), 62.5% of respondents agreed or strongly agreed with the statement that COVID-19 pandemic imposed restrictions to implementation of PB in 2020 and 75% agreed or strongly agreed that COVID-19 pandemic changed the structure and the way of functioning of PB process.

Regarding the cancellation of PB processes resulting from the consequences of the pandemic COVID-19, in Paraná, the answers were balanced between the 50% of the survey respondents who disagreed or totally disagreed and the other 50% who agreed or totally agreed about the statement. As for the answers of the survey collaborators in the Brazilian municipalities regarding the item that addressed restrictions to the PB in the post-pandemic period, 50% disagreed or totally disagreed, 37.5% agreed or totally agreed with the statement, and another 12.5% did not know the answer.

A research collaborator in Paraná expressed by comment that the pandemic has expanded the use of social networks, electronic hearings, and collection of suggestions by electronic questionnaire. Table 3 demonstrates the relative percentage frequency and absolute frequency per statement regarding the perception of PB barriers caused or intensified by the COVID-19 pandemic, according to the municipalities that participated in the survey in the state of Paraná.
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Participatory budgeting in COVID-19 times: a perspective from Paraná and Portuguese municipalities

Table 3. Relative frequency and absolute frequency per item on the perception of barriers of PB caused by COVID-19 pandemic, municipalities of Paraná.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not know</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The pandemic of COVID-19 imposed restrictions on the realization of the PB in the municipality in the year 2020.</td>
<td>25.0 2</td>
<td>12.5 1</td>
<td>25.0 2</td>
<td>37.5 3</td>
<td>0.0 0</td>
<td>100 8</td>
<td></td>
</tr>
<tr>
<td>(2) The pandemic of COVID-19 changed the structure and operation of the PB process in the municipality in the year 2020.</td>
<td>12.5 1</td>
<td>12.5 1</td>
<td>37.5 3</td>
<td>37.5 3</td>
<td>0.0 0</td>
<td>100 8</td>
<td></td>
</tr>
<tr>
<td>(3) The pandemic of COVID-19 caused the cancellation of the PB process in the municipality in the year 2020.</td>
<td>37.5 3</td>
<td>12.5 1</td>
<td>12.5 1</td>
<td>37.5 3</td>
<td>0.0 0</td>
<td>100 8</td>
<td></td>
</tr>
<tr>
<td>(4) Possible restrictions on the realization of the PB in the municipality arising from the COVID-19 pandemic may impact the realization of the process in the coming years.</td>
<td>25.0 2</td>
<td>25.0 2</td>
<td>25.0 2</td>
<td>12.5 1</td>
<td>12.5 1</td>
<td>100 8</td>
<td></td>
</tr>
</tbody>
</table>

Source: the authors.

In Portugal the perception of the research collaborators indicates that 66.7% agreed or totally agreed with the statement that the pandemic COVID-19 brought restrictions to the realization of PB in the year 2020. And 56.4% agreed or totally agreed about the changes caused in the structure and operation of the PB process caused by the COVID-19 pandemic, another 24.4% indicated that they did not know.

The survey collaborators in the Portuguese municipalities reacted as follows when answering about the barrier that deals with the cancellation of PB processes: 38.5% disagreed or strongly disagreed, and others indicated a perceptibly higher perception, 39.7%, agreed or strongly agreed with the statement. Regarding the item that addressed restrictions on PB in the post pandemic period: 43.3% disagreed or strongly disagreed and another 43.6% agreed or strongly agreed with the statement.

Through comments in the questionnaire section open to survey contributors, two respondents from Portuguese municipalities indicated obstacles or aspects correlated to the COVID-19 pandemic. One respondent mentioned that during the pandemic the process was facilitated because the PB process in the municipality is preponderantly in digital format with the submission of proposals on the platform. Another respondent indicated that the PB process in the municipality was hampered because it is mostly face-to-face. Table 4 shows the relative percentage frequency and absolute frequency per statement regarding the perception of PB...
barriers caused or intensified by the COVID-19 pandemic, according to the municipalities that participated in the survey in Portugal.

Table 4. Relative frequency and absolute frequency per item on the perception of barriers of PB caused by COVID-19 pandemic, Portuguese municipalities.

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do not know</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The pandemic of COVID-19 imposed restrictions on the realization of the PB in the municipality in the year 2020</td>
<td>10.3</td>
<td>8</td>
<td>7.7</td>
<td>23.1</td>
<td>43.6</td>
<td>15.4</td>
</tr>
<tr>
<td>(2) The pandemic of COVID-19 changed the structure and operation of the PB process in the municipality in the year 2020.</td>
<td>10.3</td>
<td>8</td>
<td>9.0</td>
<td>17.9</td>
<td>38.5</td>
<td>24.4</td>
</tr>
<tr>
<td>(3) The pandemic of COVID-19 caused the cancellation of the PB process in the municipality in the year 2020.</td>
<td>30.8</td>
<td>24</td>
<td>7.7</td>
<td>9.0</td>
<td>30.8</td>
<td>24</td>
</tr>
<tr>
<td>(4) Possible restrictions on the realization of the PB in the municipality arising from the COVID-19 pandemic may impact the realization of the process in the coming years.</td>
<td>28.2</td>
<td>22</td>
<td>14.1</td>
<td>11</td>
<td>28.2</td>
<td>15.4</td>
</tr>
</tbody>
</table>

Source: the authors.

