

Revista do Serviço Público

Special Issue on Public Policy and Regulation

Vol. 72, Special Issue Dec. 2021
ISSN: 0034-9240 | E-ISSN: 2357-8017

Editorial

Claudio D. Shikida

The use and exemption of regulatory impact assessment by the National Health Surveillance Agency

Natasha Schmitt Caccia Salinas & Lucas Thevenard Gomes

Evaluating the quality of regulatory impact analysis: a literature review

Flavio Saab & Suylan de Almeida Midlej e Silva

Do women use microcredit resources better? Evidence for Brazil

Dayane Rocha de Pauli

Impact of policy implementation shortcomings and context constraints on the effectiveness of civil servant performance appraisal: the case of Brazilian Federal Service

Enrique J. Sánchez Elvira & Maria de Fátima Bruno-Faria



Brasília – 2021

The mission of the Revista do Serviço Público

Disseminate knowledge and stimulate reflection and debate, supporting the development of civil servant, their commitment to citizenship and the consolidation of a community of practitioners, specialists and interested parties in the themes of public policy and government management.

Escola Nacional de Administração Pública (Enap)

President: Diogo Godinho Ramos Costa

Executive Director: Rebeca Loureiro de Brito

High Studies Director : Diana Magalhães de Souza Coutinho

Professional Development Director: Paulo Marques Diretor de

Executive Education Director: Rodrigo Torres de Araújo Lima

Internal Management Director: Alana Regina Biagi Silva Lisboa

Innovation Director: Bruna Silva dos Santos Santos

Editorial Committee: Antônio Sérgio Araújo Fernandes (Universidade Federal da Bahia - UFBA); Andre Luiz Marengo dos Santos (Universidade Federal do Rio Grande do Sul - UFRGS); Armin Mathis (Universidade Federal do Pará UFPA); Barry Ames (University of Pittsburgh - Estados Unidos); Carla Bronzo Ladeira (Fundação João Pinheiro – FJP); Celina Souza (Universidade Federal da Bahia – UFBA); Claudia Avellaneda (Indiana University - Estados Unidos); Fernando Luiz Abrucio (Fundação Getúlio Vargas – FGV-SP); Francisco Longo (Escuela Superior de Administración y Dirección de Empresas – Espanha); Frank Fisher (Rutgers University – Estados Unidos); Guy Peters (University of Pittsburgh Estados Unidos); James L. Perry (Indiana University Bloomington - Estados Unidos); José Antônio Puppim de Oliveira (Fundação Getúlio Vargas – FGV-SP / United Nations University – Estados Unidos); José Carlos Vaz (Universidade de São Paulo – USP); Marcelo Fabián Repetto (Universidad de Buenos Aires – Argentina); Marco Aurélio Chaves Cepik (Universidade Federal do Rio Grande do Sul – UFRGS); Marcus André Melo (Universidade Federal de Pernambuco – UFPE); Maria Paula Dallari Bucci (Universidade de São Paulo – USP); Maria Rita Loureiro (Fundação Getúlio Vargas – FGV-SP); Mariana Llanos (German Institute of Global and Area Studies – Alemanha); Michael Barzelay (London School of Economics – Reino Unido); Nuria Cunill Grau (Universidad De Los Lagos – Chile); Paulo Carlos Du Pin Calmon (Universidade de Brasília – UnB); Tânia Bacelar de Araújo (Universidade Federal de Pernambuco – UFPE).

Scientific Editorial Board: Ciro Campos Christo Fernandes (Escola Nacional de Administração Pública – Enap); Fernando de Souza Coelho (Universidade de São Paulo – USP); Frederico Lustosa da Costa (Universidade Federal Fluminense – UFF); Gabriela Spanghero Lotta (Fundação Getúlio Vargas - FGV); Luciana Leite Lima (Universidade Federal do Rio Grande do Sul - UFRGS); Márcia Miranda Soares (Universidade Federal de Minas Gerais – UFMG); Mariana Batista da Silva (Universidade Federal de Pernambuco – UFPE); Claudio Djissey Shikida (Escola Nacional de Administração Pública – Enap); Natália Massaco Koga (Instituto de Pesquisa Econômica Aplicada – Ipea); Pedro Lucas de Moura Palotti (Instituto de Pesquisa Econômica Aplicada – Ipea); Ricardo Corrêa Gomes (Fundação Getúlio Vargas – FGV); Thiago Dias (Universidade Federal do Rio Grande do Norte – UFRN).

Periodicity: The Revista do Serviço Público is a quarterly publication of the National School of Public Administration.

Editorial Team: **Editor-in-chief:** Claudio Djissey Shikida. **Associate Editors:** Mila Lopes Mesquita and Carolina da Cunha Rocha. **Editorial Assistant:** Sandro de Almeida Rêgo. **English Reviewer:** Jennifer J. Su and Melissa Ayres Toman. **Graphic design cover/Intern:** Cassia Naomi Toguchi.

ISSN:0034-9240 • E-ISSN: 2357-8017

Revista do Serviço Público. 1937 - / Escola Nacional de Administração Pública. Brasília: ENAP, 1937 - .

v.: il.; 25,5 cm.

Edited by DASP in November 1937 and published in Rio de Janeiro until 1959. The periodicity varies from the first year of circulation, and from the last few years it has been quarterly predominant (1998/2007).

Interrupted between 1975/1980 and 1990/1993.

ISSN:0034-9240

E-ISSN: 2357-8017

1. Administração Pública – Periódicos. I. Escola Nacional de Administração Pública.

CDU: 35 (051)

Cataloged by the team of Graciliano Ramos Library – ENAP

Enap, 2021



Previous issues of Revista do Serviço Público (RSP) are available at :
revista.enap.gov.br

Fundação Escola Nacional de Administração Pública
 SAIS – Área 2-A | CEP: 70610-900 | Brasília, DF
 Phone+55 (61) 2020 3072/3186
www.enap.gov.br
publicacoes@enap.gov.br

The opinions expressed in the articles published here are the sole responsibility of their authors and do not necessarily express the opinion of Revista do Serviço Público.

The RSP follows the Creative Commons (CC) Attribution - Non Commercial (BY-NC).

Contents

Editorial	4
Claudio D. Shikida	
The use and exemption of regulatory impact assessment by the National Health Surveillance Agency	8
O uso e a dispensa da análise de impacto regulatório pela agência Nacional de Vigilância Sanitária	
Natasha Schmitt Caccia Salinas & Lucas Thevenard Gomes	
Evaluating the quality of regulatory impact analysis: a literature review	34
Avaliando a qualidade da análise de impacto regulatório: uma revisão da literatura	
Flavio Saab & Suylan de Almeida Midlej e Silva	
Do women use microcredit resources better? Evidence for Brazil	58
As mulheres usam melhor os recursos do microcrédito? Evidências para o Brasil	
Dayane Rocha de Pauli	
Impact of policy implementation shortcomings and context constraints on the effectiveness of civil servant performance appraisal: the case of Brazilian Federal Service	88
Impacto das deficiências na implementação da política e restrições do contexto na efetividade da avaliação de desempenho de servidores públicos: o caso da administração federal brasileira	
Enrique J. Sánchez Elvira & Maria de Fátima Bruno-Faria	

EDITORIAL

Regulation, much like public policy, is not free. This raises the question of who, therefore, will pay the costs and we know that society will bear them. The inevitable conclusion is that we should not extend policies that do not pass the test of cost-benefit analysis. That is the most important insight guiding the actions of policymakers in charge of public policies.

This editorial has two sections. In the first one, I would like to give to the readers a panoramic view of the role of Escola Nacional de Administração Pública (Enap)¹ on public policy evaluation and regulatory impact analysis. In the second section, I will introduce the articles of this issue.

SECTION I – THE ROLE OF THE ESCOLA NACIONAL DE ADMINISTRAÇÃO PÚBLICA ON PUBLIC POLICY EVALUATION AND REGULATORY IMPACT ANALYSIS

Some considerable effort to institutionalize public policy evaluation can be observed in the Brazilian Federal Government over the past years. In 2017, the Presidential Decree nº 9.203 established policy evaluation as an important guideline for public governance. The Public Policy Monitoring and Evaluation Council (Conselho de Monitoramento e Avaliação de Políticas Públicas - CMAP) was created in 2019 by the Decree nº 9.834, with the intention to evaluate relevant policies stated at the budget and planning instruments.

In addition, the Regulatory Impact Assessment (RIA) was made mandatory for the federal government by the Economic Freedom Act (Law nº 13.874) and became regulated in 2020 by the Decree nº 10.411. In March 2021, the need to perform program evaluations was included in Brazil's Federal Constitutional Law.

¹ National School of Public Administration.

Enap² has been making valuable contributions to the institutionalization of evaluation mechanisms in Federal Government public policies through the capacity building of civil servants. The School is a member and technical supporter of CMAP, alongside the other Center of Government bodies. In addition to open access courses on the virtual school of government (EV.G) and short courses of Enap's Executive Education program, in 2020 the School launched a Master's program/degree in Monitoring and Evaluation.

Considering this intention to make evaluation and RIA mandatory, Enap has also created an on-demand service called the Assessoria para Avaliação (Evaluation Advisory Service or Enap-EAS). This is a learning by doing training and mentorship project for civil service teams that need to undertake policy evaluation or RIA, although they require technical support to do so.

Using an original methodology developed by the enthusiastic Enap-EAS team, this service consists of workshops and virtual meetings conducted by experts in RIA or public policy evaluation whose role is to offer technical guidance for the staff teams to analyze a policy problem or to evaluate a chosen program. The goal of this project is both to assess public policies and train civil service to be independent to undertake evaluation and RIA.

Most of the developed work is theoretically-based on the Federal Government Practical Guides for Ex Ante and Ex Post Evaluation and Regulatory Impact Assessment. The remaining work is based on practical and academic literature on Logical Model, Theory of Change, Evidence-Based/Informed Policy, Problem Solving, and good international practices in public policy evaluation³.

Another front in which Enap has been contributing to Regulatory Impact Analysis and Public Policy Evaluation is the sponsorship of high-quality research. In 2020, we funded ten research projects on RIA and public policy evaluation that will soon result in open-source reports at Enap's public repository under the series of 'Cadernos Enap'.

Finally, Enap also produced a useful public good called the RegBR. It is an open-source database that measures the flow of Brazilian regulatory flow (from

² I would like to thank Diana Coutinho (the mind behind the creation of Enap-EAS) for her help on this section.

³ I would like to thank the team of Enap-EAS, Guilherme Mansur, Larissa N. Fonseca, and Tamille S. Dias for their help with the description of the details of the service.

both regulatory agencies and federal normatives) with some original quantitative analysis. It is also an invaluable source of information for researchers⁴.

That said, let me talk about the articles in this special issue.

SECTION II – THE ARTICLES OF THIS SPECIAL ISSUE

This special issue of *Revista do Serviço Público* is dedicated to Public Policy Evaluation and Regulatory Impact Analysis (RIA). We have four interesting articles on RIA and public policy evaluation authored by Brazilian researchers.

In the first article, Natasha Schmitt Caccia Salinas and Lucas Thevenard Gomes analyze normative acts regarding RIA at ANVISA (Agência Nacional de Vigilância Sanitária)⁵ from 2011-2020. One of their findings is that ‘urgency’ and ‘severity’ were used as justification in approximately 86.2% of their sample. Additionally, the RIA was dismissed in 56.7% of Anvisa’s general normative acts with external effects.

The improvement of the Brazilian RIA cannot be achieved without a solid understanding of what happens in the world regarding the subject. This is the contribution of the second article, written by Flavio Saab and Suylan de Almeida Midlej e Silva. The authors compiled a sample of 26 articles indexed in two databases: Web of Science and Scopus. They focused on three categories: contextual characteristics, RIA quality evaluation, and main findings about the quality of RIA. Through this research they found evidence of inconsistencies in several aspects of the RIA (e.g. in social participation and in the use of evidence).

The analysis of the Brazilian microcredit program is the subject of the third article by Dayane Rocha de Pauli. She used dose-response models in a database that included formal companies with more than nine employees per year for the period 2010 to 2015. The role of female entrepreneurs is one of the main results of the paper. The author found that companies led by women displayed better responses on female employment, as well as employment in general.

⁴ The tool can be found here: <https://infogov.enap.gov.br/regbr/fluxo-regulatorio>.

⁵ National Health Surveillance Agency.

Policymakers are responsible for public policy evaluation and RIA. It is, then, natural to ask about their performance. In the last article, Enrique J. Sánchez Elvira and Maria de Fátima Bruno-Faria used qualitative research with case studies to address this question. Twenty-two interviews were conducted, where the authors identified five factors as structural barriers and five factors as obstacles derived from organizational culture. They concluded that a better performance analysis could be achieved if we act on them.

We hope these four articles inspire our readers and show them new possibilities in regulatory impact analysis and public policy evaluation for the future.

Claudio D. Shikida

Editor-in-Chief

The use and exemption of Regulatory Impact Assessment by the National Health Surveillance Agency

Natasha Schmitt Caccia Salinas

Lucas Thevenard Gomes

Escola de Direito da Fundação Getúlio Vargas (FGV Direito Rio), Rio de Janeiro – RJ, Brazil

Regulatory impact assessment—RIA—is increasingly important for Brazilian Administrative Law, especially after the ‘Economic Freedom Act’ (*Lei de Liberdade Econômica*) extended its scope of implementation to all public bodies and federal administration entities. This work analyses the evolution of RIA under the purview of the National Health Surveillance Agency (Anvisa), a federal agency that stands out for being at the forefront of RIA implementation in Brazil. To this end, data published on the legislation section of the agency’s website about the use of RIA to substantiate Directors’ Collegiate Regulations (*Resoluções de Diretoria Colegiada*) and Normative Instructions (*Instruções Normativas*) between 2011 and 2020 were collected. The total number and proportion of cases in which the Directors’ Collegiate approved the realization or dispensation of RIA, based on relevant normative acts collected in this period, are presented. It was found that, in most cases, there were exemptions from RIA, and this proportion was not reduced over time. Furthermore, in cases of exemption, it was observed that the urgency/severity of the process was used as justification in a high proportion of cases. Finally, it was also observed that the use of RIA and exemption justifications vary according to the subject of the regulatory norm in question. The results of this study advance the existing knowledge about the implementation of RIA in Brazil and suggest new avenues of qualitative research on the factors that influenced the use and exemption of RIA by Anvisa.

Keywords: regulatory reform, regulatory impact assessment, National Health Surveillance Agency, Anvisa, empirical research.



O USO E A DISPENSA DA ANÁLISE DE IMPACTO REGULATÓRIO PELA AGÊNCIA NACIONAL DE VIGILÂNCIA SANITÁRIA (ANVISA)

A Análise de Impacto Regulatório (AIR) vem ganhando crescente importância para o Direito Administrativo brasileiro, sobretudo após a edição da Lei de Liberdade Econômica, que estendeu o seu escopo de realização a todos os órgãos e entidades da administração pública federal. Este trabalho analisa o uso e a dispensa desse instrumento no âmbito da Agência Nacional de Vigilância Sanitária (Anvisa), agência federal que se destacou como pioneira na implementação da AIR no Brasil. Para tanto, foi feito um levantamento, a partir de dados publicados no portal de legislação da agência, sobre o uso de AIRs para subsidiar a elaboração de Resoluções de Diretoria Colegiada e de Instruções Normativas, entre 2011 e 2020. Apresentamos, para os atos normativos relevantes coletados no período analisado, o número e a proporção de casos em que a Diretoria Colegiada da agência aprovou a realização ou a dispensa de AIR. Identificamos que na maior parte dos casos, houve dispensa de AIR e que essa proporção não foi reduzida ao longo do período estudado. Além disso, para os casos de dispensa, constatamos que a urgência/gravidade do processo foi utilizada como justificativa em uma alta proporção de casos. Por fim, constatamos também que o uso de AIR e a justificativa para os casos de dispensa variam de acordo com o tema da norma regulatória analisada. Os resultados obtidos neste trabalho, além de avançarem a atual compreensão da implementação da AIR no Brasil, sugerem novas linhas de pesquisas qualitativas acerca dos fatores que influenciaram o uso e a dispensa de AIR pela Anvisa.

Palavras-chave: reforma regulatória; análise de impacto regulatório; Agência Nacional de Vigilância Sanitária; pesquisa empírica.

EL USO Y LA DISPENSA DEL ANÁLISIS DEL IMPACTO REGULATORIO POR LA AGENCIA NACIONAL DE VIGILANCIA SANITARIA (ANVISA)

El Análisis del Impacto Regulatorio (AIR) adquiere importancia creciente para el Derecho Administrativo brasileño, especialmente después de la edición de la Ley de Libertad Económica, que ha extendido su alcance para todos los órganos y entidades de la administración pública federal. Este estudio analiza el uso y la dispensa de esta herramienta en el ámbito de la Agencia Nacional de Vigilancia Sanitaria (Anvisa), agencia federal que se ha destacado como pionera en la implementación del AIR en Brasil. Para ese propósito, hicimos una búsqueda, con datos publicados en el sitio de legislación de la agencia, sobre el uso de los AIRs para basar la elaboración de Resoluciones del Directorio Colegiado y de Instrucciones Normativas, entre 2011 y 2020. Para todos los actos normativos relevantes que hemos recopilado en el período del análisis, presentamos el número y la proporción de casos en los cuales el Directorio Colegiado ha aprobado la realización o la dispensa del AIR. Hemos identificado que en la mayoría de los casos hubo dispensa del AIR y que esta proporción no se redujo a lo largo del periodo del análisis. Además, para los casos de dispensa, constatamos que la agencia utilizó la urgencia/gravedad del proceso como justificación en una alta proporción de los casos. Finalmente, constatamos también que el uso del AIR y la justificación para los casos de dispensa varían en función del tema de la norma regulatoria. Los resultados de este trabajo no sólo adelantan el conocimiento actual a propósito de la implementación del AIR en Brasil, sino también sugieren nuevas líneas de investigación cualitativa sobre los factores que han influenciado el uso y la dispensa del AIR por la Anvisa.

Palabras clave: reforma regulatoria; análisis de impacto regulatorio; Agencia Nacional de Vigilancia Sanitaria; investigación empírica.

1 INTRODUCTION

In recent years, Regulatory Impact Assessment (RIA) has become increasingly important for Brazilian Administrative Law. Debates about this tool arrived in Brazil from the country's engagement with the regulatory reform agenda of the Organization for Economic Co-operation and Development—OECD¹—which led to the creation of the federal Program to Strengthen Institutional Capacity for the Management of Regulation (Programa de Fortalecimento da Capacidade Institucional para Gestão em Regulação—PRO-REG), in 2008.

In 2019, RIA gained legal basis in Brazil after Law No. 13,848/2019 (General Law of Regulatory Agencies) was passed, providing for the use of RIA by 11 federal agencies. Shortly after, Law No. 13,874/2019 (Economic Freedom Act) extended its use to all bodies of the federal government, and Decree No. 10,411/2020 established specific rules of implementation and methodological guidelines for RIAs.

This paper intends to contribute to the current public debate with an empirical analysis of the use and exemption of RIA by Anvisa, a federal agency that stands out for being at the forefront of RIA implementation in Brazil. Anvisa's regulatory activities highly impact the Brazilian economy,² and the agency has maintained a strong engagement with the development of RIA practices in Brazil. This paper analyzes the proportion of cases in which the agency's Directors' Collegiate approved the use or exemption of RIA. The justifications offered in case of exemption are also analyzed.

The text is divided into 5 sections. After this short introduction, section 2 briefly presents theoretical foundations for the use of RIA in the public administration's rulemaking process. Section 3 describes the legal implementation of RIA in Anvisa, calling attention to the regulatory milestones that were most important for the evolution of the instrument over time. Section 4 presents the results of the empirical survey. The methods employed to collect the data and the criteria applied to select relevant observations³ were indicated. Next, the results for the use of RIA and the justifications used by the agency

1 In 2007, Brazil was invited to a program of “enhanced engagement” with OECD and was included in the group of “key partnerships” of the Organization.

2 According to the webpage of Anvisa's economic advisory department, the production value in 2013 of activities related to food products, drugs, cosmetic products, agrottoxins, sanitizing products, health products and tobacco was in the order of 261.2 billion reais, which corresponds to approximately 10.5% of the value of the domestic product in that year. See: <http://antigo.anvisa.gov.br/assessoramento-economico>. Last accessed on June 24, 2021.

3 This paper intends to follow the directives of the reproducible research movement (Stodden, 2014).

in case of exemption are presented, drawing attention to a high level of variation in both cases when considering normative acts related to different subjects. Finally, section 5 presents final remarks, pointing to the fact that other lines of research could complement the efforts made in this study.

2 REASONS FOR THE ADOPTION OF RIA

The academic literature offers three main reasons for the adoption of RIA at the beginning of the decision-making process: (i) an increase in rationality; (ii) political control of the bureaucracy; and (iii) legitimacy (Radaelli & De Francesco, 2010).

RIA makes use of a rational model of decision making to direct the law-making process. In this model, every rational decision implies choosing a solution that is the most suitable for accomplishing the objectives intended by the decision-maker. The decision-maker must also choose, among different possible solutions, the one that maximizes his or her goals. For the decision-maker to be ready to choose the best option, he or she must have information that will allow him or her to foresee the impacts of each alternative.⁴

Therefore, RIA is rooted in an instrumental mode of rationality that is different from Weberian, formal-logic rationality. In RIAs, proposed normative rules are not analyzed considering only their formal-logic characteristics; they are, above all, analyzed on the basis of their teleological virtues (Atienza, 1997, p. 37–38). Consequently, RIA is at the center of a movement towards the rationalization of the law-making process (Chevallier, 1992, p. 18). Any additions or adjustments to the content of the intended rule, in any steps of the regulatory rulemaking process, must guarantee that the final regulation is suitable for achieving certain objectives.

The potential of RIA to promote instrumental rationalization of the rulemaking process is controversial. RIA is criticized for relying on studies based on imprecise information and for producing inferences of questionable validity and reliability (Shapiro & Schroeder, 2008, p. 446). Its rationality can also be compromised because of the political use of RIA by politicians.

It is important to bear in mind that RIA can also be understood as an instrument for political control of the Public Administration. Legislators and other elected officials do not have adequate means to legislate on technically intricate issues. Furthermore, due

⁴ Simon (1997) was one of the people responsible for disseminating the characteristics and the limitations of the model. The idea of the use of scientific principles to guide rational decision making, however, dates more than one century back (Shapiro & Schroeder, 2008, p. 437).

to information asymmetry problems, they do not have enough knowledge to assess if the regulatory activity of the Public Administration is in accordance with the public policy goals they should serve (McCubbins et al., 1987).

Since it is not feasible, for the abovementioned reasons, for political agents to decide on intricate technical issues, they delegate their decision-making power to agencies without, however, losing control over the regulatory activity. In this regard, RIA can provide a means for political agents to control the decision-making process without having to fully understand the content of these decisions.⁵

This control mechanism becomes even more effective if RIA, besides being monitored, is also revised by political agents. In the United States, where RIA was originally conceived in the 1970s, it functions, above all, as an important instrument of political control by the Administration, deployed by the President, who has the prerogative to revise normative acts of significant economic impact (Morall, 1997, p. 71–87).

It is worth observing, however, that there is no consensus in the literature regarding the potential of procedural instruments, such as the RIA, to act as a means of controlling the rulemaking activities of regulatory agencies. The most controversial issues are those concerning the enabling or obstructing of the execution of administrative procedures involved in regulatory decisions (Moe, 1989).

In addition to its strategic political use, RIA can also fulfill a legitimizing role, given that it submits the normative rule to a comprehensive analysis and forces its creator to explain and document the problems and objectives that motivated the proposed regulation. RIA can therefore be understood as an answer to an alleged democratic deficit resulting from the delegation of decision-making powers to agencies.

The three reasons for the adoption of RIA can be complementary to each other, but they can also become mutually exclusive. When RIA is used as an instrument of political control, its root rationality can be neglected. Furthermore, an excess of transparency can disrupt the rationality of regulatory decisions in cases in which access to confidential information is relevant to inform the decision-making process of the regulator (Coglianese et al., 2009).

According to Salinas and Cerqueira (2020), tensions of this nature have become

⁵ This argument differs considerably from traditional scholarship on administrative procedures that guide the decision-making process of the Administration. The traditional legal view understands administrative procedures as a means of ensuring the legitimacy of administrative decisions, of limiting the discretion of public agents, and of protecting citizens against arbitrary actions by the State (Medauar, 2008).

a salient trait of the RIA institutionalization process in Brazil. At first sight, one might suppose that RIA was introduced by both the General Law of Regulatory Agencies and by the Economic Freedom Act, based on the same principles of rationality and legitimacy. Both laws establish that the lawmaking process must be preceded by RIA and that they should contain information and data on the possible effects of the proposed rule.

This does not mean, however, that RIA has not been deliberately used as a tool for political control. From this standpoint, it is important to highlight a fact rarely addressed in the literature: the provisions for the use of RIA in the General Law of Regulatory Agencies were an initiative of the Legislative Power, while the provisions from the Economic Freedom Act were an initiative of the Executive Power.

The Executive Power's control is more focused on the adoption of least-intrusive regulation and regulatory red tape reduction, while the Legislative Power's control predominantly aims to improve accountability, transparency, and the application of informed (evidence-based) expertise to regulatory issues. While rational policymaking and low-intervention regulation are not necessarily in contradiction, there can be tensions between them. The potential clash between more expert, evidence-based regulation and the desire for less intrusive styles of control will be more accentuated if the institutions in charge of creating and implementing a specific regulatory policy do not share a single vision of how regulation should be made. For further development on this issue, see Baldwin (2010).

3 IMPLEMENTATION OF RIA BY ANVISA

Anvisa is considered a pioneer in the use of regulatory impact assessment instruments in Brazil. In October 2006, Anvisa held an international seminar on “Regulatory Impact Assessment: experiences and contributions for the improvement of regulatory quality,” which was the first event organized by a body of the federal government to discuss this issue in Brazil.⁶

The initiative marks the institutional cooperation between Anvisa and the Program for Strengthening the Institutional Capacity for Management in Regulation—PRO-REG (Alves & Peci, 2011)—which was created in March of the same year by Decree No. 6,062/2007.⁷ In the years that followed the creation of PRO-REG, Anvisa approved

⁶ National Health Surveillance Agency - ANVISA (2013).

⁷ PRO-REG was created in the context of Brazil's increasing engagement with multilateral forums on regulatory reform, such as the Organization for Economic Co-operation and Development (OECD). OECD recommends

a series of regulatory rules to enhance its rulemaking process by improving the routines of formal rule standardization and by implementing instruments designed to ensure substantive quality control of its regulatory frameworks, including the establishment of public consultations and impact assessment.

Regarding RIA, in particular, Anvisa is considered an important reference for other Brazilian regulatory agencies. It was mentioned in PRO-REG case studies (Proença et al., 2009) and was also selected for a pilot project of the federal government to conduct the first systematic effort to measure the economic impacts of a federal agency's regulatory activities.⁸ Recently, in the context of the approval of the Economic Freedom Act, Anvisa has, again, served as a case study in a research paper that circulated in the Senate (Meneguín & Saab, 2020).

RIA started being implemented by Anvisa after the passing of Ordinance No. 422/2008, which instituted Anvisa's Program on the Improvement of the Regulatory Process. RIA started to gradually be integrated into the agency's rulemaking processes, although at that point, there were no specific provisions determining the systematic and generalized implementation of the tool.

In 2011, RIA appeared for the first time in Anvisa's Internal Rules of Procedure. Ordinance No. 1,381/2011 created the Center for Regulation and Good Practices on Regulation, establishing as one of its attributions to "promote, coordinate and execute activities and procedures of Regulatory Impact Assessment to inform and subsidize, in advance, the decision-making process of the Directors' Collegiate on rulemaking and regulatory matters, in cooperation with other departments of Anvisa, depending on the degree of complexity and specificities established by the Directors."⁹

As of 2011, Anvisa started to regularly disclose whether the rules published on its legislation website were preceded by RIA, also publishing justifications when they did not.

In 2012, the Anvisa's Directors' Collegiate addressed the agency's impact assessment practices in the Ordinary Public Meeting—OPM No. 19¹⁰—in which it was established that RIA would become mandatory for all rules following common procedure and that a standardized form should be created in the FormSus system to guide RIA

that states implement AIR as a generalized tool for the approval of any regulatory rules that can create significant social-economic impacts (OECD, 2008, 2012, 2015).

8 National Health Surveillance Agency - ANVISA (2008).

9 Article 35-B, V of Anvisa's Ordinance n. 354/2006.

10 As shown in the records for Ordinary Public Meeting No. 19, of June 26, 2012.

procedures.¹¹

Following the agency's initial experiences with RIA since 2011, a methodology was established within Anvisa based on different levels of complexity. In some cases, RIAs followed a simple method based exclusively on qualitative analysis (level-1 RIA); in complex cases, RIAs could include more extensive investigation and could entail a quantitative dimension (level-2 RIA and level-3 RIA).

OPM No.19/2012 determined the use of level 1 RIA (the so-called Report of Impact Assessment—REMAI) as the standard to be used in most cases and that RIAs of levels 2 and 3 should be used in cases the Directors' Collegiate determined them as necessary to better analyze the dimension of the impacts.

The method of assessment developed by Anvisa was based on a Multiple Criteria Decision Analysis (MCDA) methodology called MACBETH (Measuring Attractiveness by Categorical Based Evaluation Technique) (Bana e Costa et al., 2011; Costa et al., 2019). This methodology stipulates a phase in which qualitative evaluations on multiple decision-making criteria are collected. Those evaluations are then systematically processed in a standardized manner and generate quantitative, structured references to assess the alternatives for each decision.

At Anvisa, this method consisted of a qualitative evaluation of the level of impact of the proposed rule regarding 4 possibly affected groups: (i) private regulated actors; (ii) Anvisa itself; (iii) the System of Sanitary Surveillance (SSS), except for Anvisa; and (iv) regular citizens.

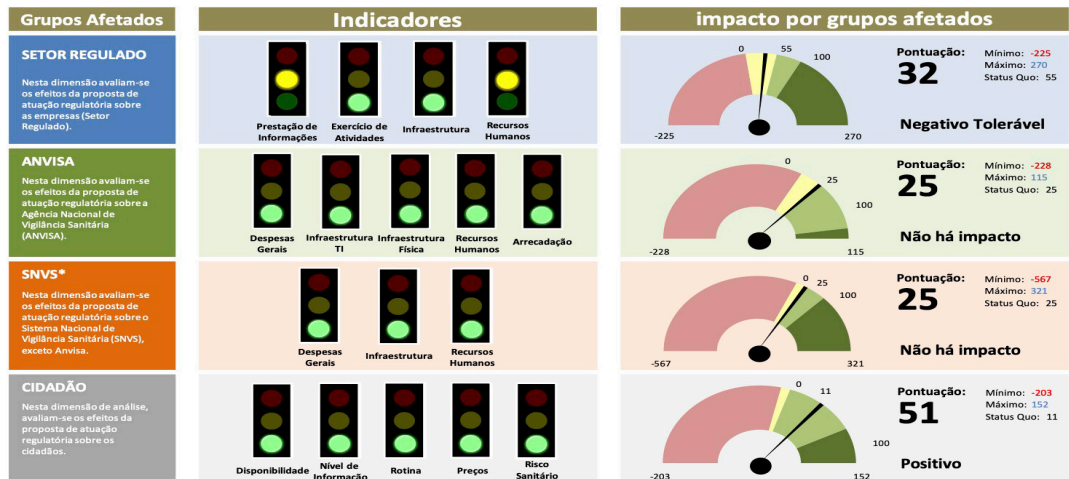
For each of these groups, there are distinct dimensions of analysis to be associated with one of three possible levels of impacts (low, medium, and high), which are represented by the colors of a traffic light. At the end of the process, a panel is produced with a general synthesis of the expected impacts of the rule for the respective groups. The image below shows the impact panel for a revision of RDC No. 4/2012 regarding the criteria used for the Studies of Agrochemical Residues and the establishment of Maximum Limitations on Residues.¹²

11 Despite the importance of this advancement, it is worth noting the fragility of the instrument used to generalize the use of RIAs in Anvisa, as the sole documentation for this provision was the records for the Ordinary Public Meeting, which were not converted into a formal Ordinance.

12 Available at:

<http://antigo.anvisa.gov.br/documents/10181/3445713/REMAI.pdf/178961a1-bbf0-4922-ac7a-e926a205da71>. Last access on June 24, 2021.

Image 1 – Regulatory Impact Panel



Source: ANVISA – Report on Impact Survey

This methodology, however, was revised by Ordinance No. 1,741/2018 to harmonize Anvisa's practices with the guidelines provided by the Civil Office (Casa Civil, 2018) for the preparation of RIAs.

This Ordinance was passed in the context of a substantial change in the role of RIA in Brazilian Administrative Law. Soon after the release of the Civil Office's guidelines, the General Law of Regulatory Agencies made the RIA mandatory for 11 regulatory agencies at the federal level, including Anvisa, for the creation or revisions of rules of general interest for economic players, consumers, or users of regulated services.¹³

After that, the Economic Freedom Act expanded the obligation to carry out RIA, in similar cases, to all bodies of the Federal Administration.¹⁴ Finally, RIA was regulated by Decree No. 10,411/2020, which established rules for cases in which RIA was inapplicable or exempted,¹⁵ for the structure of RIA reports,¹⁶ for different methodologies that could be used to measure economic impact,¹⁷ for the submission of the RIA report itself or the proposed rule for social participation,¹⁸ among other similar implementation rules.

In December 2019, when Ordinance No. 1,741 was issued, the Civil Office's

13 Article 6 of Law No. 13,848/2019 – General Law of Regulatory Agencies.

14 Article 5 of Law No. 13,874/2019 – Economic Freedom Act.

15 Article 3, p. 2 and Article 4, respectively, of Decree No. 10,441/2020.

16 Article 6 of Decree No. 10,441/2020.

17 Article 7 of Decree No. 10,441/2020.

18 Article 8 and Article 9, respectively, of Decree No. 10,441/2020.

RIA guideline highlighted the need for more complete analyses, which had to include a detailed exposition of the regulatory problem and a detailed evaluation of multiple regulatory alternatives. These new directives, which were being consolidated at the federal level, implied the need for greater institutional efforts for the collection and treatment of empirical data on regulatory issues. Consequently, Ordinance No. 1,741/2018 also determined a new workflow to integrate social participation with the preparation of RIA. This workflow included the possibility of submitting the RIA's Preliminary Report to public consultation.

In order to integrate these new directives into the practices of its organizational units, Service Orientation—SO No. 56/2018—was passed, specifying the workflow for the formulation and deliberation of regulatory instruments. The provisions determined a 2 (two) year transition period, between April 2019 and April 2021, in which ANVISA's organizational units could choose between executing the RIA based on the previous or new workflow.¹⁹

In March 2021, ANVISA's program for regulatory improvement would once again be revised, with the goal of complying previous regulations to the terms of Decree No. 10,411/2020 as well as specifying the division of responsibilities in the preparation of RIAs. This reform, however, does not fall within the time period analyzed in this article.

4 EMPIRICAL ANALYSES OF THE USE OF RIA BY ANVISA

To study the evolutions of Anvisa's RIA instruments, data published on the agency's website were collected using an automated tool for data collection (web scraping). The main source of this data was the legislation section of Anvisa's website. The data obtained from this source included information on the use or exemption of RIA as well as the justification used in cases in which RIA was exempted.

These data were cross-referenced with information on the classification of normative acts (regarding the theme and scope of the act) published by Anvisa itself. These classifications were also available on the legislation section of Anvisa's website in a spreadsheet used by the agency to consolidate information on its normative acts.²⁰ The whole process of data collection, including gathering a database through web scraping

19 Article 57 of Anvisa's Ordinance No. 1,741/2018.

20 This spreadsheet was downloaded on March 3, 2021, through the following link: http://antigo.anvisa.gov.br/documents/33880/3396406/Consolidado_Estoque+Regulatório_Portal2/7164cfed-0213-4c97-8f1c-f7fff224683.

and cross-referencing it with Anvisa's spreadsheet, took place between February 17, 2021, and March 3, 2021.

4.1 Data collection criteria

The analyses below were made according to a consolidated database prepared with data obtained by the data collection methodology described above. The complete database contains 2,185 normative rules, 2,077 of which were issued by Anvisa, and 112 by other entities (Ministry of Health, Ministry of Agriculture, the President's Office, etc.). These regulations are available on Anvisa's website due to the high level of connection between these rules and the normative rules issued by Anvisa itself.

Among Anvisa's rules, the ones mainly found were Directors' Collegiate Resolutions (RDC)—1,656 cases—Normative Instructions (INs/INCs—181 cases). RDCs, INs, and INCs correspond to approximately 88% of Anvisa's rules in the database. These types are not the most common if we consider all acts published by Anvisa in the Federal Official Gazette. There are other types of acts, such as Ordinances and Special Resolutions, that are more common.

The agency's option to mainly publish these types of normative acts on its webpage relates to the fact that these acts contain regulatory rules with general effects for private regulated agents. According to Anvisa's Internal Rules of Procedure (RDC No. 255/2019), ordinances are used for issues related to the interest of the agency itself (administrative management); and Special Resolutions are usually concrete acts with no general effects, such as permissions, authorizations, etc.²¹

The database also included non-binding measures, such as guidelines, which are of interest to private regulated agents (and, therefore, are published in the legislation section of the webpage), but they are not normative acts *per se*.

Among the types of acts that compose the database, Directors' Collegiate Resolutions and Normative Instructions are the ones that best reflect the regulatory activity of the agency. As such, the analyses only include RDCs, Ins, and INCs from Anvisa itself. This first criterion reduces the universe of study to 1,837 normative acts.

In addition, as seen before, Anvisa started using RIA due to the establishment of

21 It is important to note that both Decree No. 10.411/2021 (article 3, p. 2, I e II) and Anvisa's Ordinance No. 162/2021 (article 17, I e II) have established the inapplicability of RIA for special acts with concrete effects (as opposed to general effects) and for internal acts (with effects related only to agency's internal administrative matters).

the Program on the Improvement of the Regulatory Process by Ordinance No. 422/2008. However, the agency has only started to disclose data on the use or exemption of RIA after 2011, when Ordinance No. 1,381 created the Center for Regulation and Good Practices on Regulation. At that time, RIA was included for the first time in Anvisa's Internal Rules of Procedure.

Given that the specific interest of this article is to study the implementation of RIAs by Anvisa, a second selection criterion becomes necessary. Before 2008, the practice of RIAs did not exist within Anvisa. Between 2008 and 2011, there were only tentative debates regarding the implementation of this instrument, and data on RIA are very scarce, with very few examples of its actual use.

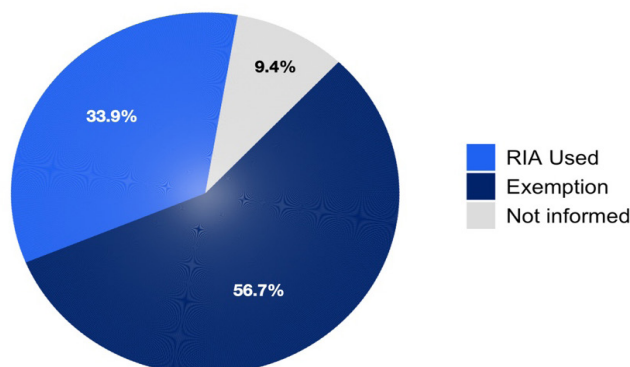
A second criterion was thus used to select, among Anvisa's RDCs, INs, and INCs, only the acts that were issued in the period from 2011 to 2020. The year 2021 was also excluded to avoid distortions in the analysis since the data are only available for the months of January and February.

Thus, using criteria regarding the origin of the act, the type of act, and the period of interest, a total of 843 normative rules (719 RDCs, 114 INs, and 10 INCs) are reached.

4.2 Use of RIA by the Agency

The first question that the data collected answers concerns the evolution of the use of RIA by ANVISA since 2011. It was observed that, among the 843 normative acts that compose the database, 286 used RIA (33,9% of the cases) to inform decisions; for 478 normative acts (56,7% of the cases), RIA was exempted; and for 79 normative acts (9,4% of the cases), there was no information available on the Agency's website about the use of RIA. The graph below shows these results.

Graph 1 – General proportion of use of RIA by Anvisa



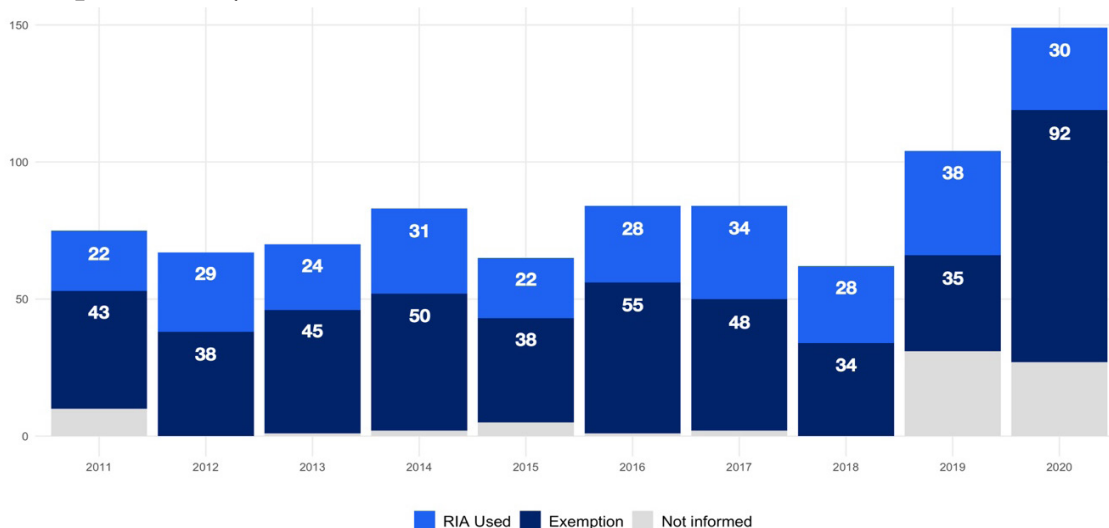
Source: elaborated by the authors.

During the period investigated, it was identified that the total number of normative acts per year and the proportion of use and exemption of RIAs have remained relatively constant between 2011 and 2016, with a slight upward trend in the use of RIAs in 2017 and 2018. In 2019, an increase in the total volume of normative acts was observed, with a decrease in the proportion of cases in which RIA was used and an increase in the proportion of cases with no information available.

This result may be related to the entry of the General Law on Agencies, which made RIA mandatory for ANVISA in certain cases. Another possible explanatory factor is the change in Anvisa's RIA methodology after the Civil Office guideline was issued and Ordinance No. 1,741/2018 was passed.

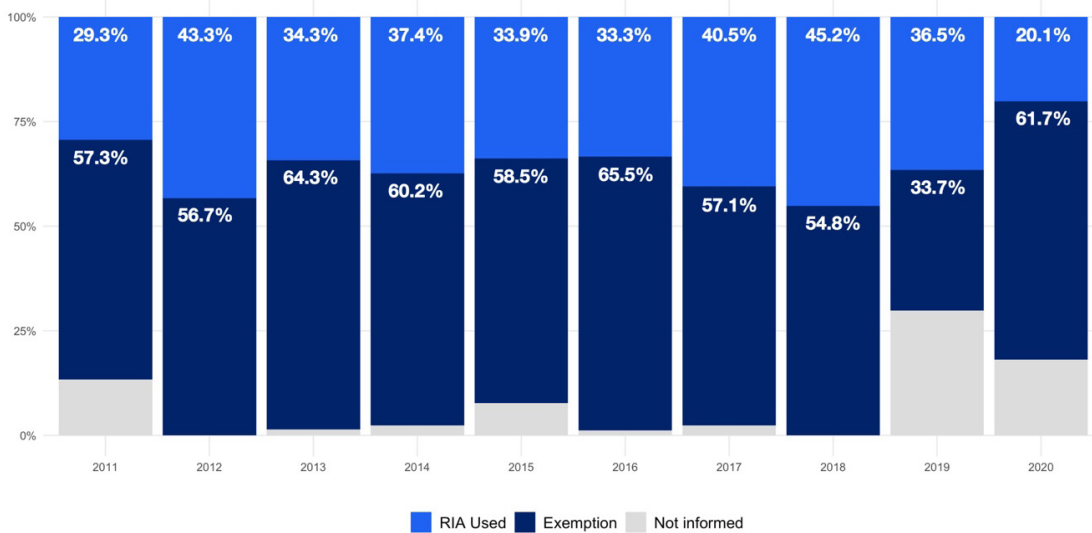
Finally, in 2020, a strong increase in the total volume of normative acts and a decrease in the proportion of cases in which RIA is used were observed. This result was expected due to the repercussion of the COVID-19 pandemic, especially considering that Anvisa was the regulatory agency that issued the majority of the direct measures that dealt with the pandemic (Guerra et al., 2020). The graphs below show the evolution of the use of RIA by ANVISA in absolute numbers and relative proportions.²²

Graph 2 – Yearly Evolution of the use of RIA (absolute numbers)



Source: elaborated by the authors.

²² A table with consolidated data on the yearly evolution of the use of RIA by Anvisa is available in the Appendix to this article.

Graph 3 – Yearly Evolution of the use of RIA (proportion)

Source: elaborated by the authors.

Based on these results, it can be concluded that, although ANVISA is an agency with a high degree of engagement with RIA, most general normative acts approved in this period did not rely on previous analyses of their regulatory impacts.

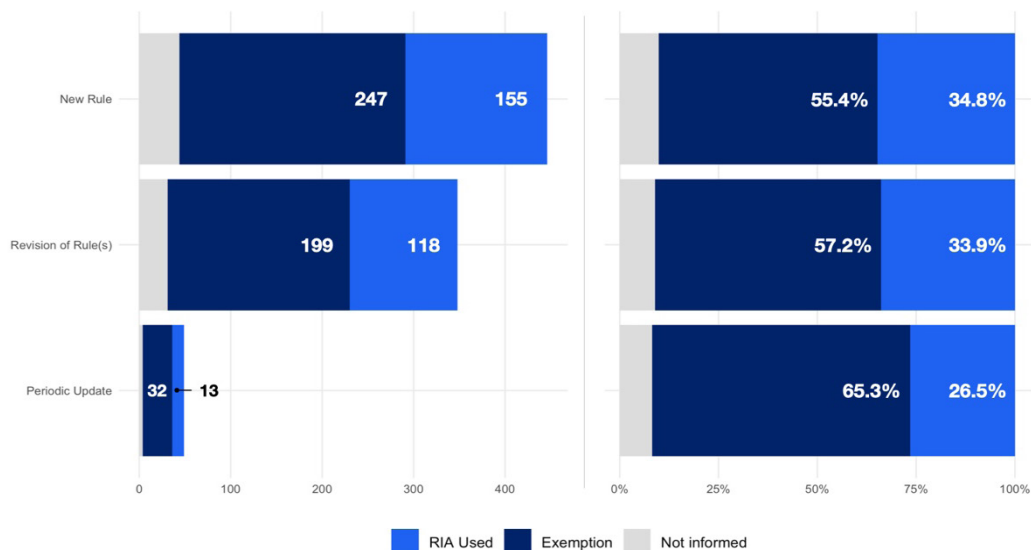
This is, however, a conclusion that is potentially compatible with the regulation of RIA, if one is to consider the general directives established by Decree No. 10,441/2020 and the internal rules of procedure established by Anvisa's Ordinances. This is because these rules establish cases in which RIA *does not apply* (material error corrections, normative consolidation, update/repeal of obsolete rules, etc.) and in which RIA *may be exempted* (procedures of great severity and urgency that represent high social risks, cases of notoriously low impacts, administrative simplifications without changes in the substance/merits of the normative rule, etc.).

Indications of the occurrence of these cases can be identified by cross-referencing data on the implementation of RIA with the categories of scope of the normative acts. In Anvisa's consolidation spreadsheet, the agency has classified its normative acts according to 3 (three) categories of scope: (i) new rule, (ii) revision of rule(s), and (iii) periodic update. Therefore, it is possible to assess if there is a substantially higher proportion of cases of RIA exemption among the rules that only revise or periodically update other rules, in comparison to entirely new normative acts.