The Public Administration officials responsible for carrying out PB, both in the state of Paraná (Brazil) and in Portugal, agreed that COVID-19 pandemic had a negative impact on implementation of PB processes, considering the imposition of restrictions on the mechanism. However, there is no majority perception about the cancellation of the processes during the pandemic or about the impacts after the crisis.

Although some authors indicate that changes in PB processes during COVID-19 pandemic may be positive, such as the use of technological solutions in Slovakia (Bardović & Gašparik, 2021), apparently the implementation of changes in post-pandemic period will depend on decisions of local leaders and participants in each municipality. In Poland, for example, most cities do not intend to change regulations to permanently adapt PB processes to the online format, the aim is to return to face-to-face format soon after the pandemic.

Test on the perception of barriers related to the pandemic of COVID-19: inferential analysis

The first hypothesis seeks to verify the perception of respondents about the negative consequences of the pandemic on the PB process. The statement that best translates the negative
impact of the health crisis on the participation mechanism is the following: (1) the pandemic of COVID-19 imposed restrictions on the realization of the PB in the municipality in the year 2020.

The second hypothesis seeks to verify the perception of respondents about the possible future consequences of the pandemic on the PB process. The statement that best represents the perception of the future consequences of the health crisis on the participation mechanism is the following: (4) possible restrictions on the realization of the PB in the municipality arising from the COVID-19 pandemic may impact the realization of the process in the coming years.

To test the hypotheses, the frequency of response options gathered into two groups is considered (totally disagree or disagree / totally agree or agree), the responses that have opted for the indication "don't know" were disregarded. Then, by means of the Chi-square test of adherence, it is checked whether the frequencies of each group are equal to 50%. If the two groups are equal to 50%, there is no agreement or disagreement, according to most of the survey contributors. However, if one of the frequencies is greater than 50%, it means that there is greater agreement or disagreement with the statement.

The Chi-square test of adherence was applied for sample regarding respondents in Portugal, as indicated above, according to the requirements of the applied statistical technique (n>30) (Campos, 1983; Morettin & Bussab, 2017).

To interpret the p-value of the Chi-square test of adherence, if it is less than 0.05, then there is a statistical significance of 5%, as to whether the frequencies of the groups are not both 50%, occurring greater agreement or disagreement regarding the statement. Otherwise, the frequencies are not statistically different from 50% (Morettin & Bussab, 2017). For when they are statistically different from 50%, the observed frequencies are checked to determine if there is more agreement or disagreement.

Table 5. Frequencies of the variable (1) the pandemic of COVID-19 imposed restrictions on the realization of the PB in the municipality in the year 2020 (p < 0.001; Chi-square test of adherence with 50% x 50%).

<table>
<thead>
<tr>
<th>Strongly Disagree or Disagree</th>
<th>Agree or Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 (21.2%)</td>
<td>52 (78.8%)</td>
</tr>
</tbody>
</table>

Source: the authors.

From the p-value obtained less than 0.05, there is a significance level (α) of 5% indicating that the groups are different (strongly disagree or disagree / agree or strongly agree). Therefore, from the p-value obtained and the frequency of the variable contained in Table 5, it can be concluded that there is a greater agreement among the survey respondents about the imposition
of restrictions on PB processes correlated to the COVID-19 pandemic, causing a negative impact on the mechanism.

In other words, the first hypothesis is confirmed by statistical evidence, from the data coming from the Portuguese municipalities, pointing out that most respondents indicate agreeing on the negative effects of the health crisis generated by the pandemic of COVID-19 on the realization of PB processes during the year 2020. Table 6 presents the result of the test for the second hypothesis.

Table 6. Frequencies of the variable (4) possible restrictions on the realization of the PB in the municipality arising from the COVID-19 pandemic may impact the realization of the process in the coming years (p = 0.903; Chi-square test of adherence with 50% x 50%).

<table>
<thead>
<tr>
<th>Strongly Disagree or Disagree</th>
<th>Agree or Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>33 (49.3%)</td>
<td>34 (50.7%)</td>
</tr>
</tbody>
</table>

Source: the authors.

Considering that the obtained p-value is greater than 0.05, there is a significance level (α) of 5% that no difference occurs between the groups (strongly disagree or disagree / strongly agree or agree). Therefore, there are no statistically relevant differences between those who strongly disagree or disagree and those who agree or strongly agree about the consequences of the COVID-19 pandemic on OP in the coming years. Thus, the second hypothesis is not confirmed, since there is no statistical evidence indicating agreement regarding future restrictions on PB processes originating from the health crisis.