The results obtained confirm that the high proportion of RIA exemption is also

present in rulemaking processes for entirely new normative acts. As shown in the graph below, the proportions of exemption and unavailability of information are practically equivalent among new rules and revision of rules. There is a higher proportion of RIA dismissal for periodically updating rules, which compose only a small number of cases.

Graph 4 – Implementation of RIA among scope categories



Source: elaborated by the authors.

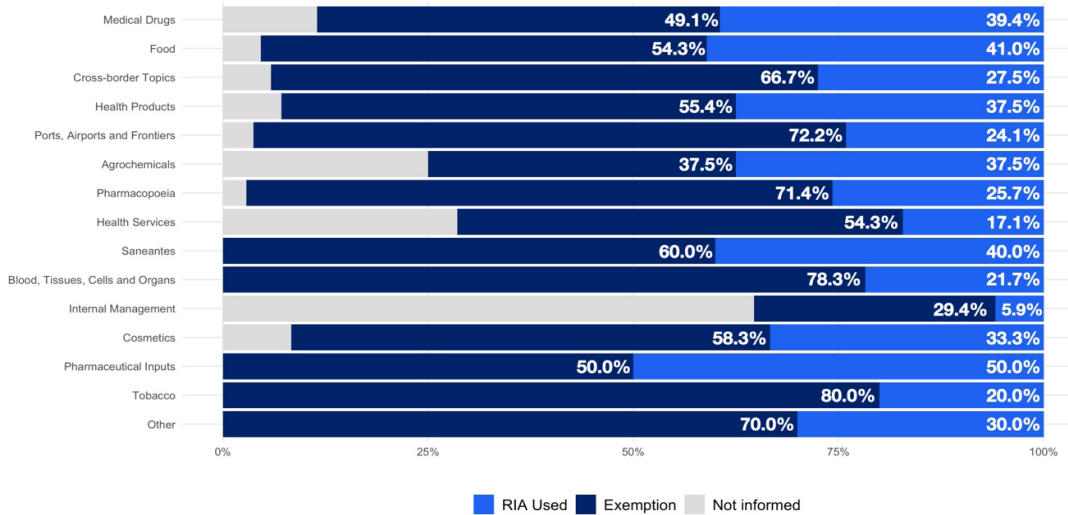
4.3 Variation of RIA implementation regarding the theme in the regulatory rule

On the other hand, more variation is seen when cross-referencing data on the use of RIA with the themes of the rules, a category also available in Anvisa’s consolidation spreadsheet. The normative acts were classified by the agency, according to its theme, into 17 categories: medical drugs (218 cases); food (173 cases); cross-border topics (120 cases); health products (56 cases); ports, airports, and frontiers (54 cases); agrochemicals (40 cases); pharmacopoeia (35 cases); health services (35 cases); sanitizing products (30 cases); blood, tissues, cells, and organs (23 cases); internal management (17 cases); cosmetics (12 cases); pharmaceutical inputs (10 cases); tobacco (10 cases); organization and management of the SSS (7 cases); analytical laboratories (2 cases); and services of health interest (1 case).

Given its low frequency, the themes of organization and management of the

SSS, analytical laboratories, and services of health interest were consolidated into the category “others,” totalizing 10 cases. The graph below shows the frequencies of RIA implementation according to categories of themes.

Graph 5 – Use of RIA according to regulatory theme



Source: elaborated by the authors.

For some themes with a very small number of cases (low n) in the database, the significance of this variation must be analyzed with caution. This is the case for themes such as cosmetics, pharmaceutical inputs, and tobacco. However, one can identify that, even in themes that are very common in the database, such as medical drugs; products for health; or ports, airports, and frontiers, the variation in the proportion of cases of exemption is very significant.

This result may indicate different levels of engagement of internal departments of the agency with RIA or even reflect perceptions of the Directors' Collegiate of the Agency regarding themes of greater relevance and urgency. Again, complementary studies are necessary for a qualitative analysis of the results obtained here.

4.4 Justifications in cases of dismissal

Besides publishing information on the implementation of RIA, the Agency also offers a justification for the cases it has opted to exempt the use of RIA or public

consultation before the approval of the rule on its website.

There were 4 (four) different justifications published by the agency on its website for the universe of cases investigated in this article: “procedure with a high degree of urgency and severity;” “procedure of periodic update;” “procedure of notorious low impact;” and “procedure of revision of a normative rule that exclusively envisages administrative simplification, without altering substance/merits.”

To simplify the presentation of our results, these justifications are codified as ‘urgency/severity,’ ‘periodic update,’ ‘low impact,’ and ‘administrative simplification.’ There are also cases in which the agency has not published a justification on its webpage, referred to as “not informed.”

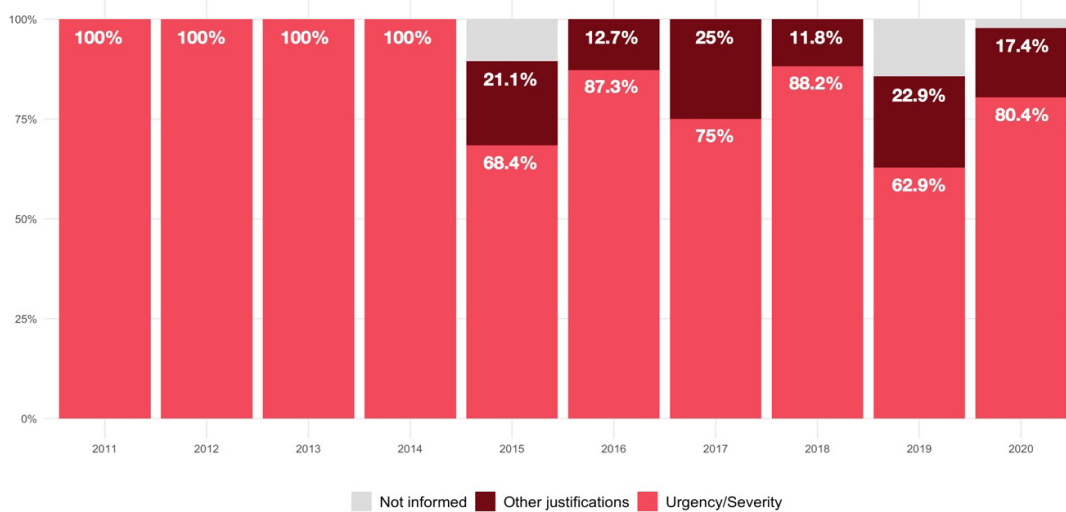
The table below shows categories of justification used by Anvisa in cases of RIA exemption, indicating the absolute number and percentage of rules that have received each justification.

Table 1 – Justifications for RIA dismissal

Justification	No. of Cases	
	Total	%
Urgency/Severity	412	86.2
Periodic Update	31	6.5
Low Impact	22	4.6
Not Informed	11	2.3
Administrative Simplification	2	0.4

Source: elaborated by the authors.

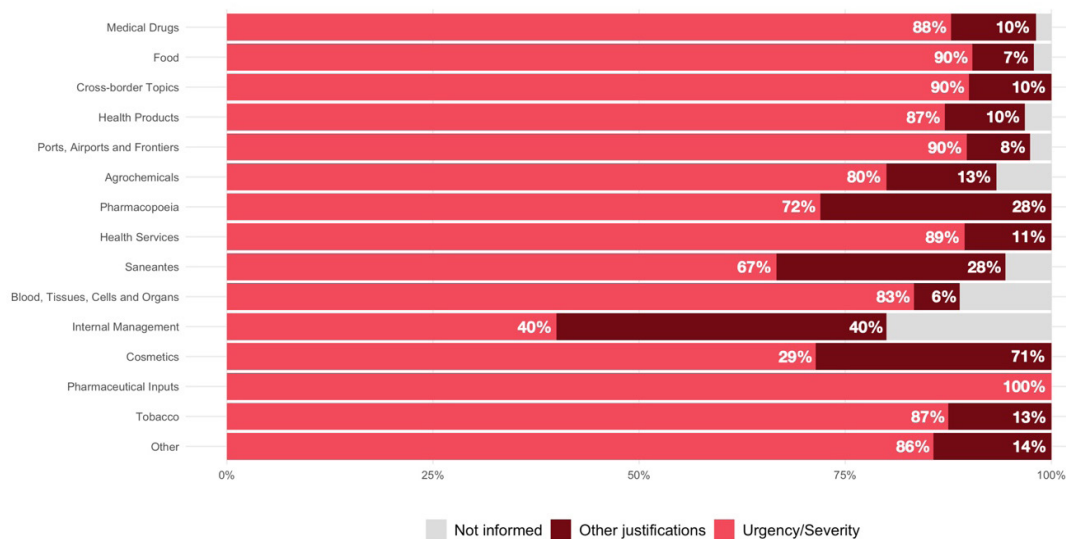
There is a predominance of the justification urgency/severity, which is present in 86.2% of the cases in which RIA has been exempted for the universe of cases under investigation. In addition, when comparing justifications over the years, it was verified that, until 2014, urgency/severity was the only justification presented by the Agency for RIA exemption, as observed in the graph below.

Graph 6 – Justifications for RIA dismissal per year

Source: elaborated by the authors.

Interestingly, compared to the year 2020, when the COVID-19 pandemic started, years 2014 and 2018 had a larger proportion of cases in which RIA was dismissed due to urgency/severity. It is worth noting, however, that the total number of normative acts issued in 2020 was substantially higher than those of the years 2014 and 2018. But it is a fact, in any case, that the high prevalence of urgency/severity as justification for RIA exemption does not relate to the COVID-19 pandemic, given that this trend was already present years before the start of the pandemic.

Furthermore, it is observed that the themes of the normative rules are also associated with variations in the justifications presented for RIA exemption. Cases involving themes such as agrochemicals, pharmacopoeia, and sanitizing products presented higher proportions of justifications other than gravity/severity. The graph below shows this result.

Graph 7 – Justifications for the dismissal of RIA according to theme

Source: elaborated by the authors.

Again, one must bear in mind that the number of cases (n) of some categories is excessively low and does not allow the reaching of robust conclusions. In any case, the data do show indications that the Directors' Collegiate of the Agency perceives gravity/severity differently for different thematic areas that fall within the agency's regulatory agenda. Further qualitative analysis of justifications for RIA dismissal may contribute to the understanding of this occurrence.

5 FINAL REMARKS

As a pioneer in the implementation of RIA in Brazil, Anvisa might be the best agency to systematically integrate this tool into its regulatory practices. Nevertheless, this paper finds that the agency has dismissed the use of RIA for 56.7% of its general normative acts with external effects.

The gravity/severity of the rulemaking process has been used massively by the agency to exempt studies of RIA, totaling 86.2% of exemption cases.

The use of RIA and exemption justifications tend to vary depending on the theme of the normative act as demonstrated. This result can indicate institutional differences between the different organizational unities of Anvisa. It can also point to differences in the way the Directors' Collegiate evaluates the complexity and severity of different recurring themes in its regulatory agenda.

In addition to contributing to the rationality and legitimacy of administrative decisions, RIAs can be used as a mechanism for political control of the Public Administration. It is beyond the scope of the article to confirm whether the use of RIA by Anvisa fulfills its different functions and purposes.

This article has accomplished a far simpler but essential task for future studies on the efficacy and effectiveness of this instrument—that of identifying the circumstances under which the agency used or did not use RIAs. In order to meet its rationality standards, RIA should only be exempted exceptionally, such as in low-impact rulemaking or when the costs of adopting RIA in urgent/severe situations supersede its benefits. Likewise, RIA will only serve as an instrument of political control if it is used as a rule of thumb by regulatory agencies.

In this article, it was not confirmed whether the situations in which Anvisa exempted RIA really met the urgent/severity or low impact criteria. This analysis is exclusively based on the justifications presented by Anvisa; verification of the justifications presented by the agency is yet to be made. However, the data collected do show that Anvisa uses this justification often and that different regulatory themes are treated differently by the agency. Hopefully, these results have set the ground for further investigations into Anvisa's RIA effectiveness.

REFERENCES

- Alves, F. N. R., & Peci, A. (2011). Análise de Impacto Regulatório: Uma nova ferramenta para a melhoria da regulação na Anvisa. *Revista de Saúde Pública*, 45(4), 802–805. <https://doi.org/10.1590/S0034-89102011000400023>
- Atienza, M. (1997). Contribución a uma teoria de la legislación. *Civitas*. Baldwin, R. (2010). Better Regulation: The Search and the Struggle. In R. Baldwin, M. Cave, & M. Lodge, **The Oxford Handbook of Regulation**. Oxford Handbooks Online.
- Bana e Costa, C. A., de Corte, J.-M., & Vansnick, J.-C. (2011). **MACBETH (Measuring Attractiveness by a Categorical Based Evaluation Technique)**. In J. J. Cochran, L. A. Cox, P. Keskinocak, J. P. Kharoufeh, & J. C. Smith, Wiley Encyclopedia of Operations Research and Management Science. John Wiley & Sons, Inc. <https://doi.org/10.1002/9780470400531.eorms0970>
- Casa Civil. (2018). **Diretrizes gerais e guia orientativo para elaboração de análise de impacto regulatório—AIR**. Governo Federal. https://www.gov.br/casacivil/pt-br/centrais-de-conteudo/downloads/diretrizes-gerais-e-guia-orientativo_final_27-09-2018.pdf/@@download/file/diretrizes-gerais-e-guia-orientativo_final_27-09.pdf
- Chevallier, J. (1992). **A Racionalização da Produção Jurídica**. Cadernos de Ciência da Legislação, 3, 9–23.
- Coglianesi, C., Kilmartin, H., & Mendelson, E.

- (2009). **Transparency and Public Participation in the Rulemaking Process**. Faculty Scholarship at Penn Law. https://scholarship.law.upenn.edu/faculty_scholarship/238
- Costa, C. A. B. e, Vieira, A. C. L., Nóbrega, M., Quintino, A., Oliveira, M. D., & Costa, J. B. e. (2019). **Collaborative Value Modelling in corporate contexts with MACBETH**. *Procedia Computer Science*, 162, 786–794. <https://doi.org/10.1016/j.procs.2019.12.051>
- Guerra, S., Salinas, N. S. C., & Gomes, L. T. (2020). **As agências reguladoras em resposta à crise da COVID-19**. *Revista de Administração Pública*, 54(4), 874–897. <https://doi.org/10.1590/0034-761220200321>
- McCubbins, M. D., Noll, R. G., & Weingast, B. R. (1987). **Administrative Procedures as Instruments of Political Control**. *Journal of Law, Economics, & Organization*, 3(2), 243–277.
- Medauar, O. (2008). **A processualidade no direito administrativo** (2a. ed. rev., atualizada e ampliada). Editora Revista dos Tribunais.
- Meneguín, F. B., & Saab, F. (2020). *Análise de Impacto Regulatório: Perspectivas a partir da Lei da Liberdade Econômica [Texto para Discussão no 271]*. Núcleo de Estudos e Pesquisas/CONLEG/Senado.
- Moe, T. M. (1989). *The Politics of Bureaucratic Structure*. In J. E. Chubb & P. E. Peterson (Eds.), *Can the government govern?* (p. 267–329). Brookings Institution.
- Morall, J. (1997). *An Assessment of the US Regulatory Impact Analysis Programme*. In OECD, *Regulatory Impact Analysis: Best Practices in OECD Countries* (p. 71–87). OECD Publishing.
- National Health Surveillance Agency - ANVISA. (2008). *Governo escolhe Anvisa para projeto piloto de regulação*. Anvisa's news page.
- National Health Surveillance Agency - ANVISA. (2013). *Análise de impacto regulatório: Anvisa é referência para agências*. Anvisa's news page.
- OECD. (2008). *Building an Institutional Framework for Regulatory Impact Analysis (RIA): Guidance for Policy Makers*. OECD Publishing. <https://www.oecd.org/gov/regulatory-policy/40984990.pdf>
- OECD. (2012). *Recommendation of the Council on Regulatory Policy and Governance*. OECD Publishing. <https://doi.org/10.1787/9789264209022-en>
- OECD. (2015). *Evidence-based policymaking through Regulatory Impact Assessment*. In OECD *Regulatory Policy Outlook 2015* (p. 93–117). OECD Publishing. <https://doi.org/10.1787/9789264238770-9-en>
- Proença, J. D., Costa, P. V. da, & Montagner, P. (2009). *Desafios da regulação no Brasil*. ENAP.
- Radaelli, C., & De Francesco, F. (2010). *Regulatory Impact Assessment*. In R. Baldwin, M. Lodge, & M. Cave, *The oxford handbook of regulation* (Vol. 90, p. 563–564). Oxford University Press. <http://doi.wiley.com/10.1111/j.1467-9299.2012.02049.x>
- Salinas, N. S. C., & Cerqueira, L. S. (2020). *Análise de impacto regulatório na Lei Geral das Agências e na Lei de Liberdade Econômica: Fundamentos e tensões*. *Interesse Público*, 22(124), 217–231.
- Shapiro, S. A., & Schroeder, C. (2008). *Beyond cost-benefit analysis: A pragmatic reorientation*. *Harvard Environmental Law Review*, 32, 70.
- Simon, H. A. (1997). *Administrative behavior: A study of decision-making processes in administrative organization* (4. ed). The Free Press.
- Stodden, V. (2014). *The reproducible research movement in statistics*. *Statistical Journal of the IAOS*, 30, 91–93.

CITED LEGISLATION

National Health Surveillance Agency – Anvisa. Ordinance No. 354 of August 11, 2006. Available at: <https://www.legisweb.com.br/legislacao/?id=197327>. Last access on June 24, 2021.

National Health Surveillance Agency – Anvisa. Ordinance No. 422, of April 16, 2008. Available at: <https://www.gov.br/anvisa/pt-br/centraisdeconteudo/publicacoes/regulamentacao/guia-para-o-programa-de-melhoria-do-processo-de-regulamentacao-da-anvisa.pdf>. Last access on June 24, 2021.

National Health Surveillance Agency – Anvisa. Ordinance No. 1,381 of September 16, 2011. Available at: <https://www.legisweb.com.br/legislacao/?id=235139>. Last access on June 24, 2021.

National Health Surveillance Agency – Anvisa. Directors' Collegiate Resolution - RDC No. 255 of September 10, 2018. Available at: https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/54522298/do1-2018-12-11-resolucao-de-diretoria-colegiada-rdc-n-255-de-10-de-dezembro-de-2018-54521871. Last access on June 24, 2021.

National Health Surveillance Agency – Anvisa. Ordinance No. 1,741, of September 12, 2018. Available at: https://www.in.gov.br/materia/-/asset_publisher/Kujrw0TZC2Mb/content/id/55220083/do1-2018-12-14-portaria-n-1-741-de-12-de-dezembro-de-2018-55219864. Last access on June 24, 2021.

National Health Surveillance Agency – Anvisa. Service Orientation – SO No. 56, of September 18, 2018. Available at: http://antigo.anvisa.gov.br/documents/10181/5087466/OS_56_2018_BPR_COMP.pdf/1e57cdc2-9597-4677-bc62-4a99ceae9d8e. Last access on June 24, 2021.

National Health Surveillance Agency – Anvisa. Ordinance No. 162, of March 12, 2021. Available at: http://antigo.anvisa.gov.br/documents/10181/6242211/PRT_162_2021_.pdf/43a711e9-4d53-4496-afc5-6eb3d7287a07. Last access on June 24, 2021.

National Health Surveillance Agency – Anvisa. Service Orientation – SO No. 96, March 12, 2021. Available at: http://antigo.anvisa.gov.br/documents/10181/6242211/OS_96_2021.pdf/09b1a87b-5d8d-4703-8696-d5ca361b9c7a. Last access on June 24, 2021.

Brazil. Law No. 95, of February 26, 1998. Available at: http://www.planalto.gov.br/ccivil_03/leis/lcp/lcp95.htm. Last access on June 24, 2021.

Brazil. Decree No. 4,176, of March 28, 2002. Available at: http://www.planalto.gov.br/ccivil_03/decreto/2002/d4176.htm. Last access on June 24, 2021.

Brazil. Decree No. 6,062, of March 16, 2007. Available at: http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2007/decreto/D6062.htm. Last access on June 24, 2021.

Brazil. Decree No. 9,191, of November 1st, 2017 Available at: http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2017/Decreto/D9191.htm#art59. Last access on June 24, 2021.

Brazil. Law No. 13,848, of June 25, 2019. Available at: http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2017/Decreto/D9191.htm#art59. Last access on June 24, 2021.

Brazil. Law No. 13,874, of September 20, 2019. Available at: http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/lei/L13874.htm. Last access on June 24, 2021.

Brazil. Decree No. 10,441, of June 30, 2020. Available at: <https://www.in.gov.br/en/web/dou/-/decreto-n-10.411-de-30-de-junho-de-2020-264424798>. Last access on June 24, 2021.

Natasha Schmitt Caccia Salinas

 <https://orcid.org/0000-0003-1012-1132>

Professor, Fundação Getulio Vargas School of Law in Rio de Janeiro (Graduate Program on Regulatory Law and Bachelor of Laws). Holds a Ph.D and a master's in law, University of São Paulo Law School. Master of Laws (LL.M.), Yale Law School.

E-mail: natasha.salinas@fgv.br

Lucas Thevenard Gomes

 <https://orcid.org/0000-0001-5011-4960>

Attending a Masters degree on Regulatory Law, Fundação Getulio Vargas School of Law in Rio de Janeiro (FGV Direito Rio). Researcher at the Center for Research in Law and Economics, FGV Direito Rio. MBA in International Relations, FGV.

E-mail: lthevenard@gmail.com

APPENDIX

I. COMPLEMENTARY TABLES

YEARLY USE/EXEMPTION OF RIA

Year	Use of RIA		Exemption of RIA		Not informed	
	Use (total)	Use (%)	Exemption (total)	Exemption (%)	N/I (total)	N/I (%)
2011	22	29.33	43	57.33	10	13.33
2012	29	43.28	38	56.72	0	0.00
2013	24	34.29	45	64.29	1	1.43
2014	31	37.35	50	60.24	2	2.41
2015	22	33.85	38	58.46	5	7.69
2016	28	33.33	55	65.48	1	1.19
2017	34	40.48	48	57.14	2	2.38
2018	28	45.16	34	54.84	0	0.00
2019	38	36.54	35	33.65	31	29.81
2020	30	20.13	92	61.74	27	18.12

Source: elaborated by authors.

USE/EXEMPTION OF RIA BY THEME

Tema	Use of RIA		Exemption of RIA		Not Informed	
	Use (Total)	Use (%)	Exemption (Total)	Exemption (%)	N/I (Total)	N/I (%)
Medical Drugs	86	39.4	107	49.1	25	11.5
Food	71	41.0	94	54.3	8	4.6
Cross-border Topics	33	27.5	80	66.7	7	5.8
Health Products	21	37.5	31	55.4	4	7.1
Ports, Airports and Frontiers	13	24.1	39	72.2	2	3.7
Agrochemicals	15	37.5	15	37.5	10	25.0
Pharmacopoeia	9	25.7	25	71.4	1	2.9
Health Services	6	17.1	19	54.3	10	28.6
Saneantes	12	40.0	18	60.0	0	0.0
Blood, Tissues, Cells and Organs	5	21.7	18	78.3	0	0.0
Internal Management	1	5.9	5	29.4	11	64.7
Cosmetics	4	33.3	7	58.3	1	8.3
Pharmaceutical Inputs	5	50.0	5	50.0	0	0.0
Tobacco	2	20.0	8	80.0	0	0.0
Other	3	30.0	7	70.0	0	0.0

Source: elaborated by authors.

USE/EXEMPTION OF RIA FOR ACTS OF DIFFERENT SCOPES

Act	Use of RIA		Exemption of RIA		Not Informed	
	Use (total)	Use (%)	Exemption (total)	Exemption (%)	N/I(total)	N/I(%)
New Rule	155	34.75	247	55.38	44	9.87
Periodic Update	13	26.53	32	65.31	4	8.16
Revision of Rule(s)	118	33.91	199	57.18	31	8.91

Source: elaborated by authors.