Recent literature on the topic points out that approaches in PB processes during the pandemic of COVID-19 were carried out involving suspension, cancellation, or continuation with reduced and even expanded investments. Some local governments changed the PB calendar to a longer period, allowing more time for adaptation to the changes imposed by the health crisis, this measure was implemented by municipalities that opted for the suspension of processes (Bardovič & Gašparík, 2021; Bhusal, 2020; Poplawski, 2020). In France, in addition to the suspension of PB processes, there were cancellations and cases in which municipalities carried out the process with a reduction and others with the expansion of proposals (Cho et al., 2021).

Once the tests are concluded, the synthesis of the validation of the research hypotheses developed is presented (Table 7), based on the test applied to the database of Portuguese municipalities.
Table 7. Validation of the research hypotheses

<table>
<thead>
<tr>
<th>Research Hypotheses</th>
<th>Paraná</th>
<th>Portugal</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: The crisis caused by the pandemic of COVID-19 has had a negative impact on the realization of PB processes.</td>
<td>-</td>
<td>Supported with statistical evidence</td>
</tr>
<tr>
<td>H2: The OP Barriers imposed by the COVID-19 pandemic are perceived to have the potential to impact the post-pandemic period.</td>
<td>-</td>
<td>Not supported statistically</td>
</tr>
</tbody>
</table>

Source: the authors.

CONCLUSION

PB is one of the most established democratic innovations worldwide (Dias et al., 2019; Falanga & Lüchmann, 2019; Sintomer et al., 2012). Brazil was a pioneer in the elaboration and adoption of the mechanism in its municipalities and Portugal is currently the country with the highest rates of PB implementation worldwide (Dias et al., 2019; Falanga et al., 2020). In this context, this paper first discussed the similarities and differences in the dissemination of PB processes in Brazil and Portugal. Among the differences is the reduction of processes in recent years in Brazilian municipalities and the expansion in Portuguese. Secondly, the barriers imposed or accentuated by the COVID-19 pandemic to PB in other countries. Then, the perceptions of Local Public Administration in Portuguese and Paraná (Brazil) municipalities on the barriers of PB caused by the COVID-19 pandemic were analyzed.

The results, from the exploratory descriptive analysis, seem to confirm that the pandemic of COVID-19 negatively impacted the PB processes, according to the survey contributors in the municipalities of Paraná and Portugal. The inferential tests applied indicated that there is a statistical significance level of 5%, pointing that the pandemic of COVID-19 generated negative impacts on PB processes in the year 2020, according to the data of the respondents in Portugal. Thus, collaborating with the confirmation of the first hypothesis listed in the research according to the data provided by the Portuguese municipalities.

In Portugal, most of the collaborators agreed, in a significantly higher number than those who disagreed, with the possibility of barriers to PB caused by the pandemic in the period after the crisis. In this sense, there is no statistically significant confirmation for the second hypothesis, tested on the data from the Portuguese municipalities, about the possible restrictions to the PB process in the coming years due to the pandemic of COVID-19.

The consequences of COVID-19 pandemic on future of PB are apparently not entirely clear to municipalities respondents in both countries. The literature indicates that government indebtedness triggered by government's response to pandemic may generate some restriction.
on implementation of PB processes. In addition to restrictions on face-to-face meetings, the reduction in budget resources is among the reasons used by local governments to impose some type of barrier to PB process (Bardovič & Gašparík, 2021; Bhusal, 2020; Cho et al., 2021; Poplawski, 2020). Many countries affected by COVID-19 will experience high government deficits and debt, indicating that budgeting will play a central role during and after the crisis (Anessi-Pessina et al., 2020; Bresser-Pereira, 2020).

The research collaborators indicated that the pandemic has led changes in the form and structure of the PB. Although in Portugal 24.4% did not know the answer to this statement. Previous research reinforces that these alterations in the structure and format of conducting PB during the pandemic may be promising from the perspective of expanding the use of technological solutions in the online format (Bardovič & Gašparík, 2021). However, the changes may emphasize a barrier regarding digital exclusion especially in the elderly group (Poplawski, 2020).

The perception of public agents of the municipalities of Paraná (Brazil) and Portugal about the barriers imposed on PB by the pandemic of COVID-19 contributes to the broadening of the compression of the effects of the health crisis on the participation mechanism. Moreover, the article reveals difficulties prior to the pandemic, such as the restriction of the participatory space due to the absence of an online platform.

Among the main limitations of the study, the research considers only the perception of the Local Public Administration of Paraná and Portuguese municipalities. In this sense, the perspective of public agents may contain, eventually, a partial view of the process with some possibility of not recognizing possible failures of the local public power that may cause obstacles to the PB in the present and in the future. Therefore, it is important to broaden or pick out the perspective of other spheres on the consequences of the COVID-19 pandemic on the execution of PB processes. Moreover, the small number of municipalities that have carried out PB in Paraná is another limitation of the study, as it reduces the possibilities of analysis instruments and the generalization of conclusions.

Besides contemplating the perspective of the participants in the process, it is important to consider in future research, the worsening of the public debt and the possible reduction in the amounts available for the execution of the PB because of the COVID-19 pandemic. Another relevant aspect is regarding the deepening of other barriers prior to the crisis, such as the digital exclusion that mainly affects the elderly, and the reduction in the number of occurrences of PB processes after the crisis caused by COVID-19.
REFERENCES


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