II. RESOURCES

The complete data base, as well as the code used in this research can be freely accessed²³ at: https://drive.google.com/drive/folders/1crxqKuRnFp39yJdh_oBoDwWNI4ikn7Ft?usp=sharing.

If you have any problems gaining access to these resources from the address given above, please contact us through the e-mail: lucas.gomes@fgv.br. All the code used to collect the data, clean the data and produce graphical visualizations was developed in the R language, using the packages and versions detailed below.

R Core Team. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria, 2020. <https://www.R-project.org/>.

Wickham et al. **Welcome to the tidyverse**. Journal of Open Source Software, 4(43), 1686, 2019. <https://doi.org/10.21105/joss.01686>.

John Harrison. **RSelenium: R Bindings for ‘Selenium WebDriver’**. R package version 1.7.7, 2020. <https://CRAN.R-project.org/package=RSelenium>.

Hadley Wickham. **rvest: Easily Harvest (Scrape) Web Pages**. R package version 0.3.6, 2020. <https://CRAN.R-project.org/package=rvest>.

Garrett Golemund, Hadley Wickham. **Dates and Times Made Easy with lubridate**. Journal of Statistical Software, 40(3), 1-25, 2011. <https://www.jstatsoft.org/v40/i03/>.

Hao Zhu. **kableExtra: Construct Complex Table with ‘kable’ and Pipe Syntax**. R package version 1.3.4, 2021. <https://CRAN.R-project.org/package=kableExtra>.

Hadley Wickham and Dana Seidel. **scales: Scale Functions for Visualization**. R package version 1.1.1, 2020. <https://CRAN.R-project.org/package=scales>.

Hadley Wickham and Jennifer Bryan. **readxl: Read Excel Files**. R package version 1.3.1, 2019. <https://CRAN.R-project.org/package=readxl>.

²³ Most files were stored in R's native format (.rds), but you will find the final version of the database (before selection cuts) in CSV format at './dados/anvisa_legis_consolidada.csv'. You will also find PDFs with the full texts of a large proportion of the normative acts on the database at './dados/PDFs/*'.

EVALUATING THE QUALITY OF REGULATORY IMPACT ANALYSIS: A LITERATURE REVIEW

Flavio Saab

Suylan de Almeida Midlej e Silva

Universidade de Brasília (UnB), Brasília – DF, Brazil

Regulatory Impact Analysis (RIA) is an instrument that can provide information and knowledge to decision makers to assess whether a given regulation is capable of achieving its objectives, with acceptable impacts and reasonable costs. For RIA to be useful and guide good decisions, it is not enough that it is carried out; it needs to be of quality. This research aimed to understand the current stage of the literature on RIA quality evaluation and offer practical and theoretical contributions, as well as an agenda for future studies. Through literature review, 26 empirical articles were identified and examined. A decreasing pace of publications and the use of various dimensions and methods for evaluating the quality of RIA were identified. It was found that the RIAs performed in the last 40 years have shown important weaknesses and inconsistencies that can compromise their use. In order to advance the knowledge on the topic, new studies that evaluate the quality of the RIA in different countries and regions, with a critical approach to the methods used, and that identify political and institutional factors related to analyses of higher or lower quality were suggested.

Keywords: regulatory impact analysis; regulatory impact assessment; RIA; regulation; quality.



AVALIANDO A QUALIDADE DA ANÁLISE DE IMPACTO REGULATÓRIO: UMA REVISÃO DA LITERATURA

A Análise de Impacto Regulatório – AIR é um instrumento que pode oferecer informações e conhecimento aos tomadores de decisão para que avaliem se determinada regulação é capaz de alcançar seus objetivos, com impactos aceitáveis e custos razoáveis. Para que a AIR seja útil e oriente boas decisões, não basta que seja realizada, ela precisa ter qualidade. O objetivo da presente pesquisa foi compreender o estágio atual da literatura sobre avaliação da qualidade da AIR e oferecer contribuições práticas e teóricas, bem como uma agenda para estudos futuros. Por meio de revisão da literatura, foram identificados e examinados 26 artigos empíricos. Identificou-se um ritmo decrescente de publicações e o uso de variadas dimensões e métodos de avaliação da qualidade da AIR. Verificou-se que as AIRs realizadas nos últimos 40 anos têm apresentado fragilidades e inconsistências importantes que podem comprometer o seu uso. Para que se avance no conhecimento sobre o tema, sugeriu-se novos estudos que avaliem a qualidade da AIR em diferentes países e regiões, com abordagem crítica aos métodos utilizados e que identifiquem fatores políticos e institucionais relacionados a análises de maior ou menor qualidade.

Palavras-chave: análise de impacto regulatório; AIR; regulação; qualidade.

EVALUACIÓN DE LA CALIDAD DEL ANÁLISIS DE IMPACTO REGULATORIO: UNA REVISIÓN DE LA LITERATURA

Análisis de Impacto Regulatorio - AIR es un instrumento que puede proporcionar información y conocimiento a los tomadores de decisiones para evaluar si una regulación dada es capaz de lograr sus objetivos, con impactos aceptables y costos razonables. Para que AIR sea útil y oriente las buenas decisiones, no basta con que se lleve a cabo, necesita tener calidad. El objetivo de esta investigación fue conocer el estado actual de la literatura sobre evaluación de la calidad del AIR y ofrecer aportes prácticos y teóricos, así como una agenda para futuros estudios. Mediante revisión de la literatura, se identificaron y examinaron 26 estudios empíricos. Se identificó un ritmo decreciente de publicaciones y varias dimensiones y métodos para evaluar la calidad del AIR. Se encontró que los AIR realizados en los últimos 40 años han mostrado importantes debilidades e inconsistencias que pueden comprometer su uso. Con el fin de avanzar en el conocimiento sobre el tema, se sugirieron nuevos estudios que evalúen la calidad del AIR en diferentes países y regiones, con un enfoque crítico de los métodos utilizados y que identifiquen factores políticos e institucionales relacionados con análisis de mayor o menor calidad.

Palabras clave: análisis de impacto regulatorio; AIR; regulación; calidad.

1 INTRODUCTION

In a broad sense, regulation covers a variety of rules established by the government that affect companies and individuals (Hahn & Tetlock, 2008). The government, in general, uses regulation to intervene in market failures and promote the values established by society (Belfield et al., 2018). People expect regulation to protect them from fraud, prevent accidents, preserve the environment, promote the health of the population, and offer security to the trade of goods and services (Ellig, 2018; Hahn et al., 2000).

However, it is known that regulation can generate unwanted effects. In regulated markets, goods and services can become more expensive, workers can have their wages reduced, and the population can lose freedom and privacy. To avoid unwanted and unnecessary effects, the decision maker must invest in obtaining knowledge and information before deciding. It is recommended that the decision maker does not make decisions before knowing whether the regulation will face real problems with acceptable impacts and reasonable costs (Ellig, 2018). The Regulatory Impact Analysis (RIA) is an instrument that can offer this type of aid to the decision maker and increase the chances of success of regulatory policies (Humpherson, 2004).

For RIA to reach its goals, it needs to be of quality to guide good decisions (Fritsch et al., 2013). Regarding this aspect, studies identified low quality in some RIAs (Belcore & Ellig, 2008; Belfield et al., 2018; Hahn & Tetlock, 2008) and the lack of an adequate analysis standard (Ellig & Fike, 2016; Ellig & Mclaughlin, 2012). Other studies suggest further investigations on the quality of RIA so that improvement strategies can be identified (De Francesco, 2012; Ellig et al., 2013; Rissi & Sager, 2013).

This research seeks to contribute to this discussion, aims to understand the current stage of the literature on RIA quality evaluation, and offers practical and theoretical contributions, as well as an agenda for future studies.

2 REGULATORY IMPACT ANALYSIS (RIA)

The term RIA was created in the United States, in the 1970s, to represent the analysis and measurement of the effects of regulatory proposals. At the time, Presidents Nixon, Ford, and Carter, who governed the United States between 1969 and 1981, had already presented guidelines for improving regulation, but the institutionalization of RIA occurred in the 1980s, when the Reagan administration demanded Cost-Benefit Analysis

(CBA) for all regulations with an impact greater than US\$100 million (Ellig & McLaughlin, 2012; Goodstein, 1995; Vibert, 2006).

When proposed in the United States, the concept of RIA had a strong relationship with CBA. There was strong concern with demonstrating that the benefits outweighed the costs of regulatory proposals (Zentner, 1984). The use of RIA was aimed at promoting the maximization of net benefits among the evaluated regulatory alternatives, to obtain greater economic efficiency and impose less discretion on the decision maker (Goodstein, 1995). RIA was confused with CBA as it was conceptualized as employing “cost-benefit criteria in developing and issuing regulations” (Zentner, 1984, p.167).

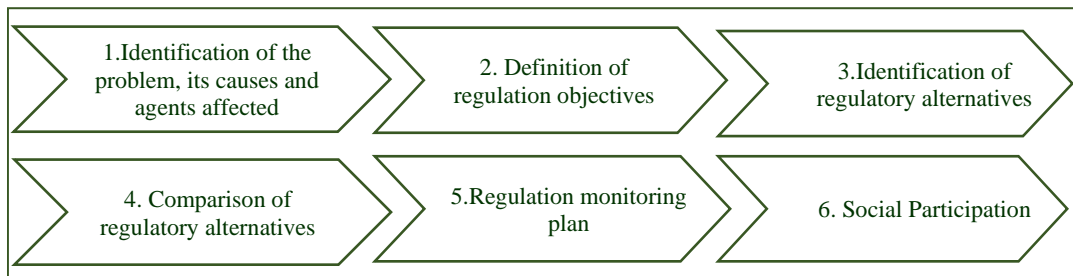
As adherence to RIA grew in developed and developing countries (Adelle et al., 2016; Reyes et al., 2015), its application and concepts underwent important changes (Radaelli, 2010). Criticism of the exclusive use of CBA has been gaining ground in recent literature due to the low development of quantification methods (Achtnicht et al., 2009; Belfield et al., 2018; Kirkpatrick et al., 2004), the difficulty and immorality of attributing values to human life and the environment (Robinson & Levy, 2011; Zentner, 1984), and the need to incorporate additional issues such as distribution, fairness, and equity in analyses (Nweke, 2011). On the other hand, as RIA incorporates new methods and moves away from the practical application of CBA, a methodological gap in RIA also emerges (Lussis, 2004). Some analyses may be conducted in a way that only justifies predetermined regulatory choices (Radchenko & Parshina, 2014).

Thus, in studies and guidelines on RIA, there has been an incorporation of methods that consider qualitative and quantitative perspectives and other fundamental issues (Hansson & Nerhagen, 2019; Jacobs, 2004). The RIA, as a process in which problems and their causes are defined (Dudley et al., 2017; Jacobs, 2004; Mota et al., 2020), regulatory alternatives are compared (Ellig & Fike, 2016), and broad social participation is promoted (Radaelli, 2010) gains strength in literature.

RIA is an administrative requirement to examine proposed regulation by performing a series of steps, including problem definition, the analysis of the status quo, the definition of feasible options, the choice of decision-making criteria, open consultation with a wide range of stakeholders, the analysis of how different stakeholders, the environment and public administration are going to be affected by proposed rules, and, in some countries at least, a recommendation for the adoption of a specific regulatory or non-regulatory option. (Radaelli, 2010, p.168)

In this sense, more recent works portray the RIA as a systematic process that involves steps that can be represented in Figure 1.

Figure 1 – RIA Steps



Source: elaborated by the authors, from Adelle and Jordan (2014), Jarrar (2018), and Radaelli (2010).

The step of identifying the problem is crucial in the regulatory process, since the low quality of regulation, in many situations, comes from an incorrect understanding of the problem (Jacobs, 2004). In this step, the causes of the problem must be explained, as well as which agents are affected by it and to what extent they are affected. In addition, the need for government action, the market failures involved, and the reasons that prevent the market from achieving efficient results must be presented (Bailey et al., 2002; Dudley et al., 2017; Nweke, 2011).

In the second step, the objectives of regulatory action must be defined in response to the identified problem. Objectives must be measurable, verifiable, and must reflect society's needs and values (Bailey et al., 2002; Ballantine & Devonald, 2006). Clear definitions of objectives are essential for monitoring the results of regulation (Jarrar, 2018).

In the step of identifying regulatory alternatives, possible ways to deal with the problem must be raised. Different alternatives, comparable and related to various regulatory instruments, must be considered. The regulator must look for friendlier alternatives in addition to the traditional “command and control.” The “doing nothing” alternative must always be considered (Dudley et al., 2017; Radaelli, 2005).

When comparing regulatory alternatives, a wide range of methods must be considered, from a simple analysis to a complete cost-benefit analysis, with the possibility of integrating qualitative and quantitative methods. In this step, the costs (disadvantages) and benefits (advantages) of each alternative are compared to guide the decision maker (Jacobs, 2004; Radaelli, 2004b). The method of comparison must be flexible and comply with the principle of proportionality, so as not to require robust analyses when the

magnitude of the problem is less important (Letens et al., 2008).

The fifth step, which concerns the regulation monitoring plan, refers to the broad description of the procedures necessary for monitoring and evaluating the effectiveness and efficacy of the chosen regulatory alternative (Daskal et al., 2019; Staroňová, 2016). Through indicators properly developed in the RIA, it is expected to evaluate the effects of regulation and guide the decision regarding its maintenance or future revision (Radaelli, 2005).

Described as the last step, the participation of society can occur at any time during the RIA, through processes of consultation with society (Jacobs, 2004). Participation will promote listening channels for a plurality of voices and will give legitimacy to the analysis (Radaelli, 2005; Saab et al., 2018). It is recommended that society produce information, criticism, and generate evidence within the scope of the RIA (Ballantine & Devonald, 2006).

Having presented the concepts and main steps of the RIA, it is worth noting that, for it to fulfill its purpose, the analysis needs to be done well. It is not enough to conduct the process and the steps indicated; it is essential that the RIA has quality so that it can, in fact, recommend good decisions and promote improvements in regulation ((Fritsch et al., 2013).

3 METHOD

The aim of this research is to understand the current stage of the literature on RIA quality evaluation and offer practical, theoretical contributions and an agenda for future studies. To achieve this objective, a literature review was carried out based on empirical research published in scientific journals indexed in the Web of Science and Scopus databases, up until April 2021. The searches were performed using the terms “regulatory impact assessment,” “regulatory impact analysis,” and “quality.”

Initially, a list of 23 articles was generated, with the search terms in the title, keywords, or abstract. In order to ensure that important studies related to the topic were not disregarded in the review, the "snowball" technique was used (Vinuto, 2014): texts frequently cited on the same topic that were not included in the initial list were identified. Using the technique, 15 articles were included in the list, which totaled 38 articles. These articles were examined, and it was identified that 26 of them dealt with empirical investigations on RIA quality evaluation, the scope of this research.

The examination of the 26 articles was made from three categories: i) contextual characteristics; ii) RIA quality evaluation; and iii) main findings about the quality of RIA. In the category of contextual characteristics, the locus of performance of the evaluated experiences, the period of publications, and other issues were presented. The second category presented analysis dimensions and the concepts, advantages, and disadvantages of using the different methods to evaluate the quality of RIA. In the third and last category, the main findings about the quality of RIA found in the empirical experiences examined were indicated.

4 RESULTS

4.1 Contextual characteristics

The first experiences of RIA in the world took place in mid-1981, when the government of the United States (USA) started to require this type of analysis for federal regulations (Hahn & Dudley, 2004). Ten years later, in 1991, the first RIA quality evaluation study was published. Researcher Arthur Fraas published the article “The Role of Economic Analysis in Shaping Environmental Policy,” in which he evaluates the quality of impact analysis and describes the role it played in the formulation of environmental regulations in the USA. Since then, 26 empirical research papers on RIA quality evaluation have been published (Table 1).

Table 1 – Literature on RIA Quality Evaluation

n	Study	Number of RIAs evaluated	Period of RIAs	Locus	Method used
1	Fraas (1991)	2	1981-1990	USA	Case Study
2	Hahn et al (2000)	48	1996-1999	USA	Checklist
3	Harrington et al (2000)	28	1972-1999	USA	Retrospective Comparison
4	Posner (2003)	4	2000-2003	USA	Case Study
5	Humpherson (2004)	10	2001-2002	United Kingdom	Case Study
6	Hahn and Dudley (2004)	74	1982-1999	USA	Checklist
7	Opoku and Jordan (2004)	41	2003-2004	Europe	Point Scale
8	Lussis (2004)	13	2004	Europe	Checklist
9	Harrington (2006)	61	1995-2004	USA	Retrospective Comparison
10	Renda (2006)	70	2003-2005	Europe	Checklist
11	Cecot et al (2007)	94	2003-2005	USA and Europe	Checklist
12	Belcore and Ellig (2008)	13	2003-2007	USA	Point Scale
13	Russel and Turpenney (2009)	7	2004-2007	United Kingdom	Case Study
14	Staroňová (2009)	126	2007	Slovakia	Checklist
15	Staroňová (2010)	577	2007-2008	5 countries	Checklist
16	Frass and Lutter (2011)	13	2005-2009	USA	Checklist
17	Ellig and Mclaughlin (2012)	45	2008	USA	Point Scale
18	Shapiro and Morral (2012)	100	2000-2009	USA	Point Scale
19	Fritsch et al (2013)	773	2005-2010	Europe and United Kingdom	Checklist
20	Ellig et al (2013)	111	2008-2010	USA	Point Scale
21	Radchenko and Parshina (2014)	112	2013	Russia	Checklist
22	Ellig and Conover (2014)	13	2008-2010	USA	Point Scale
23	Ellig and Fike (2016)	71	2008-2010	USA	Point Scale
24	Staronová (2016)	668	2007-2013	Slovakia	Checklist
25	Belfield et al (2018)	28	2006-2015	USA	Checklist
26	Ellig and Horney (2019)	130	2008-2013	USA	Point Scale

Source: elaborated by the authors.

After the first publication, which took place in 1991, there was a hiatus of publications on the subject, with research on the subject returning only in 2000. Since then, empirical publications on RIA quality have been occurring without interruption, but with a slight deceleration in recent years (Table 2).

Table 2 – Evolution of Publications

Period	Number of Publications	%
1990-1995	1	3,8%
1996-2000	2	7,7%
2001-2005	5	19,2%
2006-2010	7	26,9%
2011-2015	7	26,9%
2016-2020	4	15,4%
Total	26	100,0%

Source: elaborated by the authors.

When analyzing the locus of the investigations carried out, the results show that the pace of publications, in addition to being slow, is concentrated in certain countries and regions. In 15 of the 26 articles examined (57.7%), experiences of RIAs from the USA were evaluated. If the country was the first to adopt this type of analysis, it also comprises more than half of the efforts of research that evaluate its quality. In addition to the studies in the United States, there were 3 RIA evaluations performed in European Union (11.5%), 2 evaluations in the United Kingdom (7.7%), 2 in Slovakia (7.7%), and 1 in Russia (3.8%). The other 3 studies (11.5%) deal with analyses of experiences in different countries, which include the Czech Republic, Estonia, Hungary, and Slovenia.

This contextual result alerts to the fact that, although the use of RIA is already implemented in most developed countries (De Francesco, 2012) and is already making progress in dozens of developing countries (Kirkpatrick et al., 2004), RIA quality evaluation has not yet reached the majority of countries in the world that adopt it in their decision-making process. In Latin America, for example, the Organization for Economic Cooperation and Development – OECD (2019) identified that RIA is being practiced in 7 countries - Mexico, Brazil, Chile, Colombia, Costa Rica, Ecuador, and Peru - but there are no publications of studies about the quality of RIAs produced in this region. Brazil,

a country that started the institutionalization and practice of RIA in mid-2007 (Castro, 2014; Peci & Sobral, 2011) and made its use mandatory in 2021 (Meneguim & Saab, 2020), also did not have the quality of RIAs evaluated in studies yet.

An increase in the volume of publications was expected, due to the growth in the number of countries that adopted RIA in recent decades (Daskal et al., 2019; De Francesco, 2012). The slowdown in the number of investigations on the quality of RIA can be explained by two reasons: i) the low interest in investigating the quality of the RIA; and ii) the imperfection and imprecision of the methods available to evaluate its quality. Previous studies show that, in many cases, RIA is adopted without a real institutional commitment (Carroll, 2010). Its use is only intended to achieve international legitimacy (Staroňová et al., 2007). In this case, there would be no incentives to explore the potential of RIA and its quality. In addition, the methods that have been used to evaluate the quality of RIA, although useful, have proved to be imperfect for diagnostic and improvement purposes (Belfield et al., 2018; Hahn & Dudley, 2004).

Among the methods used to evaluate the quality of RIA, the most prevalent was the checklist, used in 12 studies (46.2%). Then appears the point scale, which was used in 8 studies (30.8%). The case study was used in 4 studies (15.4%), and the retrospective comparison was used in 2 studies (7.7%). The next section advances this discussion and presents the different methods with their concepts, advantages, and usage limitations.

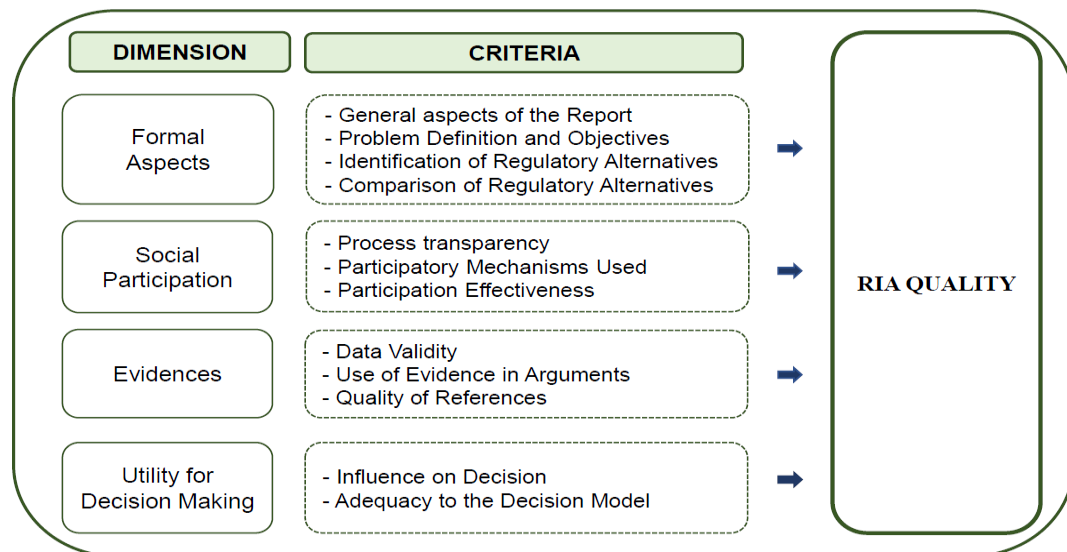
4.2 RIA Quality Evaluation

The quality of RIA is perceived from different perspectives. According to Radaelli (2004a), the various actors in society expect analysis to fulfill different roles. Specialists and academics believe that a quality RIA means efficiency and the ability to estimate impacts. Bureaucrats and public servants value analyses that follow procedures and comply with compliance rules in their development. Politicians hope that it will help with reaching consensus and improve the negotiation environment with the actors involved. The business sector perceives quality in the analysis when it indicates concerns about regulatory pressure on business costs. Citizens expect the RIA to protect them from risks and to favor the broad participation of society in the regulatory process.

Considering the variety of expectations surrounding RIA, how can we evaluate its quality? What characteristics must it have to be considered of good quality? Since 1991, when the first article that proposed to examine the quality of RIA was published,

researchers have been developing different ways to answer these questions. In general, researchers define the quality dimensions and criteria based on laws and regulations adopted in the locus of the RIA and then they apply a method to evaluate it. The main dimensions and criteria used to evaluate the quality of RIA are shown in **Figure 2**.

Figure 2 – Main Quality Dimensions and Criteria



Source: elaborated by the authors.

Once the dimensions and criteria are defined and specified, the researchers adopt a method to evaluate the quality of RIA. The current stage of the literature indicates that four methods have been used for this purpose: i) checklist; ii) point scale; iii) case study; and iv) retrospective comparison (Table 3). Next, the different methods of evaluating the quality of RIA will be discussed in more detail.

Checklist

Some studies have evaluated the quality of RIA by verifying compliance with the requirements of an impact analysis, using a simple “checklist” or “yes / no” system. The method involves analyzing the RIA report and simply checking whether or not the analysis contains items considered fundamental (Bull & Ellig, 2017).

Using the checklist is advantageous because it allows users to identify common strengths and weaknesses among many RIAs. It is a method that can be used relatively

quickly to compare large amounts of analyses (Cecot et al., 2007). It allows for the examination and diagnosis of compliance with general requirements in certain contexts (Hahn et al., 2000). Furthermore, it has the advantage of being a method easily replicable by other researchers. It does not require specific knowledge to make judgments about calculations or specific issues of the analysis (Hahn & Dudley, 2004).

On the other hand, the checklist has its disadvantages. The definition of what a good RIA is becomes somewhat imprecise. A given impact analysis may receive a high score, but its content may be of low quality (Hahn & Dudley, 2004). The checklist does not allow the identification of critical problems related to quality; there is only the verification of whether or not certain contents are present (Cecot et al., 2007).

Point Scale

In order to improve the checklist by Hahn et al. (2000), Opoku and Jordan (2004) were the first to use the point scale method to evaluate the quality of RIA. Instead of applying the checklist with a simple check of “yes” or “no,” the point scale method seeks to grade the quality of the content identified for each item. The point scale method allows the identification of how much each RIA follows the guidance and best analysis practices (Ellig et al., 2013) and offers a qualitative and quantitative perspective for the evaluation, with the aim of increasing its accuracy (Opoku & Jordan, 2004).

The point scale method consists of adopting a scale, which can range from 0 to 4 points (Opoku & Jordan, 2004), from 0 to 5 points (Belcore & Ellig, 2008), or from 0 to 6 points (Shapiro & Morrall, 2012) to represent the degree of quality observed in each item evaluated. The minimum level of the scale indicates that the item under evaluation was not even mentioned or found in the RIA. The maximum level of the scale indicates that the item was perfectly attended, without incompleteness. Intermediate levels are used to grade the quality of content observed (Belcore & Ellig, 2008; Opoku & Jordan, 2004).

Compared to the checklist, the point scale provides a more accurate evaluation of the actual quality of the RIA. In addition, the point scale encourages regulators to invest more efforts in the content developed. Regulators tend to look for better ways to conduct analysis, rather than treating RIA as a mere compliance exercise (Ellig & Mclaughlin, 2012).

On the other hand, the point scale method requires great effort from the research team. First, it requires them to read the RIA content completely and thoroughly. In

addition, it requires knowledge and specialization so that researchers are able to correctly interpret the RIA content and grade its quality with accuracy and few biases (Ellig et al., 2013).

Shapiro and Morral (2012) indicated that the use of the point scale and checklist methods provide very useful results but omit some important information. According to the authors, it is better to understand them as means to measure the degree to which the RIA provides certain types of information rather than as definitive measures of the quality of the analysis. As a consequence of this debate, the case study method is used in RIA evaluations with the expectation of obtaining clearer results related to quality.

Study Case

A common method used to evaluate the quality of RIA is the case study (Shapiro & Morrall, 2012). This method allows for an in-depth analysis of RIA elements and the differentiation between good- and bad-quality analyses, based on the understanding of consistency of arguments, key issues, assumptions, and perceptions (Cecot et al., 2007).

The case study is a qualitative research method widely used in social sciences. It is expected that a phenomenon or a social reality be investigated through this method. It starts with the observation of facts and phenomena and is followed by the discovery of the relationships between them (Silva, Godoi & Bandeira-de-Mello, 2006). According to Shapiro and Morral (2012), the case study is an excellent method for understanding the interaction of RIA quality with different factors. Individual case studies allow for the in-depth understanding of quality issues.

The use of the case study requires the selection of one or a few cases that will be investigated in depth. It is usual for the researcher to interview people involved or affected by the analysis to collect data that contribute to the identification of its quality (Russel & Turnpenny, 2009; Staroňová, 2016). Through interviews, it is possible to obtain information about the use and reliability of RIA, in addition to knowing the meanings, perceptions, and interpretations of its use as a tool for formulating regulatory policies (Fritsch et al., 2013, 2017).

The case study has the advantage of being widely accepted in social sciences and providing conditions for in-depth knowledge of RIA quality aspects, but, on the other hand, it is also a method that has disadvantages. The first is that the effort required for its realization does not allow its use in many cases. Furthermore, the results found can

be quite subjective, which means that they are hardly replicated (Cecot et al., 2007). The third disadvantage is that there is no way to generalize the results, which only apply to the investigated RIA (Shapiro & Morrall, 2012).

Any qualitative evaluation method such as checklist, point scale, or case study will be subject to criticism of subjectivity, lack of transparency, and difficulty in replication (Ellig et al., 2013). To try to get around these issues, some researchers have performed RIA quality evaluations using a quantitative approach — the retrospective comparison — presented below.

Retrospective Comparison

The main exponent of the use of retrospective comparison is the researcher Winston Harrington, who worked on the two studies that used the retrospective comparison method identified in the literature. In Harrington et al. (2000), the authors argue that little attention is paid to the accuracy of the cost information generated and made available in RIA. The authors propose that an RIA quality measure can be obtained by comparing the estimated costs before regulation (*ex-ante*) with the calculated costs after its implementation (*ex-post*). In Harrington (2006), the author includes the perspective of benefits to measure the quality of RIA, based on the comparison of costs and benefits using *ex-ante* analysis and *ex-post* analysis.

In other words, the fundamental quality parameter of RIA would be obtained from the comparison of estimated costs and benefits with those verified in the real world after the implementation of the regulation. The greater the similarity between the two measures, the greater the quality of the RIA and, therefore, the better its use in decision making (Cecot et al., 2007).

Based on the retrospective-comparison method, the low quality of an RIA would originate due to the omission or low precision of the costs and benefits used in the analysis. Omissions include cost and benefit categories that are important but not used in the analysis due to a lack of time, knowledge, or resources. Low precision would involve the occurrence of systematic errors in the calculation of the two variables (Harrington, 2006; Harrington et al., 2000).

The retrospective comparison method has important advantages and disadvantages regarding its use. The main advantage is related to the fact that the evaluation of the quality of the RIA is carried out through an economic analysis that offers good conditions for

verifying its validity and replicability. The evaluation result is objective and quantifiable. On the other hand, the method has four important disadvantages: i) it presents a perspective restricted to costs and benefits as parameters of RIA quality; ii) it can only be applied to analyses in which the CBA was used; iii) it considers the costs and benefits calculated after the implementation of the regulation as accurate, which may not be true; and iv) it requires robust ex-post studies, which are very rare (Cecot et al., 2007).

Table 3 RIA Quality Evaluation Methods

Method	Description	When to Use
Checklist	Verification of compliance with the requirements of an RIA, using “yes” or “no”	In a large number of RIAs, when it is intended to identify general aspects of quality of the analyses
Point Scale	Verification of how well each RIA follows the best analysis practices, using a point scale	In a moderate number of RIAs, when it is intended to measure the quality levels of the analyses
Case Study	In-depth investigation of RIA quality and its interaction with different factors	In few cases of RIA, when one intends to investigate the quality of the analysis in depth
Retrospective Comparison	Measurement of RIA quality based on the comparison of costs and benefits used in the ex-ante and ex-post analysis	In cases of RIA carried out with the CBA and for which ex-post data can be available for comparison

Source: elaborated by the authors.

4.3 Main Findings about RIA Quality

The literature shows that, in general, the quality of RIA developed in the last 40 years has been low and without an adequate analysis standard (Belcore & Ellig, 2008; Cecot et al., 2007; Ellig et al., 2013; Ellig & Horney, 2019; Ellig & Mclaughlin, 2012; Hahn & Dudley, 2004; Russel & Turnpenny, 2009). The use of different evaluation methods did not affect the results, which converged to the low quality of RIA in different contexts.

Studies that used the checklist method identified a low percentage of compliance with the items required in the evaluation (Cecot et al., 2007; Hahn & Dudley, 2004). Studies that used the point scale indicated that the average score of the evaluated RIAs was also low (Belcore & Ellig, 2008; Ellig & Horney, 2019; Ellig & Mclaughlin, 2012; Shapiro &

Morrall, 2012). Likewise, case studies showed important limitations and inconsistencies (Arthur Fraas, 1991; Posner, 2003; Russel & Turnpenney, 2009), and studies by retrospective comparisons showed inaccuracies in the calculation of costs and benefits (Harrington, 2006; Harrington et al., 2000). Below are the main findings on the quality of RIA in the different dimensions of analysis.

Formal Aspects

The **identification of the problem** was shown as a deficient aspect in the impact analyses that were evaluated in the literature. Belcore and Ellig (2008) evaluated 13 RIAs carried out between 2003 and 2007 in the United States and reported deficiencies in identifying market failures or systemic problems that would justify public interventions. A finding similar to that one was found by Ellig and Mclaughlin (2012) when they evaluated 45 RIAs carried out in 2008 in the same country.

In three studies carried out by Staroňová (2016, 2009, 2010), the author evaluated a total of 1,371 RIAs conducted in Slovakia, the Czech Republic, Estonia, Hungary, and Slovenia. Despite identifying differences between the countries, the author concluded that the analyses also lacked details regarding the definitions of the problems, which were described in very generic ways. In the same direction, Ellig and Conover (2014) evaluated 13 RIAs carried out in the United States from 2008 to 2010 and identified negligence with the problem identification step.

Agencies apparently are more willing to cut corners on analysis of the problem and development of alternatives than on calculation of benefits and costs of the preferred option. We suspect this occurs because some information on benefits and costs may be useful for “selling” the selected regulation, even if it is not used to design the regulation. Analysis of the underlying problem or other alternatives may actually undermine support for the regulation, so these topics get short shrift (Ellig & Conover, 2014, p.317).

The **definition of objectives** was also criticized in the three studies by Staroňová (2016, 2009, 2010). With the exception of Slovenia, which presented a good level of adequacy, the author indicated that in RIAs of Slovakia, the Czech Republic, Estonia, and Hungary, no measurable objectives were indicated. A similar result was pointed out by Fritsch et al. (2013). The authors found that, in the years between 2005

and 2010, only 22.2% of RIAs had regulatory objectives in the United Kingdom and 54.4% in the European Union.

According to Fraas (1991), failures to **identify alternatives** can be considered the most common in RIA. This finding has been confirmed by some studies. Hahn et al. (2000) found that, in 27% of 48 RIAs carried out in the United States between 1996 and 1999, the agencies failed to discuss regulatory alternatives. In RIAs studied by Posner (2003), Humpherson (2004), Belcore and Ellig (2008), and Ellig and Horney (2019), researchers also found insufficient discussion of regulatory alternatives. Often, the analysis was carried out only on the proposed regulation, with no alternatives being considered (Posner, 2003).

The results found by Russel and Turnpenney (2009) in the UK were even more worrying. According to the authors, there may have been manipulation of numbers and regulatory alternatives to achieve previously desired and predetermined policies. Staroňová (2009, 2010) came to a similar conclusion. In some European countries, the RIA was carried out after public authorities had already chosen the best regulatory alternative. In Russia, there was also no analysis of alternatives beyond the proposed regulation already defined by the government (Radchenko & Parshina, 2014).

The strong influence that ACB exerts on RIA makes the **comparison of alternatives** the focus of many evaluations of its quality. Many quality items or criteria are based on the costs and benefits used in the analysis. The results show that the conduction of this step in the last 40 years has been far from what was desired. There is a methodological gap in the comparison of regulatory alternatives (Lussis, 2004; Russel & Turnpenney, 2009).

In few RIAs, the costs and benefits of the alternatives were correctly ascertained (Hahn et al., 2000). Renda (2006) analyzed 70 RIAs carried out in Europe in the years between 2003 and 2005 and identified that, in 74.3% of cases, no real comparison was made between the costs and benefits of alternatives. The result was very close to that obtained by Staroňová (2009), which identified that there was an effort to quantify costs and benefits in only 25% of the RIAs carried out in Slovakia in 2007.

In a more recent study, Belfield et al. (2018) analyzed 28 RIAs carried out in the years between 2006 and 2015 in the United States and identified important limitations in the calculation of benefits, which were detailed in only 29% of cases. The difficulty of calculating and quantifying benefits has been recurrently verified in the literature (Arthur Fraas, 1991; Renda, 2006). When Humpherson (2004) investigated 10 UK RIAs carried out between the years 2001 and 2002, he identified that the benefits were overestimated. This bias can lead the decision maker to approve new regulations, believing in benefits

that are not verified in the real world.

Social Participation

Some important inconsistencies were found in the social participation process. When evaluating experiences in the UK, Russel and Turnpenny (2009) found that participation is poorly integrated into impact analysis and that the participants were restricted to certain groups in society. This last finding was also found by Staroňová (2009), who observed few participants outside the Slovak government, and by Radchenko and Parshina (2014), who identified the dominance of the Russian government and private companies' view in the RIA process. There was little participation from consumers and citizens.

For ordinary citizens to participate in the RIA, there must be transparency and accessibility in the process. However, empirical studies did not confirm this. In many of the analyzed experiences, public authorities failed to provide reports and data analyses. Finding RIA reports on government websites was not an easy task, and, when they were found, they were not clear enough to be understood by the average citizen (Hahn et al., 2000; Opoku & Jordan, 2004; Renda, 2006).

Evidence

The analysis of evidence is a dimension still explored very little in the evaluation of the quality of RIA. Considering that the use of evidence in RIA consists of providing information and arguments so that choices can be made by the decision-maker (Souto-Otero, 2013), the scarcity of analyses in this dimension is a worrying factor.

The research that showed advances in the analysis of this aspect was developed by Russel and Turnpenny (2009), who analyzed 7 RIAs prepared between 2004 and 2007 in the United Kingdom. The authors investigated the evidence used in the analyses and identified insufficient use of data, tools, and methods to justify the results presented. These findings confirm the understandings of Radaelli (2010) and Staroňová (2010), who alert that the use of evidence is frequently ignored and that impact analysis is often based on a mere analytical exercise.

Utility for Decision Making

Russel and Turnpenny (2009) did not find positive results when evaluating the usefulness of RIA in UK decision-making. According to the authors, there was little integration of impact analysis with decision making. RIA was often used only symbolically and was not able to change existing political structures and processes.

A similar result was found by Ellig and Mclaughlin (2012, p. 2) who warned, “the minority of the regulations contain evidence that the agency used the analysis in significant decisions”. However, these researchers found an important issue about the use of RIA in the United States. There is a high correlation between the quality of RIA and its use by decision makers, indicating that they are willing to use good analyses or that good analyses are performed when there is a propensity to use them. This finding reinforces the importance of investing in increasing the quality of RIA and raising the awareness of its use to decision makers.

5 CONCLUSION

This conclusion intends to present 3 topics: i) report the current stage of the literature on RIA quality evaluation; ii) present the theoretical and practical implications of the research; and iii) suggest an agenda for future studies that can contribute to the construction of knowledge on the subject.

This presented study showed that there is a decreasing pace of publications on RIA quality evaluation and that there is a concentration of studies in a few countries. Furthermore, the research showed that the evaluations have been carried out by using four dimensions and different methods; however, in general, the results converge to the low quality of the RIA.

It was found that the RIAs carried out in the last 40 years have shown weaknesses and inconsistencies in all their dimensions, from the formal aspects to the utility for decision making, including the social participation and the use of evidence. These inconsistencies can compromise the use of the RIA and lead to ineffective policies for addressing public problems.

From a practical point of view, this research seeks to help managers and public servants identify weaknesses in impact analyses so that they can adopt improvement measures. From a theoretical point of view, this study organized and synthesized previous studies and generated knowledge so that RIA evaluation dimensions and methods can be

used, developed, and that new reflections on RIA can be made.

To further develop the knowledge on the topic, new studies that evaluate the quality of RIA in different countries and regions are suggested, especially in Latin America. In this region, the RIA is already in practice, but there are no investigations into its quality. Furthermore, evaluation dimensions and methods must be tested, criticized, and improved. Lastly, new studies on RIA quality evaluation can help identify political and institutional factors that can lead to higher or lower quality analyses.

REFERENCES

- Achtnicht, M., Rennings, K., & Hertin, J. (2009). Experiences with integrated impact assessment - Empirical evidence from a survey in three European member states. *Environmental Policy and Governance*, 19(5), 321–335. <https://doi.org/10.1002/eet.517>
- Adelle, C., & Jordan, A. (2014). Policy Coherence for Development in the European Union: Do New Procedures Unblock or Simply Reproduce Old Disagreements? *Journal of European Integration*, 36(4), 375–391. <https://doi.org/10.1080/07036337.2013.845180>
- Adelle, C., Weiland, S., Dick, J., González Olivo, D., Marquardt, J., Rots, G., Wübbecke, J., & Zasada, I. (2016). Regulatory impact assessment: a survey of selected developing and emerging economies. *Public Money and Management*, 36(2), 89–96. <https://doi.org/10.1080/09540962.2016.1118930>
- Bailey, P. D., Haq, G., & Gouldson, A. (2002). Mind the gap! Comparing ex ante and ex post assessments of the costs of complying with environmental regulation. *European Environment*, 12(5), 245–256. <https://doi.org/10.1002/eet.303>
- Ballantine, B., & Devonald, B. (2006). Modern regulatory impact analysis: The experience of the European Union. *Regulatory Toxicology and Pharmacology*, 44(1), 57–68. <https://doi.org/10.1016/j.yrtph.2005.06.016>
- Belcore, J., & Ellig, J. (2008). Homeland security and regulatory analysis: are we safe yet? *Rutgers Law Journal*, 40(01).
- Belfield, C. R., Bowden, A. B., & Rodriguez, V. (2018). Evaluating Regulatory Impact Assessments in Education Policy. *American Journal of Evaluation*. <https://doi.org/10.1177/1098214018785463>
- Bull, R., & Ellig, J. (2017). Judicial Review of Regulatory Impact Analysis: Why Not The Best? *ABA Journal*, 69(FEB4), 725–840.
- Carroll, P. (2010). Does regulatory impact assessment lead to better policy? *Policy and Society*, 29(2), 113–122. <https://doi.org/10.1016/j.polsoc.2010.03.009>
- Castro, C. M. de. (2014). Some aspects of implementing Regulatory Impact Analysis in Brazil. *Revista de Administração Pública*, 48(2), 323–342. <https://doi.org/10.1590/0034-76121359>
- Cecot, C., Hahn, R. W., & Renda, A. (2007). A Statistical Analysis of the Quality of Impact Assessment in the European Union. *Social Science Research*, May.
- Daskal, S., Ayalon, O., & Shechter, M. (2019). Closing the Loop: the Challenges of Regulation in Municipal Solid Waste Management. *Detritus, In Press*(0), 1. <https://doi.org/10.31025/2611-4135/2019.13775>

- De Francesco, F. (2012). Diffusion of Regulatory Impact Analysis Among OECD and EU Member States. *Comparative Political Studies*, 45(10), 1277–1305. <https://doi.org/10.1177/0010414011434297>
- Dudley, S., Belzer, R., Blomquist, G., Brennan, T., Carrigan, C., Cordes, J., Cox, L. A., Fraas, A., Graham, J., Gray, G., Hammitt, J., Krutilla, K., Linquti, P., Lutter, R., Mannix, B., Shapiro, S., Smith, A., Viscusi, W. K., & Zerbe, R. (2017). Consumer's Guide to Regulatory Impact Analysis: Ten Tips for Being an Informed Policymaker. *Journal of Benefit-Cost Analysis*, 8(2), 187–204. <https://doi.org/10.1017/bca.2017.11>
- Ellig, J. (2018). Why and how independent agencies should conduct regulatory impact analysis. *Cornell Journal of Law and Public Policy*, 28(1), 1–34. <https://doi.org/10.2139/ssrn.3169413>
- Ellig, J., & Conover, C. J. (2014). Presidential priorities, congressional control, and the quality of regulatory analysis: an application to healthcare and homeland security. *Public Choice*, 161(3–4), 305–320. <https://doi.org/10.1007/s11127-014-0201-3>
- Ellig, J., & Fike, R. (2016). Regulatory Process, Regulatory Reform, and the Quality of Regulatory Impact Analysis. *Journal of Benefit-Cost Analysis*, 7(3), 523–559. <https://doi.org/10.1017/bca.2016.20>
- Ellig, J., & Horney, M. (2019). Statutory delegation, agency authority, and the asymmetry of impact analysis. *Theory and Practice of Legislation*, 7(3), 227–256. <https://doi.org/10.1080/20508840.2020.1730097>
- Ellig, J., & McLaughlin, P. A. (2012). The Quality and Use of Regulatory Analysis in 2008. *Risk Analysis*, 32(5), 855–880. <https://doi.org/10.1111/j.1539-6924.2011.01715.x>
- Ellig, J., McLaughlin, P. A., & Morrall, J. F. (2013). Continuity, change, and priorities: The quality and use of regulatory analysis across US administrations. *Regulation and Governance*, 7(2), 153–173. <https://doi.org/10.1111/j.1748-5991.2012.01149.x>
- Fraas, Art, & Lutter, R. (2011). The challenges of improving the economic analysis of pending regulations: The experience of OMB circular A-4. *Annual Review of Resource Economics*, 3(December), 71–85. <https://doi.org/10.1146/annurev-resource-083110-120042>
- Fraas, Arthur. (1991). The Role of Economic Analysis in Shaping Environmental Policy. *Law and Contemporary Problems*, 113–126. https://doi.org/10.1007/978-1-349-04722-2_5
- Fritsch, O., Kamkhaji, J. C., & Radaelli, C. M. (2017). Explaining the content of impact assessment in the United Kingdom: Learning across time, sectors, and departments. *Regulation and Governance*, 11(4), 325–342. <https://doi.org/10.1111/rego.12129>
- Fritsch, O., Radaelli, C. M., Schrefler, L., & Renda, A. (2013). Comparing the content of regulatory impact assessments in the UK and the EU. *Public Money and Management*, 33(6), 445–452. <https://doi.org/10.1080/09540962.2013.836007>
- Goodstein, E. (1995). Benefit-cost analysis at the EPA. *Journal of Socio-Economics*, 24(2), 375–389. [https://doi.org/10.1016/1053-5357\(95\)90026-8](https://doi.org/10.1016/1053-5357(95)90026-8)
- Hahn, R. W., Burnett, J. K., Chan, Y. H. I., & Mader, E. A. (2000). Assessing regulatory impact analyses: The failure of agencies to comply with executive order 12,866. *Harvard Journal of Law and Public Policy*.
- Hahn, R. W., & Dudley, P. M. (2004). How Well Does the Government Do Cost-Benefit Analysis? SSRN *Electronic Journal*. <https://doi.org/10.2139/ssrn.495462>
- Hahn, R. W., & Tetlock, P. C. (2008). Has Economic Analysis Improved Regulatory Decisions? *Journal Of Economic Perspectives*, 22(1), 67–84.
- Hansson, L., & Nerhagen, L. (2019). Regulatory measurements in policy coordinated practices: The case of promoting renewable energy and

- cleaner transport in Sweden. *Sustainability (Switzerland)*, 11(6). <https://doi.org/10.3390/su11061687>
- Harrington, W. (2006). Grading Estimates of the Benefits and Costs of Federal Regulation. *Resources for The Future*. <https://doi.org/10.2139/ssrn.937357>
- Harrington, W., Morgenstern, R. D., & Nelson, P. (2000). On the accuracy of regulatory cost estimates. *Journal of Policy Analysis and Management*, 19(2), 297–322. [https://doi.org/10.1002/\(sici\)1520-6688\(200021\)19:2<297::aid-pam7>3.3.co;2-o](https://doi.org/10.1002/(sici)1520-6688(200021)19:2<297::aid-pam7>3.3.co;2-o)
- Humpherson, E. (2004). The National Audit Office's evaluation of RIAs: Reflections on the pilot year. *Public Money and Management*, 24(5), 277–282. <https://doi.org/10.1111/j.1467-9302.2004.00434.x>
- Jacobs, S. (2004). Regulatory impact assessment and the economic transition to markets. *Public Money and Management*, 24(5), 283–290. <https://doi.org/10.1111/j.1467-9302.2004.00435.x>
- Jarrar, A. G. (2018). Regulatory Impact Assessment Role in Developing Participatory Work between Civil Society Organizations and Jordanian Ministry of Political and Parliamentary Affairs. *Journal of Politics and Law*, 11(1), 88. <https://doi.org/10.5539/jpl.v11n1p88>
- Kirkpatrick, C., Parker, D., & Zhang, Y. F. (2004). Regulatory impact assessment in developing and transition economies: A survey of current practice. *Public Money and Management*, 24(5), 291–296. <https://doi.org/10.1111/j.1467-9302.2004.00436.x>
- Letens, G., Van Nuffel, L., Heene, A., & Leysen, J. (2008). Towards a balanced approach in risk identification. *EMJ - Engineering Management Journal*, 20(3), 3–9. <https://doi.org/10.1080/10429247.2008.11431771>
- Lussis, B. (2004). EU extended impact assessment review. *Institut Pour Un Développement Durable*.
- Meneguín, F. B., & Saab, F. (2020). Análise de Impacto Regulatório: Perspectivas a partir da Lei da Liberdade Econômica. *Textos Para Discussão, Senado*, 271.
- Mota, D., Saab, F., Vazzoler, R., Schunig, K., Donagema, E., & Troncoso, G. (2020). *Regulatory Impact Assessment in Pandemic Times: a practical exercise on the COVID-19 context*. 71, 165–188. <http://dx.doi.org/xx.xxxxx/rsp.xxxx>
- Nweke, O. C. (2011). A framework for integrating environmental justice in regulatory analysis. *International Journal of Environmental Research and Public Health*, 8(6), 2366–28385. <https://doi.org/10.3390/ijerph8062366>
- OECD. (2019). *Indicators of Regulatory Policy and Governance*, Latin America 2019, El Salvador. <http://oe.cd/ireg-lac>
- Opoku, C., & Jordan, A. (2004). Impact assessment in the EU: a global sustainable development perspective. *Conference on the Human Dimension of Global Environmental Change*, December. http://userpage.fu-berlin.de/ffu/akumwelt/bc2004/download/opoku_jordan_f.pdf
- Peci, A., & Sobral, F. (2011). Regulatory Impact Assessment: How political and organizational forces influence its diffusion in a developing country. *Regulation and Governance*, 5(2), 204–220. <https://doi.org/10.1111/j.1748-5991.2011.01105.x>
- Posner, E. A. (2003). Transfer regulations and cost-effectiveness analysis. *Duke Law Journal*, 53(3), 1067–1110.
- Radaelli, C. M. (2004a). Getting to grips with quality in the diffusion of regulatory impact assessment in Europe. *Public Money and Management*, 24(5), 271–276. <https://doi.org/10.1111/j.1467-9302.2004.00433.x>
- Radaelli, C. M. (2004b). The diffusion of regulatory impact analysis - Best practice or lesson-drawing? *European Journal of Political Research*, 43(5), 723–747. <https://doi.org/10.1111/j.0304-4130.2004.00172.x>

- Radaelli, C. M. (2005). Diffusion without convergence: How political context shapes the adoption of regulatory impact assessment. *Journal of European Public Policy*, 12(5), 924–943. <https://doi.org/10.1080/13501760500161621>
- Radaelli, C. M. (2010). Rationality, Power, Management and Symbols: Four Images of Regulatory Impact Assessment. *Scandinavian Political Studies*, 33(2), 164–188. <https://doi.org/10.1111/j.1467-9477.2009.00245.x>
- Radchenko, T., & Parshina, E. (2014). Regulatory Impact Assessment in Russia: Application and Lessons from Economic Theory. *Economic Policy*.
- Renda, A. (2006). *Impact Assessment in the UE. The State of the Art and the Art of the State*.
- Reyes, R., Romano, A., & Sottiolotta, C. E. (2015). Regulatory Impact Assessment in Mexico: A Story of Interest Groups Pressure. *Law and Development Review*, 8(1), 99–121. <https://doi.org/10.1515/ldr-2014-0030>
- Rissi, C., & Sager, F. (2013). Types of knowledge utilization of regulatory impact assessments: Evidence from Swiss policymaking. *Regulation and Governance*, 7(3), 348–364. <https://doi.org/10.1111/rego.12002>
- Robinson, L. A., & Levy, J. I. (2011). The [R] Evolving Relationship Between Risk Assessment and Risk Management. *Risk Analysis*, 31(9), 1334–1344. <https://doi.org/10.1111/j.1539-6924.2011.01653.x>
- Russel, D., & Turnpenny, J. (2009). The politics of sustainable development in UK government: *What role for integrated policy appraisal?* *Environment and Planning C: Government and Policy*, 27(2), 340–354. <https://doi.org/10.1068/c0810j>
- Saab, F., Bermejo, P. H. de S., Garcia, G. C., Pereira, J. S., & e Silva, S. de A. M. (2018). Does public consultation encourage social participation? *Journal of Enterprise Information Management*, JEIM-11-2017-0169. <https://doi.org/10.1108/10.1108/11-2017-0169>
- Shapiro, S., & Morrall, J. F. (2012). The triumph of regulatory politics: Benefit-cost analysis and political salience. *Regulation and Governance*, 6(2), 189–206. <https://doi.org/10.1111/j.1748-5991.2012.01131.x>
- Silva, A. B., Godoi, C. K., & Bandeira-de-Mello, R. (2006). *Pesquisa qualitativa em estudos organizacionais: paradigmas, estratégias e métodos*, São Paulo, Ed. Saraiva.
- Souto-Otero, M. (2013). Is “better regulation” possible? Formal and substantive quality in the impact assessments in education and culture of the European Commission. *Evidence and Policy*, 9(4), 513–529. <https://doi.org/10.1332/174426413X662725>
- Staroňová, K. (2016). Regulatory impact assessment in Slovakia: performance and procedural reform. *Impact Assessment and Project Appraisal*, 34(3), 214–227. <https://doi.org/10.1080/14615517.2016.1176410>
- Staroňová, K. (2009). Better regulation and regulatory quality: The case of RIA in Slovakia. *Sociologia*, 41(3), 247–264.
- Staroňová, K. (2010). Regulatory impact assessment: Formal institutionalization and practice. *Journal of Public Policy*, 30(1), 117–136. <https://doi.org/10.1017/S0143814X09990201>
- Staroňová, K., Pavel, J., & Krapež, K. (2007). Piloting regulatory impact assessment: A comparative analysis of the Czech Republic, Slovakia and Slovenia. *Impact Assessment and Project Appraisal*, 25(4), 271–280. <https://doi.org/10.3152/146155107X246314>
- Vibert, F. (2006). The limits of regulatory reform in the EU. *Economic Affairs*, 26(2), 17–21. <https://doi.org/10.1111/j.1468-0270.2006.00626.x>
- Vinuto, J. (2014). a Amostragem Em Bola De Neve Na Pesquisa Qualitativa: Um Debate Em Aberto. *Temáticas*, 22(44), 203–220. <https://doi.org/10.20396/tem>

Zentner, R. D. (1984). *Chemical Industry Perspectives on Regulatory Impact Analysis*. 161–173. <https://doi.org/10.1021/bk-1984-0239.ch011>


Flavio Saab

 <https://orcid.org/0000-0002-3913-4175>

Doctoral candidate and Master in Administration and Graduated in Economics, University of Brasília (UnB). He has been a federal public servant at the National Health Surveillance Agency-Anvisa. External Professor, Department of Public Policy Management, UnB.

E-mail: flaviosaab@gmail.com

Suylan de Almeida Midlej e Silva

 <https://orcid.org/0000-0002-9395-3657>

PhD in Sociology, University of Brasília (UnB). Master in Communication and Contemporary Culture, Federal University of Bahia (UFBA). Graduated in Social Communication, Pontifical Catholic University of Minas Gerais (PUC/MG). Adjunct Professor, Department of Public Policy Management, UnB.

E-mail: suylan00@gmail.com

DO WOMEN USE MICROCREDIT RESOURCES BETTER? EVIDENCE FOR BRAZIL

Dayane Rocha de Pauli

Universidade Federal do Paraná (UFPR), Curitiba – PR, Brazil

The objective of this study is to verify whether productive microcredit resources are better used by women in terms of employability, using data from a Brazilian microcredit program. We analyze the differential impact both on overall employment generation and on female employment according to the entrepreneur's gender, using dose-response models (with propensity score matching and continuous treatment). In addition, we consider the differential cost of loans for these groups, culminating in a cost-effectiveness analysis. We show that loans for women are a more effective choice compared to loans for men, especially for increasing female employability. The results were significant and corroborate the findings in empirical literature. They were the basis for the creation of a microcredit line targeting women in Brazil.

Keywords: microcredit for women; impact analysis; cost-effectiveness analysis; women entrepreneurship; Latin America; Brazil.



AS MULHERES USAM MELHOR OS RECURSOS DO MICROCRÉDITO? EVIDÊNCIAS PARA O BRASIL

O objetivo desse estudo é verificar se recursos de microcrédito produtivo são melhor aproveitados pelas mulheres, em termos de empregabilidade utilizando dados de um programa de microcrédito brasileiro. Analisaremos o diferencial de impacto sobre geração de empregos em geral e empregos femininos conforme o sexo do empreendedor utilizando modelos dose-resposta (com propensity score matching e tratamentos contínuos). Além disso, consideraremos o diferencial de custos de empréstimos para esses públicos, culminando em uma análise de custo-efetividade. Mostramos que empréstimos para mulheres é uma escolha mais efetiva, em comparação a empréstimos para homens, principalmente no que se refere ao aumento da empregabilidade feminina. Os resultados se mostraram significantes, estão alinhados aos achados da literatura empírica e embasaram a criação de uma linha de microcrédito focalizada para mulheres no Brasil.

Palavras-chave: microcrédito para mulheres; análise de impacto; análise custo-efetividade; empreendedorismo feminino; América Latina; Brasil.

¿LAS MUJERES USAN MEJOR LOS RECURSOS DE MICROCRÉDITO? EVIDENCIAS PARA BRASIL

El objetivo de este estudio es verificar si los recursos productivos del microcrédito son mejor utilizados por las mujeres, en términos de empleabilidad, utilizando datos de un programa de microcrédito brasileño. Analizaremos el impacto diferencial en la generación de empleo en general y empleo femenino según el género del emprendedor utilizando modelos de dosis-respuesta (con propensity matching score y tratamiento continuo). Además, consideraremos el diferencial de costos de los préstamos para estas audiencias, culminando con un análisis de costo-efectividad. Hemos demostrado que los préstamos para mujeres son una opción más eficaz en comparación con los préstamos para hombres, especialmente en lo que respecta al aumento de la empleabilidad femenina. Los resultados resultaron ser significativos, están en línea con los hallazgos de la literatura empírica y apoyaron la creación de una línea de microcrédito enfocada a las mujeres en Brasil.

Keywords: microcrédito para mujeres; análisis de impacto; análisis de costo-efectividad; emprendimiento femenino; América Latina; Brasil.

1 INTRODUCTION

According to the World Bank, 70% of Micro and Small Enterprises (MSEs) owned by women in the formal sector of emerging markets are not served by financial institutions (World Bank, 2015), demonstrating how difficult it is for these entrepreneurs to have access to credit. Brazil is part of the list of countries where this occurs significantly (IFC, 2007). According to the Global Entrepreneurship Monitor, Brazil is also the country with the second highest rate of female entrepreneurship, only behind Indonesia. There are more women entrepreneurs than men, at the rate of 1.04 (GEM, 2017).

Studies on the labor market point out several pieces of evidence on existing discrimination, namely: the existence of unequal pay for similar positions;¹ the limited presence of women in executive management positions and barriers in professional advancement (known as the glass-ceiling);² the greater concentration of women in precarious, low-skilled jobs of short duration without social protection, normally in economic activities related to family or personal consumption;³ and the responsibility for domestic work, which doubles their working hours and makes them less available for paid work.⁴ All these factors render a strong demand for inclusion and justice, including by international organizations such as the International Labor Organization (ILO, 2008).

In view of this, microcredit targeting women is a topic of great international appeal. Several organizations (Women's World Banking (WWB), Microcreditsummit, USAID, and the World Bank) utilize it as an efficient way to expand opportunities to women.

The national empirical literature on microcredit is quite extensive, with different approaches. Some studies focus on the role of microcredit in reducing poverty (such as ARAÚJO, 2012; COSTA, 2006; DA MOTA and DE SANTANA, 2011; NERI and CORTES, 2008; RAPIS, 2008); others in the generation of employment, income, and local development (CORSINI, 2007; COSTA, 2001; COSTANZI, 2002; LEITE and MONTORO, 2008; NETO, MONZONI, and PRESTES, 2006; OLIVEIRA, 2007; PEREIRA, 2003); some in financial inclusion (BACEN, 2010, 2015b; CONCEIÇÃO, 2005; FELTRIM, VENTURA and DODL, 2009; VENTURA and DODL, 2009; ZOUAIN and BARONE, 2007); others

1 Cambota and Pontes (2007); Giuberti and Menezes-Filho (2005); Madalozzo (2010; 2011); Madalozzo et al. (2010).

2 Bruschini and Puppini (2004); Bussmann (2017); Collins and Singh (2006); Morrison and Glinow (1990); Steil (1997).

3 Cambota and Pontes (2007); Carloto (2002); Lavinias (2001).

4 Bruschini, (2007).

assess the financial sustainability of the programs (DALTRO and DE SANTANA (2013); JUNQUEIRA and ABRAMOVAY (2005); NICTER, GOLDMARK, and FIORI (2002); SOARES and MELO SOBRINHO (2008); VON ENDE and LEOPOLDINO, 2004), among others.

Although it is a topic widely analyzed by empirical literature, studies on the impact of microcredit programs are not consensual about the differential efficiency in relation to gender,⁵ with a scarcity of studies that compare impacts with costs, as proposed here.

Therefore, the objective of this study is to verify whether microcredit resources used by women entrepreneurs render better results in terms of employability, as well as differences in cost. For this purpose, data comprehending 2010 – 2015 from the program “Banco do Empreendedor Microcredito”, a Brazilian microcredit line implemented in the State of Paraná, will be used. The impacts on overall employment levels and female employment will be assessed according to the borrower’s gender. In addition to verifying the impact differential, this study aims to measure the differential cost by exploring the difference in defaults between groups, in order to show whether loans for women or for men are more cost-effective. We found that there are no cost differences and that loans to women result in better female employability outcomes, so, yes, women use microcredit resources better than men.

We intend to contribute to the empirical literature on microcredit for women and support the creation of public policies. Indeed, the results of this study supported the creation of a regional microcredit policy targeting women in the State of Paraná, the “Banco da Mulher Paranaense Microcrédito”, which provides more attractive interest rates for this public (Fomento Paraná, 2019).

To meet the objectives, we initially present the context of the program, the data, and the empirical strategy adopted; discuss the results; and finally outline the conclusions.

2 CONTEXT OF THE PROGRAM

Brazil is a country with profound social and regional inequalities, where gender still affects opportunities. In the country, 40.51% of the families residing in private households

5 Regarding the relationship between the results of microcredit for women, the studies can be mentioned: AGIER and SZAFARZ (2013); WORLD BANK (2017); BANERJEE et al. (2015); BARDASI; SABARWAL; TERRELL (2011); BECKER (2010); CHOWDHURY; AMIN; FARHA (2012); COLEMAN, (2000); DE MEL; MCKENZIE; WOODRUFF (2009); MALAPIT (2012); NWOSU et al. (2015); SECK et al. (2015); STUPNYTSKA et al. (2014).

are headed by women and, of these, 41% own businesses (IBGE, 2015)⁶, highlighting the importance of female businesses in maintaining the national economy.

The growth of female-owned companies may be one of the main factors in reducing the high unemployment rates in Brazil since unemployment rates for women are historically higher than those for men (despite women being the majority of the population). Some international studies found that women are more likely to hire other women (World Bank, 2015; OECD, 2004), suggesting that opportunities for female entrepreneurs can generate an even greater impact on employability, especially among women. Therefore, facilitating access to credit for women is a possible means of fostering the country's economic and social development.

Brazilian microcredit programs are designed differently according to the regional profile; thus, it is important to contextualize the reader about the program analyzed here.

Although adopted by several countries around the world, microcredit programs are designed in different ways depending on context and objectives. For example, some programs focus on providing small loans to rural people, as in the case of the Grameen Bank; others focus on urban microenterprises, such as BancoSol in Bolivia; others have conditionalities for lower interest rates, such as training courses (Banco do Empreendedor Microcrédito); some make loans to groups (such as the Grameen Bank and Crediamigo in Brazil), only to women (for example, Banco Compartamos in Mexico), or to any business, formal or informal, that fits annual profitability as a condition of participation (Programa Nacional de Microcrédito Produtivo e Orientado e o Banco do Empreendedor Microcrédito). Regarding the objectives, some programs focus on poverty reduction, others on the increase of micro-entrepreneurship and the generation of employment and income. What they have in common is the search for promoting local development and correcting market failures by allowing access to credit.

An important distinction concerns the focus between natural persons (including informal companies) and legal entities (formal establishments). On the national average, 94.8% of the portfolio corresponds to “natural person borrowers,” and 5.2% to “legal entity borrowers.” The regions that deviate from the national standard the most are the Northeast (with a high poverty rate) and the South (one of the regions with the lowest poverty rates). In the Northeast, almost the entire portfolio is destined to natural persons (99.5%), and

⁶ The information about households headed by women is available at sidra.ibge.gov.br (Table 1942) and we used the microdata with complex sample weights to obtain the information about how many of these women have their own business.

in the South, the weight of the legal entities is much greater (about 20%). In addition, the distribution of the value of the national microcredit portfolio by region shows that the Northeast concentrates almost 55% of the portfolio attributed to natural persons, and the South region attributes almost 70% of the portfolio to legal entities (BACEN, 2015a, p. 9).

According to these data, Paraná, one of the states in the South region, represented 20.3% of the region's portfolio value in 2013 (accounting for approximately R\$ 184 million, the equivalent of nearly 85 million American dollars)⁷, and approximately 27% of total customers and operations of the region (or 5% of the number of national customers, representing more than 92 thousand customers in the state and 113 thousand financing operations).

Regarding grantors, Brazilian microcredit is highly concentrated in banks (91.4% of the portfolio's value), followed by the representation of credit unions (6.1%), development agencies (2%), and micro-entrepreneur credit societies (0.4%). However, when analyzing only credits directed to legal entities in the country, the value of the bank portfolio falls to 45.6% of the total value of the portfolio destined for legal entities, followed by the development agencies (29.9%), Credit Cooperatives (24.2%), and micro-entrepreneur credit societies (0.2%). Given this focus on serving legal entities, development agencies totaled a portfolio of more than R\$ 82 million, with 4,127 operations in 2013 (BACEN, 2015a, p. 25). Only the Paraná development agency (Fomento Paraná) had a microcredit portfolio of R\$ 32.2 million in 2013, with 5,048 active contracts, representing about 40% of the national microcredit portfolio of the nine development agencies considered in the aforementioned study (Bacen, 2015a; Fomento Paraná, 2013).

From this, the representativeness of the credit line evaluated is contextualized, called "Banco do Empreendedor Microcredito", operated by the development agency of the state of Paraná.⁸ Fomento Paraná is a financial institution whose major shareholder is the State Government; therefore, it is an important agent for public financial inclusion policies.

The program has existed since 2001 and serves micro-enterprises, formal or informal, releasing resources of up to R\$ 15,000.00 (the equivalent of nearly US\$ 4.502)⁹. Since 2010, its focus has been on productive microcredit, serving mostly micro-enterprises

7 Using the average exchange rate for 2013, when one U.S. dollar was equivalent to 2.16 Brazilian reals.

8 This credit is only available through this financial institution located in Curitiba, but there are many "credit agents" acting as facilitators in almost every municipality.

9 Using the average exchange rate for 2015: when one U.S. dollar was equivalent to 3.33 Brazilian reals.

of legal-entity nature. **Table 1** shows the number of contracts served by the program evaluated between 2010 – 2015, for formal and informal enterprises, distinguishing the owner's gender.

Table 1 – Number of contracts of the banco do empreendedor microcrédito¹⁰ between 2010 and 2015 by gender and legal nature

Sex	Natural Person	Legal Entity	Total
Women	2,829	5,281	8,110
Men	2,415	5,444	7,859
Not informed	1	22	23
Total	5,245	10,747	15,992

Source: elaborated by the authors.

It is important to note the representation of legal entities (67%), and that women represent 49% of these contracts. These 10,747 corporate contracts constitute the treated sample used since employability data are only available to formal establishments.

To be eligible for the program, the applicant must be Brazilian or reside in the country for more than one year, be over 18 years old, be the owner of a formal or informal micro or small company located in Paraná, which preferably has generating capacity employment and income, develop activities that do not harm the environment, have difficulty with other conventional forms of credit, have a negative debt certificate, and have gross annual revenue of up to R\$ 360 thousand. They can use the credit as working capital or as fixed investment. There is an audit using samples to verify the application of the resource.

3 MATERIAL AND METHODS

This section aims to present the database used for research, as well as the empirical strategies adopted. To do so, the presentation is divided into these two subsections, respectively.

¹⁰ The information in this table only refers to “Banco do Empreendedor Microcrédito,” the Paraná program of microcredit.

3.1 Material

Databases from two confidential sources were used: the financial institution that manages the program and the Ministry of Labor. Three types of data were used: information on microcredit contracts (including the gender of the owner), default information on these contracts, and the Ministry of Labor's identified database, called Rais (Annual Social Information Report) with employability information by Taxpayers ID (CPF) or National Register of Legal Entities (CNPJ). Crossing this information resulted in an exclusive database, containing detailed information on microcredit and employment contracts at the corporate level. The database was filtered to formal companies with more than 9 employees per year to have the control observations more consistent with that of the treated sample (micro companies), and the information at a firm level for the consolidated period (2010 to 2015) was used.

3.2 Methods

This section provides a brief description of the methodological decisions and is divided into two parts: an empirical strategy for measuring impact and differential cost.

3.2.1 Impact Analysis

In order to analyze the differential impact of the use of microcredit by women on general employment and female employment, it is necessary to verify whether higher doses correspond to greater impacts. The dose-response model was used for this purpose (BIA; MATTEI, 2008; GUARDABASCIO; VENTURA, 2014; HIRANO; IMBENS, 2004; IMBENS, 2000; LECHNER, 2001).

In this model, the level of treatment, in addition to having a dose of continuous treatment (amount borrowed), is not randomly distributed; thus, it is necessary to address selection bias: better companies are able to loan higher values. To control this issue, a series of observable variables (X_i) was used to estimate the model by means of matching: the Generalized Propensity Score (GPS) method was used to compare similar companies, allowing access to the causal impact of the program under the unconfoundedness assumption, that is, that the relevant variables for the selection bias are being considered (Hirano and Imbens, 2004). Among the available variables, those that could influence the performance of companies were used, and the following was used to perform the

matching (vector “X”) and build the GPS:

- *Company characteristics*: revenue; formal age of the company; inclusion Simples Nacional (type of simplified taxation system available for Brazilian micro-companies); economic activity (through the division of the National Classification of Economic Activities); amounts obtained by other financing lines of Fomento Paraná; category of wages paid by the company; owner’s age; interest rate; and size of the establishment.
- *Characteristics of the workers*: working time at that establishment in months; proportion of workers with basic education; proportion with high school; proportion with higher education; proportion of workers according to occupation category.

The model initially pairs companies using a generalized propensity score (GPS), then generates a simple linear regression between the value granted (ln) and the value of the variable of interest (ln), controlled by GPS.

Our interest lies in the Average Treatment Effect on the Treated (ATT), that is, the average impact of the treated companies. The ATT for the case of a categorical treatment variable for two treatment doses “t” and “s” would be given by:

$$\theta_0^{t,s} = E(Y_i^t - Y_i^s | T=t) = E(Y_i^t | T=t) - E(Y_i^s | T=t)$$

Where Y_i is the set of potential results and T is the treatment level. Since we have a model with multiple doses, we used the dose-response function by the mean, applied in Guardabascio and Ventura (2014):

$$\psi(t) = E\{Y_i(t)\},$$

Where $\psi(t)$ is the dose-response function by the mean and $Y_i(t)$ is the set of potential results within the universe of treated companies ($t \in T$).

To estimate the potential results, we used the generalized propensity score model (GPS), obtained from a generalized linear model (GLM), in which the conditional treatment density is defined as:

$$r(t,x) = f(T|X_i(t|x))$$

Where GPS is $R = r(T|X)$ and X_i is the covariate vector.

Given the balance property and, according to the unconfoundedness assumption, Hirano and Imbens (2004) show that GPS can be used to eliminate any bias associated

with differences in covariates.

In this way, the average results can be estimated by conditioning only to the GPS. Finally, the dose-response function can be represented as:

$$\gamma(t,r) = E\{Y(t)|r(t,X)=r\} = E(Y|T=t, R=r)$$

$$\psi(t) = E\{\gamma\{t,r(t,X)\}\}$$

The estimation steps are: initially calculate the propensity score ($r(t,x)$) using the generalized linear model (GLM); then, conditional hope is modeled as a function of the treatment level and the GPS ($E(Y|T=t, R=r)$), or, in other words, $Y=T+GPS$; finally, the dose-response function ($\psi(t)$) is estimated by means of the average conditional expectation ($\hat{\gamma}\{t,r(t,X)\}$) along with the GPS for each treatment dose. For the standard errors, bootstraps were used.

This function is represented by a graph that shows the causal relationship of the variables according to the model. The results indicate the average effect of the value released between the treated companies for each group (men and women), considering the consolidated period between 2010 and 2015 (companies benefited more than once in this period had the values of their contracts added together). All this information allowed us to obtain conclusions to be drawn on the effectiveness of credit to women based on the chosen variables.

3.2.2 Cost-Effectiveness Analysis

Besides the differential effectiveness, it is necessary to verify if there is a differential cost between the listed groups. Therefore, the possible differential effects in collaboration with the program managers were mapped and it was found that the main influencing effect was the difference in default. In the theoretical framework, it was verified that women tend to be more compliant (D'ESPALLIER et al., 2011; KEVANE and WYDICK, 2001). It will be verified if this information has empirical support in the sample used.

Because studies on microcredit defaults in Brazil are sparse, this study aimed to contribute to this literature by executing the models as follows: the variables that impact default for a general sample of micro-companies (with up to 9 employees) were verified, as well as for the sample in focus: micro-employers. That is, in addition to the previous cut, in the second sample, only companies that had some employment in the period were

kept (this cut was used for the impact models since the variables of interest were linked to Rais, that is, to formal employment itself).

The impact on default was carried out using two models: initially, *probit*¹¹ was used to verify the impact of a series of variables on the probability of bad debt; next, with access to the defaulted amount per contract and interested in the monetary measurement of the differential cost, a *tobit*¹² model with the same controls was used, allowing the use of a censored distribution at zero, since most companies are not in default.

For both models, the following independent variables were used: year; owner's gender; type of activity (predominantly female or not); municipality; type of loan (working, fixed, and mixed); Contract value; company billing value; contract deadline; and interest rate. All monetary variables used in the study were considered in real values for 2015, being deflated by official prices indices.¹³ Defaults were considered as defined by the Central Bank: more than 90 days overdue (BACEN, 2005).

In addition to the financial cost, there could be a higher operational cost since, in many countries, loans for women require greater assistance, monitoring of contracts, and training courses, given that in many countries women's schooling is much lower than that of men (D'ESPALLIER; GUÉRIN; MERSLAND, 2011). This does not apply to Brazil's case. Concerning the evaluated program, no differences were found.

Finally, with estimates of differential efficiency and differential cost (LEVIN et al, 2018), the cost-effectiveness analysis can be carried out, analyzing the alternatives separately and comparing them to try to answer whether it is worth increasing microcredit targeting women. For this purpose, the Incremental Cost-Effectiveness Ratio (ICER), given by the equation below, was used:

$$ICER = \frac{\Delta C}{\Delta E} = \frac{(costs\ of\ project\ 1 - costs\ of\ project\ 2)}{(effectiveness\ of\ project\ 1 - effectiveness\ of\ project\ 2)}$$

Where project 1 is the loan for women, and project 2 for men.

3.3 Descriptive statistics

Before presenting the results of the models, it is advisable to deal with some

11 To verify the formalization of the *probit* model, see CAMERON and TRIVEDI (2009, chap. 14).

12 For the formalization of the *tobit* model, see CAMERON and TRIVEDI (2009, cap. 16) e WOOLDRIDGE (2015, seç. 17.2).

13 The price index called "IPCA" was used (with the exception of wages, which were deflated by "INPC").

descriptive statistics of the “Banco do Empreendedor Microcrédito”, according to the cutouts adopted. The total values obtained by formal companies during the analyzed period are shown in **Table 2**, differentiating the statistics by the owner’s gender. The number of contracts for each one is also highlighted, making it possible to observe their average value.

TABLE 2 – VALUE OF THE CREDIT PORTFOLIO, NUMBER OF CONTRACTS AND MEAN VALUE OF CONTRACTS BY GENDER AND YEAR, 2010-2015

By Gender	Total Value		Number		Mean Value of Contract	
	Women	Men	Women	Men	Women	Men
2010	4,001,324.68	5,242,601.19	368	451	10,873.16	11,624.39
2011	5,663,232.53	6,122,649.53	509	526	11,126.19	11,640.02
2012	10,058,175.88	11,423,130.52	781	818	12,878.59	13,964.71
2013	10,641,642.26	11,317,064.60	886	925	12,010.88	12,234.66
2014	13,746,623.98	15,187,953.65	1,244	1,278	11,050.34	11,884.16
2015	14,653,169.21	15,132,884.76	1,398	1,345	10,481.52	11,251.22
Total	58,764,168.55	64,426,284.25	5,186	5,343	11,331.31	12,058.07

Source: elaborated by the authors.

Note: monetary values in R\$ (2015).

It is observed that women have become more frequent in the program in recent years. In the analyzed period, with information from companies that obtained more than one credit operation in the year condensed, 5,186 contracts for women (maintaining the representativeness of approximately 49%) and 5,343 for men (51%) were considered for the calculations. On average, the value contracted by women is lower than the value by men, which can be seen by the average value of contracts.

Table 3 shows the descriptive statistics of all the variables used in the models, as well as the t-test of difference of means between genders. In general, no significant difference in employability was observed, but there was a significant difference in the mean female employability and the contracted value. Of the control variables, the following is highlighted: female-owned companies are younger, have lower revenues, and lower pay.

Table 3 – Descriptive statistics and t-test of mean differences according to gender, 2010 – 2015

	Sex	Obs.	Mean	Standard-deviation	Minimum	Maximum	p-value
Contracted Value	F	5,186	11,331.31	4,921.03	889.2365	26,837.28	0
	M	5,343	12,058.07	4,692.14	6,198,328	27,385.34	
Jobs	F	5,186	0.472	1.136	0	9	0
	M	5,343	0.583	1.243	0	9	
Female Jobs	F	1,467	1.031	1.219	0	9	0
	M	1,814	0.778	1.077	0	9	
Vector “X”:							
Revenue	F	5,186	100,956.80	82,675.54	0	482,729	0
	M	5,342	118,979.60	93,280.33	6,000	483,536	
Formal age of the company	F	5,162	3.241	4.82	0	48	0
	M	5,315	3.998	5.951	0	49	
Inclusion Simples Nacional	F	5,186	0.958	0.201	0	1	0.8264
	M	5,343	0.962	0.192	0	1	
Economic Activity (division of CNAE)	F	1,467	47.809	19.391	1	96	0.0043
	M	1,814	47.269	16.129	1	96	
Amounts obtained by other financing lines	F	5,186	23.71	1,211.28	0	66,597	0.0183
	M	5,343	10.55	770.88	0	56,348	
Wages paid by the company	F	1,238	956.45	308.01	0	3,080.92	0
	M	1,506	997.39	322.09	0	3,240.31	
Owner’s age	F	5,184	42.658	11.334	17	86	0.9852
	M	5,340	42.559	11.687	15	87	
Interest rate	F	5,186	10.112	1.772	6.6	13.59	0.0002
	M	5,343	10.268	1.709	6.6	13.59	
Size of the establishment	F	1,467	1.911	0.465	1	3	0.0007
	M	1,814	1.9	0.48	1	3	
Working time (months)	F	1,467	30.23	48.64	0	504.2	0.0002
	M	1,814	32.24	52.06	0	429.2	

	Sex	Obs.	Mean	Standard-deviation	Minimum	Maximum	p-value
Vector "X":							
Proportion of workers with basic education	F	1,238	0.188	0.344	0	1	0.041
	M	1,506	0.206	0.357	0	1	
Proportion with high school	F	1,238	0.715	0.397	0	1	0.0533
	M	1,506	0.7	0.399	0	1	
Proportion with higher education	F	1,238	0.096	0.262	0	1	0.9271
	M	1,506	0.093	0.247	0	1	
Proportion of workers according to occupation category 1	F	1,238	0.136	0.309	0	1	0
	M	1,506	0.215	0.361	0	1	
Proportion of workers according to occupation category 2	F	1,238	0.701	0.413	0	1	0
	M	1,506	0.628	0.43	0	1	
Proportion of workers according to occupation category 3	F	1,238	0	0	0	0	0.0458
	M	1,506	0.001	0.026	0	1	

Source: elaborated by the authors.

For the cost analysis, it was necessary to explore the default differences according to the owner's gender, which can be seen in **Table 4**.

Table 4 – Degree of default according to gender - by value and by number of defaulted contracts¹⁴

	Value		Number	
	Women	Men	Women	Men
2010	1.34%	0.97%	2.36%	1.68%
2011	2.13%	2.46%	3.64%	3.11%
2012	3.23%	2.73%	5.02%	4.96%
2013	6.44%	4.85%	10.59%	8.11%
2014	6.79%	8.40%	10.03%	11.89%
2015	6.19%	8.25%	12.31%	15.04%
Total	5.14%	5.54%	8.84%	9.29%

Source: elaborated by the authors.

The results are variable over the period. On average, they indicate that women are ‘more compliant in terms of value. In terms of the number of contracts, it is also observed that contracts signed by women appear less in default in the last two years of the analysis. These discrepancies over the period point to the need for more a rigorous investigation, which will be carried out next.

The mean difference test of the selected variables according to gender is presented in Table 5, as well as the number of observations and their means. The differences in the two proposed cuts were identified: the default in the micro companies cut seems to be distinct from the default in the employer micro companies cut, which is of particular interest. In any case, in both cuts, there does not seem to be a highly significant difference in the mean value of default and default dummy according to gender, indicating a possible inexistence of this causal relationship, which will be verified next.

¹⁴ Default contracts with delays of more than 90 days were considered, as defined by the Central Bank (BACEN, 2005).

Table 5 – T-test for the difference in means of the variables of interest of the default model according to the owner’s gender

A) TREATED MICRO COMPANIES:					
	Women		Men		p-Value
	Obs.	Mean	Obs.	Mean	
Defaulted value	5,186	585.22	5,342	670.03	0.0896
Default dummy	5,186	0.09	5,342	0.1	0.2460
Owner’s age	5,186	42.64	5,342	42.54	0.7051
Municipality	5,184	411331	5,341	411339	0.6778
Borrowed value	5,186	11331	5,342	12,060	0.0000
Revenue	5,186	100957	5,342	118,980	0.0000
Term of contract	5,186	26.75	5,342	28.39	0.0000
Interest rate	5,186	10.11	5,342	10.27	0.0002
B) EMPLOYING MICRO COMPANIES:					
	Women		Men		p-Value
	Obs.	Mean	Obs.	Mean	
Defaulted value	1,294	226.02	5,186	585.22	0.2459
Default dummy	1,294	0.04	5,186	0.09	0.3586
Owner’s age	1,294	44.79	5,186	42.64	0.4355
Municipality	1,294	411381	5,184	411331	0.5823
Borrowed value	1,294	13364	5,186	11331	0.5923
Revenue	1,294	175513	5,186	100957	0.0268
Term of contract	1,294	28.4	5,186	26.75	0.0400
Interest rate	1,294	10.29	5,186	10.11	0.1065

Source: elaborated by the authors.

Having listed the main descriptive statistics, the analysis of the impact and cost models will be presented in the next section.

4 RESULTS

This section is organized as follows: Initially, the results of the models of impact analysis are presented; finally, the cost analysis (including the default analysis) is presented.

4.1 Impact analysis

In this topic, it is verified whether the companies present different responses to the loan, given the owner's gender, using the dose-response models. To do this, the impact on total employment is first presented, followed by the impact on female employability.¹⁵

In terms of jobs, the results can be found in **Table 6**, which demonstrates the positive and significant impact of microcredit for both, even with the addition of controls. There was, however, no great heterogeneity in the impact: for every 1% increase in loan for women, **0.294** p.p. was generated in jobs, compared to **0.293** for companies headed by men.

Table 6 – Results of dose-response models according to owner's gender - impact on employment

Impact of the released value on Female Employment (LNEMPR)						
	WOMEN			MEN		
	(1)	(2)	(3)	(1)	(2)	(3)
ATT	0.293***	0.301***	0.294***	0.293***	0.304***	0.293***
Standard-error	0.064	0.064	0.064	0.057	0.058	0.057
p-Value	0.000	0.000	0.000	0.000	0.000	0.000
R ²	0.024	0.022	0.023	0.025	0.023	0.025
Observations	1,460	1,460	1,460	1,841	1,841	1,841
Control groups:						
Characteristics of the establishment	Yes		Yes	Yes		Yes
Characteristics of the workers		Yes	Yes		Yes	Yes

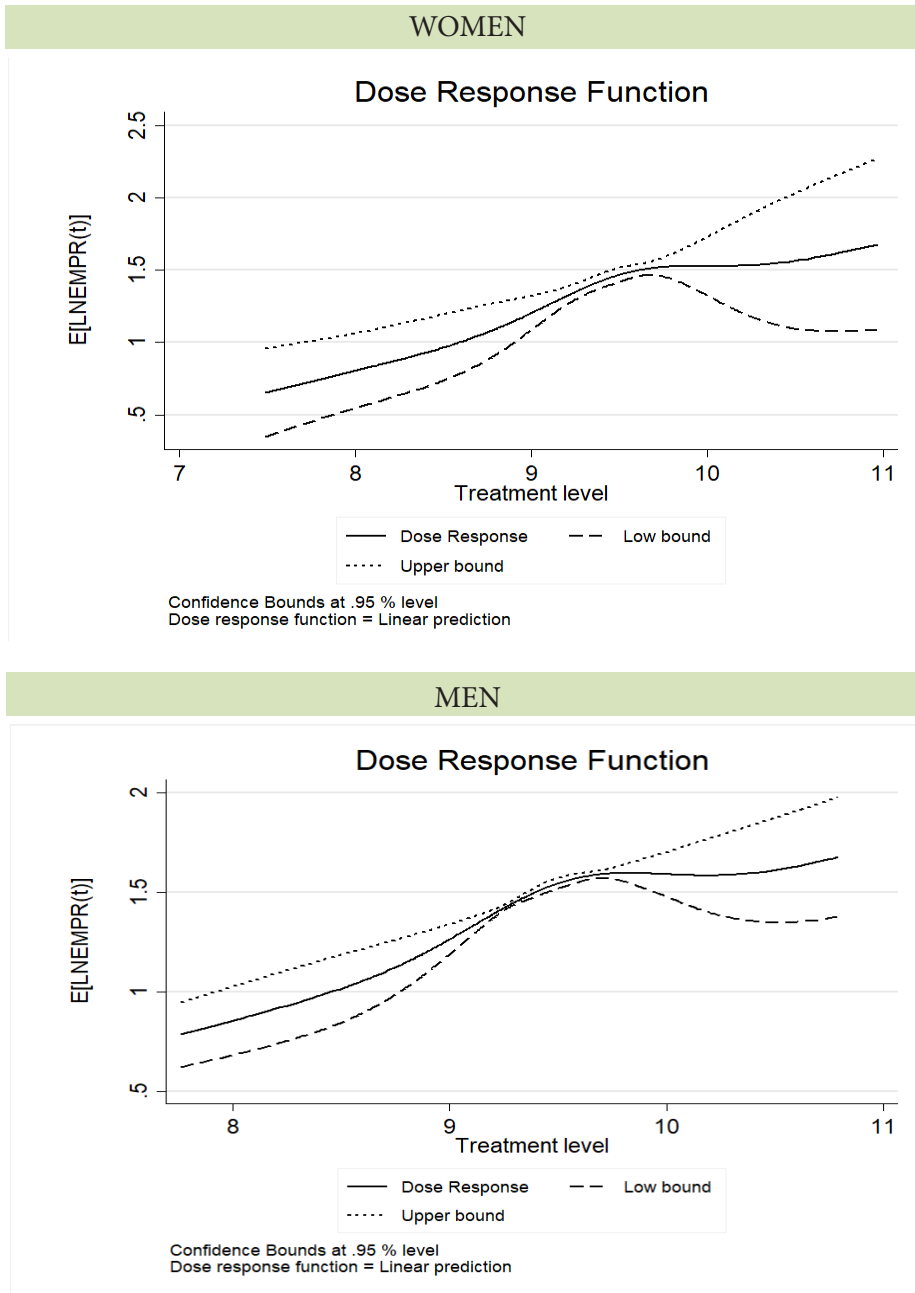
Source: elaborated by the authors.

Note: ***p<0.01, **p<0.05, *p<0.1. Standard errors were calculated using bootstraps with 50 repetitions.

¹⁵ All models presented in this discussion satisfied the balancing property at a level lower than 0.01.

The dose-response models generated impact functions whose graphs are represented in **Figure 1**.

Figure 1 – Dose-response functions according to owner’s gender - employment



Source: elaborated by the authors.

When female employability is observed, a greater impact for companies headed by women is found, as expected. According to data in **Table 7**, the impacts are robust for both genders; for women, 1% more in the amount granted impacts **0.297** p.p. on female employment, while for companies headed by men this impact is **0.177** p.p..

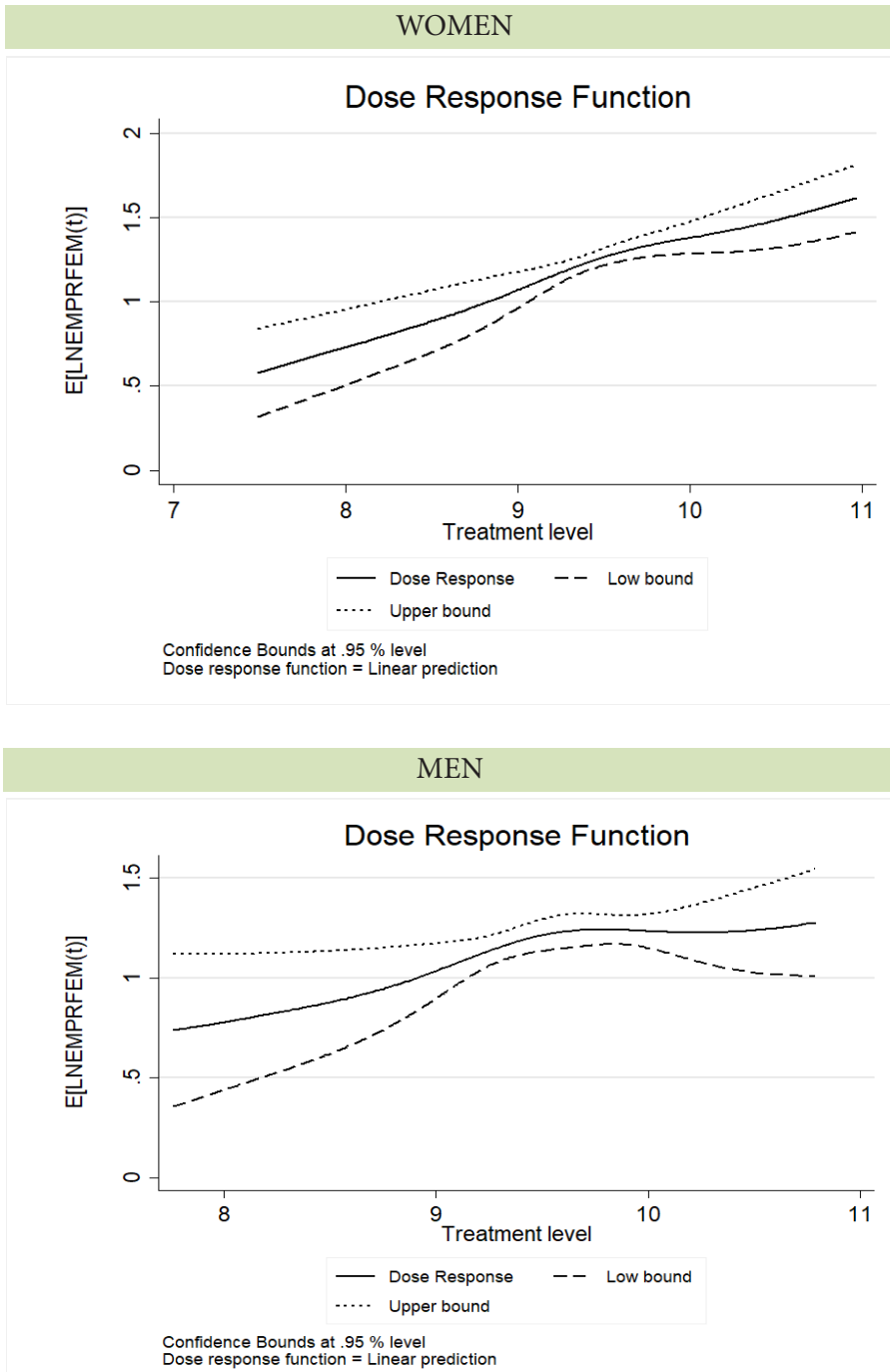
Table 7 – Results of dose-response models according to owner’s gender - impact on female employment

Impact of the released value on Female Employment (LNEMPRFEM)						
	WOMEN			MEN		
	(1)	(2)	(3)	(1)	(2)	(3)
ATT	0.298***	0.308***	0.297***	0.177***	0.181***	0.177***
Standard-error	0.068	0.068	0.068	0.060	0.060	0.060
p-Value	0.000	0.000	0.000	0.003	0.002	0.003
R ²	0.020	0.020	0.020	0.013	0.013	0.013
Observations	1,460	1,460	1,460	1,841	1,841	1,841
Control groups:						
Characteristics of the establishment	Yes		Yes	Yes		Yes
Characteristics of the workers		Yes	Yes		Yes	Yes

Source: elaborated by the authors.

Note: ***p<0.01, **p<0.05, *p<0.1. Standard errors were calculated using bootstraps with 50 repetitions. The dose-response functions for female employment can also be verified using the graphs in Figure 2.

Figure 2 – Dose-response functions according to owner’s gender - female employment



Source: elaborated by the authors.

Better impacts were observed for general employment (although the difference was small) and more strongly for female employment when companies were headed by women.

4.2 Cost-effectiveness analysis

The results of the impact analysis show that micro-credit for women was better used, mainly considering the result on female employment. However, to assess whether it is more effective to target credit to women, it is necessary to analyze the additional cost that this decision entails.

After mapping the program's cost items, it was found that costs could be broken down into operating costs and financial costs. In the case of operating costs, there was no difference in the cost of analysis or monitoring according to the owner's gender in the program evaluated.

Additionally, it was seen that the mean value contracted by women is lower than that of men, which may result in a higher opportunity cost, that is, smaller contracts have a fixed cost of analysis and monitoring, but generate lower financial income due to the incidence of interest rate on a lower value.

It should be noted that interest rates until then were not differentiated according to gender. Thus, there could be a differential cost caused by the lower contracted value. To address this issue, a model was estimated to check whether gender or type of activity had an influence on the contracted value, controlled by other variables (such as municipality, CNAE (National Classification of Economic Activities), company revenue, interest rate, owner's age, and term of contract). The results showed that the value of the contract does not depend significantly on the owner's gender. Therefore, the results suggest that there is no difference in operational costs related to women. This conclusion is in line with the evidence found by D'ESPALLIER; GUERIN; MERSLAND (2013). The authors raise the question of the importance of assessing costs beyond the impact on defaults, but, when analyzing 398 microcredit programs from 73 different countries following them for 10 years, they also found no evidence of differences in operating costs linked intrinsically to the gender difference.

Thus, it remains to be verified whether there is a difference in the financial cost, that is, in default. The consideration of this item is quite pertinent to the literature since there is evidence of differences in defaults according to gender.

Initially, the analysis of the default differential was carried out, and in possession of these results, which constitute the differential cost, the cost-effectiveness analysis was performed by choosing the variables of general job creation and female employment in the calculation of the Incremental Cost-Effectiveness Ratio (ICER).

4.2.1 Financial cost analysis - default differential

For default analysis, in addition to the gender cut, each model was carried out with two samples: micro-companies in general and micro-employers, which constitute the sample used for the impact models previously presented.

Table 8 shows the results for the probability of default. It was found that gender had no effect on the probability of default in any of the samples.

Table 8 – Results of probit models – default

TOBIT	A) MICRO COMPANIES		B) MICRO-EMPLOYERS	
	dy/dx	dy/dx	dy/dx	dy/dx
	(1)	(2)	(1)	(2)
Year	0.026***	0.024***	0.014***	0.015***
Owner's gender	-0.006	-0.008	-0.005	-0.006
Type of activity (Female or not)	-0.034***	-0.038***	-0.002	
Owner's age	-0.001***		0.000	
Municipality	0.000**		0.000	
Type of loan				
Fixed Capital	0.062***		0.019	
Mixed Capital	0.045***		-0.003	
Loan value	0.000***	0.000*	0.000**	0.000***
Company's revenue	0.000***	0.000***	0.000**	0.000***
Term of contract	0.002**	0.001***	0.001	0.000
Interest rate	0.003*		0.000	
Number of observations	10,525	10,770	2,895	3,018
Log pseudolikelihood	-3,097.34	-3,177.98	-485.22	-501.959
Wald chi ² (10)	386.03	276,08	74.11	60.44
Prob > chi ²	0.0000	0,0000	0.0000	0.0000
Pseudo R ²	0.0653	0.0479	0.0746	0.0571

Source: elaborated by the authors..

Note: ***p<0.01, **p<0.05, *p<0.1. The coefficients are in terms of marginal effects (dy/dx).

With these results considered, the monetary impact of these different variables was verified, as presented in Table 9. As with the previous model, the results indicate that gender has no significant interference in the defaulted value.

Table 9 – Results of tobit models – default

TOBIT	A) MICRO COMPANIES		B) MICRO-EMPLOYERS	
	dy/dx	dy/dx	dy/dx	dy/dx
	(1)	(2)	(1)	(2)
Year	312.253***	291.638***	268.578***	281.699***
Owner's gender	-80.549	-102.462	-115.699	-138.504
Type of activity (Female or not)	-476.077***	-518.411***	-27.639	10.406
Owner's age	-19.194***		-6.902	
Municipality	-0.117**		0.024	
Type of loan				
Fixed Capital	864.54***		355.692	
Mixed Capital	679.654***		-95.346	
Loan value	-0.011	0.032***	-0.045*	0.041***
Company's revenue	-0.003***	-0.004***	-0.002**	-0.002***
Term of contract	18.605**	18.92***	26.862	-0.024
Interest rate	48.048**		-1.045	
Number of observations	10,583	10,770	2,895	3,078
Log pseudolikelihood	-12,958.30	-12,966.57	-1,724.38	-1739.5
Wald chi2(10)	37.29	47.11	6.87	9.47
Prob > chi ²	0.0000	0.0000	0.0000	0.0000
Pseudo R ²	0.0162	0.0124	0.0213	0.0172

Source: elaborated by the authors.

Note: ***p<0.01, **p<0.05, *p<0.1. The coefficients are in terms of marginal effects (dy/dx).

Thus, since there is no difference in operating and financial costs, it is possible to conclude that the differential cost according to sex is null.

4.2.2 Calculation of the ICER

The existence of a positive impact differential from the dose-response models for women was verified, but there was no evidence of differential cost. Although a lower cost

of default was expected, it was concluded that loaning to women has a positive impact and does not generate additional costs, which is a desirable outcome.

The dose-response models showed that every 1% increase in the amount loaned to women impacted the level of employment by 0.294 and for men by 0.293, a difference of 0.001. As for female employability, the differential is greater: the models pointed out that every 1% increase in the amount loaned to women impacts 0.297 female employment, while for men the impact on this same variable is 0.177. The difference is therefore 0.12 p.p.. That is, an increase in female employability by 0.12 p.p. was possible just by prioritizing credit to women and without incurring additional costs to do so.

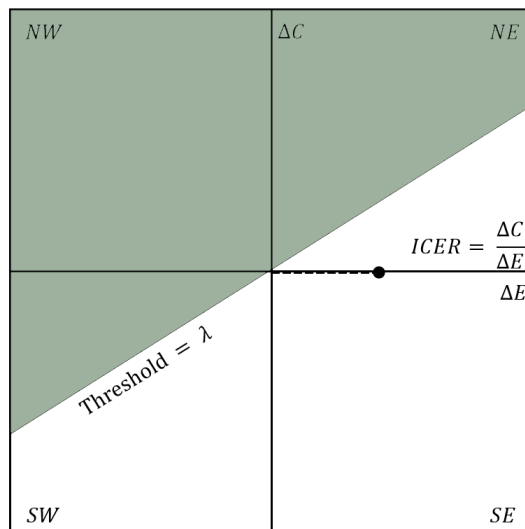
Thus, the calculation of ICER is, in a way, redundant because:

$$ICER = \frac{\Delta C}{\Delta E} = \frac{0}{(\Delta E > 0)} = 0$$

However, as seen in Figure 3, the graphical location of the point referring to the ICER has interesting information, especially when compared to other projects. First, it is situated between the northeast quadrant and the southeast quadrant, implying that it is in the white area of the figure and, therefore, loaning to women is preferred over loaning to men (baseline). In case there were another proposal to be compared, it would be located in the cost-effectiveness plan and compared for decision making. Assuming that the differential costs are equal (and identical to 0), one can only sort by impact, choosing the alternative with the highest result.¹⁶ This means that the location of this point in the cost-effectiveness plan is important, even if its calculation seems unnecessary.

¹⁶ Likewise, if there were equal impacts and different costs, the lowest cost would be chosen.

Figure 3 – The cost-effectiveness plan - result



Source: elaborated by the authors, based on Willian and Briggs (2006).

For instance, it will be easier for the policy maker to justify microcredit targeting women if the aim is to increase female employability than if the objective is to increase jobs in general, as they will be situated further east. It is noteworthy that in the case studied, as is null, the choice of the manager's shadow price (λ) is not important, but the choice of the variable of interest to define the is.

5 CONCLUSIONS

The study provided an analysis of the female differential in the use of microcredit using a Brazilian case study directed at formal companies. It analyzed effects on general employment and female employment, as well as the existence of incremental costs.

The results showed that the impact of female management on the use of the resource was positive, that is, companies headed by women obtained better responses on female employment and similar ones on employment in general.

In addition, it was verified whether there was evidence of differences in costs for the financial institution, measuring operating costs and impacts on default. It was concluded that there are no differences in any of the costs according to gender.

Finally, a cost-effectiveness analysis was carried out, showing the feasibility of microcredit targeting women, especially if the manager's interest is to increase female

employability in the region.

By dealing with such a relevant and current issue and adding impact analysis to cost-effectiveness, this study seeks to contribute to the literature on the subject and foster new designs of public policies based on evidence. An example of an outcome of this research occurred in 2019, when the State Government created a differentiation of microcredit interest rates for women in Paraná to support their activities.

REFERENCES

- Agier, I.; Szafarz, A. Microfinance and gender: Is there a glass ceiling on loan size? **World Development**, v. 42, p. 165–181, 2013.
- Araújo, M. R. D.. **O microcrédito e o combate à pobreza: Entraves e Desafios para o Fortalecimento do Setor de Microfinanças no Brasil**, 155 f. Dissertação (Mestrado em Administração Pública) - Fundação João Pinheiro, Belo Horizonte, 2012.
- BACEN. **Nova estrutura de dados de crédito – Nota Metodológica**. Banco Central do Brasil, 2005.
- BACEN. **Relatório de Inclusão Financeira**, no 1. Brasília: Banco Central do Brasil, 2010
- BACEN. **Panorama do Microcrédito**. Nº 1, Série Cidadania Financeira: estudos sobre educação, proteção e inclusão, p. 39, 2015a.
- BACEN. **Relatório de Inclusão Financeira**, no 3. Brasília: Banco Central do Brasil, 2015b.
- Banerjee, A., Duflo, E., Glennerster, R.; KINNAN, C. The Miracle of Microfinance? Evidence from a Randomized Evaluation. **American Economic Journal: Applied Economics**, v. 7, n. 1, p. 22–53, 2015.
- Bardasi, E., Sabarwal, S.; Terrell, K. How do female entrepreneurs perform? Evidence from three developing regions. **Small Business Economics**, v. 37, n. 4, 2011.
- Becker, G. S. **The economics of discrimination**. University of Chicago Press, 2010.
- Bia, M.; Mattei, A. A Stata package for the estimation of the dose–response function through adjustment for the generalized propensity score. **The Stata Journal**, v. 8, n. 3, p. 354–373, 2008.
- Bruschini, C.; Puppim, A. B. Trabalho de mulheres executivas no Brasil no final do século XX. **Cadernos de pesquisa**, v. 34, n. 121, p. 105–138, 2004.
- Bruschini, M. C. A. Trabalho e gênero no Brasil nos últimos dez anos. **Cadernos de pesquisa**, v. 37, n. 132, p. 537–572, 2007.
- Bussmann, T. B. **Ensaio em Economia do Trabalho: Uma Análise das Minorias no Mercado de Trabalho Brasileiro**, Tese de Doutorado em Economia. PUCRS, 2017.
- Cambota, J. N.; Pontes, P. A. Desigualdade de rendimentos por gênero intraocupações no Brasil, em 2004. **Revista de economia contemporânea**, v. 11, n. 2, p. 331–350, 2007.
- Cameron, A. C.; Trivedi, P. K. **Microeconometrics using stata**. College Station, TX: Stata Press, 2009.
- Carloto, C. M. Gênero, reestruturação produtiva e trabalho feminino. **Serviço Social em Revista**, v. 4, n. 2, 2002.
- Conceição, J. H. M. Da. **Microcrédito como ferramenta de geração de renda e emprego: uma**

análise de experiências públicas municipais. 79f. Dissertação (Mestrado em Administração Pública), Centro de Formação Acadêmica e de Pesquisa - EBAPE-FGV, Rio de Janeiro, 2005.

Corsini, J. N. M. **Microcrédito e inserção social em cidades baianas:** estudo da experiência do centro de apoio aos pequenos empreendimentos da Bahia-Ceape/Bahia, 2007, Dissertação. Universidade Salvador. <http://tede.unifacs.br/tede/handle/tede/175>

Costa, B. L. de S. **Microcrédito ou crédito pequeno?** A experiência dos financiados do programa providência no Recanto das Emas e Riacho Fundo II, no Distrito Federal. 240 f. Tese de doutorado em Sociologia, Universidade de Brasília, Brasília, 2006.

Costa, L. M. **O Microcrédito e a Geração de emprego e Renda no Norte de Minas:** Ênfase ao Crediamigo do Banco do Nordeste. Belo Horizonte: UFMG/CEDEPLAR, 2001.

Costanzi, R. N. **Microcrédito no âmbito das políticas públicas de trabalho e renda,** 2002. <http://repositorio.ipea.gov.br/handle/11058/5596>

Chowdhury, M. J. A.; Amin, S.; Farha, T. **Access to Credit and Women Entrepreneurship:** Evidence from Bangladesh, PEP: Partnership for economic policy, 2012.

Coleman, S. Access to capital and terms of credit: A comparison of men- and women-owned small businesses. **Journal of Small Business Management**, v. 38, n. 3, p. 37-52, 2000.

Collins, J.; Singh, V. Exploring gendered leadership. In D. McTAVISH; K. Miller, **Women in leadership and management.** Edward Elgar Publishing, 2006.

Da Mota Almeida, W. L.; De Santana, J. R. O microcrédito como estratégia de redução da pobreza no Nordeste: uma avaliação a partir do programa Crediamigo. **Revista Econômica do Nordeste**, v. 42, n. 1, p. 25–48, 2011.

De Mel, S., Mckenzie, D.; Woodruff, C. Are

women more credit constrained? Experimental evidence on gender and microenterprise returns. **American Economic Journal: Applied Economics**, v. 1, n. 3, p. 1–32, 2009.

Daltro, H. S.; De Santana, J. R. **Uma avaliação da importância econômica e da sustentabilidade financeira das operações de microcrédito:** a experiência do Banese. **Revista Econômica do Nordeste**, v. 44, n. 4, p. 931–956, 2013.

D'Espallier, B.; Guérin, I.; Mersland, R. Women and repayment in microfinance: A global analysis. **World Development**, v. 39, n. 5, p. 758–772, 2011.

D'Espallier, B.; Guerin, I.; Mersland, R. Focus on women in microfinance institutions. **The Journal of Development Studies**, v. 49, n. 5, p. 589–608, 2013.

Feltrim, L. E.; Ventura, E. C. F.; Dodl, A. V. B. **Perspectivas e desafios para a inclusão financeira no Brasil:** visão de diferentes atores. Brasília: Banco Central do Brasil, 2009.

FOMENTO PARANÁ. **Balanco anual - 2013,** (2013)http://www.fomento.pr.gov.br/arquivos/File/institucional/Balancos_e_Relatorios/Balanco_Fomento_12_2013.pdf

Fomento Paraná. **Banco da Mulher Paranaense Microcrédito.** 2019. <http://www.fomento.pr.gov.br/Pagina/Banco-da-Mulher-Paranaense-Microcredito>

GEM. **Global Report 2016/2017 - Global Entrepreneurship Monitor,** 2017. <http://gemconsortium.org/>

Giuberti, A. C.; Menezes-Filho, N. Discriminação de rendimentos por gênero: Uma comparação entre o Brasil e os Estados Unidos. **Economia Aplicada**, v. 9, n. 3, p. 369–384, 2005.

Guardabascio, B.; Ventura, M. Estimating the dose-response function through a generalized linear model approach. **Stata Journal**, v. 14, n. 1, p. 141–158, 2014.

Hirano, K.; Imbens, G. W. (2004). The propensity

- score with continuous treatments. In: GELMAN, A. e MENG, X. **Applied Bayesian modeling and causal inference from incomplete-data perspectives**. John Wiley & Sons, p. 73–84, 2004.
- IBGE. **Pesquisa Nacional por Amostra de Domicílios—PNAD**. Rio de Janeiro: IBGE, 2015.
- IFC. **Doing Business in Brazil**, World Bank, 2007.
- Imbens, G. W. The role of the propensity score in estimating dose-response functions. **Biometrika**, v. 87, n. 3, p. 706–710, 2000.
- Junqueira, R. G. P.; Abramovay, R. A sustentabilidade das microfinanças solidárias. **Revista de Administração-RAUSP**, v.40, n.1, 2005.
- Kevane, M.; Wydick, B. Microenterprise lending to female entrepreneurs: Sacrificing economic growth for poverty alleviation? **World development**, v. 29, n. 7, p. 1225–1236, 2001.
- Lavinas, L. Empregabilidade no Brasil: Inflexões de gênero e diferenciais femininos, **Textos para discussão**, IPEA, n. 826, 2001.
- LEITE, C.; MONTORO, F. A. F. A importância do microcrédito para o desenvolvimento econômico e social e o banco do povo paulista. **Jornal Valor Econômico**. v. 932, 2008. goo.gl/ztiDvs
- Levin, H. M.; Mcewan, P. J.; Belfield, C. R.; Bowden, A. B.; Shand, R. D. **Economic Evaluation in Education: Cost-Effectiveness and Benefit-Cost Analysis**. SAGE Publications, 2018.
- Madalozzo, R. Teto de Vidro e Identificação: Uma análise do perfil de CEOs no Brasil. **InspereWorkingPaper**, **Inspere Instituto de Ensino e Pesquisa**, 2010.
- Madalozzo, R. CEOs e Composição do Conselho de Administração: A falta de identificação pode ser motivo para existência de teto de vidro para mulheres no Brasil? **RAC-Revista de Administração Contemporânea**, v. 15, n. 1, 2011.
- Madalozzo, R.; Martins, S. R.; Shiratori, L. Labor market and home production: Are men and women equal? **Revista Estudos Feministas**, v. 18, n. 2, p. 547–566, 2010.
- Malapit, H. J. L. Are women more likely to be credit constrained? Evidence from low-income urban households in the Philippines. **Feminist Economics**, v. 18, n. 3, p. 81–108, 2012.
- Morrison, A. M.; GLINOW, M. A. **Women and minorities in management**. (Vol. 45). American Psychological Association, v. 45, n. 2, p. 200–208, 1990.
- Neri, M. C. **Microcrédito: o mistério nordestino e o Grameen brasileiro: perfil e performance dos clientes do Crediamigo**. FGV Editora, 2008. goo.gl/cNnfZk
- Neto, M.; Prestes, M. **Impacto em renda do microcrédito: uma investigação empírica sobre geração de renda do Crédito Popular Solidário (São Paulo Confia)**, no Município de São Paulo, 2006. <http://bibliotecadigital.fgv.br/dspace/handle/10438/2499>
- Nichter, S.; Goldmark, L.; Fiori, A. **Entendendo as microfinanças no contexto brasileiro**. BNDES Microfinanças, 2002.
- Nwosu, E. O.; Orji, A.; Nnetu, V.; Nwangwu, C. **Is there Discrimination Against Women Entrepreneurs in Formal Credit Markets in Nigeria?** PEP: Partnership for Economic Policy, 2015. <https://www.pep-net.org/there-discrimination-against-female-entrepreneurs-formal-credit-markets-nigeria>
- OECD. **Women's Entrepreneurship: Issues And Policies**. Istanbul, 2004. <http://www.oecd.org/cfe/smes/31919215.pdf>
- Oliveira, L. C. G. **Desempenho do Crediente no microcrédito a micro e pequenos empreendimentos de Campo Grande-MS e suas implicações no desenvolvimento local**. 107f. Dissertação (Mestrado em Desenvolvimento Local). Universidade Católica Dom Bosco, Campo Grande, 2007.
- Pereira, G. D. de O. **Efeitos do**

- microcrédito sobre o fortalecimento dos microempreendimentos e sobre as condições de vida dos microempreendedores-um estudo do CEAPE/PB, no período de 2001 a 2004.** 110f. Dissertação (Mestrado em Economia), UFPB, João Pessoa, 2003.
- Rapis, C. **O microcrédito e o combate à pobreza.** 118f. Dissertação (Mestrado em Direito), Universidade Presbiteriana Mackenzie, São Paulo, 2008.
- Seck, A.; Araar, A.; Camara, K.; Diallo, F. L.; Diop, N. K. M.; e Fall, F. A. **Female Entrepreneurship, Access to Credit, And Firms' Performance in Senegal**, PEP: Partnership for Economic Policy, 2015 <https://www.pep-net.org/female-entrepreneurship-access-credit-and-firms-performance-senegal>
- Soares, M. M.; Sobrinho, M. **O papel do Banco Central do Brasil e a importância do cooperativismo de crédito.** Brasília: BCB, 2008.
- Steil, A. V. Organizações, gênero e posição hierárquica-compreendendo o fenômeno do teto de vidro. **Revista de Administração da Universidade de São Paulo**, v. 32, n. 3, 1997.
- Stupnytska, A.; Koch, K.; Macbeath, A.; Lawson, S.; Matsui, K. Giving credit where it is due: How closing the credit gap for women-owned SMEs can drive global growth. **Goldman Sachs Global Investment Research Division. Australia**, 2014.
- Ventura, E. C. F.; Dodl, A.V. B. **Perspectivas e desafios para a inclusão financeira no Brasil.** Brasília: Banco Central do Brasil, 2009.
- Von Ende, M.; Leopoldino, C. B. Avaliação da Sustentabilidade de uma Instituição de Microcrédito via Modelagem Financeira. **ConTexto**, v. 4, n. 7, 2004.
- Wooldridge, J. M. **Introductory econometrics: A modern approach.** Nelson Education, 2015.
- World Bank. **SMEs Financing: Women Entrepreneurs in Ethiopia.** World Bank, 2015. <http://www.worldbank.org/en/news/feature/2015/11/16/financing-women-entrepreneurs-in-ethiopia>
- World Bank. **Doing Business 2017: Equal Opportunity for All**, 2017. goo.gl/Qu6jPz.
- Zouain, D. M.; Barone, F. M. Excertos sobre política pública de acesso ao crédito como ferramenta de combate à pobreza e inclusão social: o microcrédito na era FHC. **Revista de Administração Pública**, v.41, n.2, p.369–380, 2007.

Dayane Rocha de Pauli

 <https://orcid.org/0000-0003-3238-3918>

Assistant Professor of Economics, Federal University of Paraná (UFPR). B.A. in Economic Sciences, State University of Campinas (Unicamp). M.Sc. and PhD in Economic Development, UFPR.

E-mail: dayanerocha@ufpr.br

IMPACT OF POLICY IMPLEMENTATION SHORTCOMINGS AND CONTEXT CONSTRAINTS ON THE EFFECTIVENESS OF CIVIL SERVANT PERFORMANCE APPRAISAL: THE CASE OF BRAZILIAN FEDERAL SERVICE

Enrique J. Sánchez Elvira
Maria de Fátima Bruno-Faria

Universidade Federal do Rio de Janeiro (UFRJ), Instituto de Economia, Rio de Janeiro – RJ, Brasil

Literature points out constraints existing in public service to performance appraisal (PA) related to, among others, justice perception and cultural aspects. In order to analyze the effectiveness of civil servant PA policy in the Brazilian federal administration, an ex-post policy evaluation was conducted, considering its impact and implementation process. It implemented a qualitative methodology, with a case study strategy, a policy cycle analysis with the participation of relevant actors and key institutions. The results showed reduced effectiveness of the policy derived, on one hand, from implementation failures found in each stage of the policy. On the other, the results identified structural barriers - (i) stability at work; (ii) recruitment by competition; (iii) frequent supervisor turnover; (iv) autonomy and discretion of civil servants; (v) high number of decision and veto players – that lead to PA cultural constraints - (i) companionship among workers; (ii) non-acceptance of performance critiques; (iii) absence of managerial culture; (iv) traditional practice of filing the evaluation process; (v) ineffective performance bonus. One of the main practical implications discussed, besides the need to improve the policy design and implementation, is that traditional PA policies in Brazil confront federal service characteristics, leading to an outright rejection of the process, which became an administrative protocol. The research specifies and amplifies the organizational obstacles to PA in Brazilian federal service, which could be tested in other contexts.

Keywords: Brazil federal administration; civil servants; performance appraisal; public sector barriers; public policy cycle.



IMPACTO DAS DEFICIÊNCIAS NA IMPLEMENTAÇÃO DA POLÍTICA E RESTRIÇÕES DO CONTEXTO NA EFETIVIDADE DA AVALIAÇÃO DE DESEMPENHO DE SERVIDORES PÚBLICOS: O CASO DA ADMINISTRAÇÃO FEDERAL BRASILEIRA

A literatura aponta para as restrições que existem à avaliação de desempenho (AD) no serviço público relacionadas à percepção de justiça e aspectos culturais, entre outros. Para analisar a efetividade da política de AD dos servidores públicos da administração federal brasileira, foi realizada uma avaliação ex-post da política, considerando seu impacto e seu processo de implementação. Foi aplicada uma metodologia qualitativa, com uma estratégia de estudo de caso, uma análise do ciclo da política, envolvendo atores relevantes e instituições-chave no processo. Os resultados mostraram uma eficácia reduzida da política decorrente, por um lado, das falhas na implementação, identificadas em cada etapa da política. Por outro lado, foram identificadas barreiras estruturais - (i) *estabilidade no trabalho*; (ii) *acesso por concurso*; (iii) *rotatividade frequente das chefias*; (iv) *autonomia e discricionariedade dos servidores*; (v) *elevado número de atores com poder de decisão e veto* - que geram limitações culturais em relação à AD - (i) *camaradagem entre os trabalhadores*; (ii) *não aceitação de críticas sobre o desempenho*; (iii) *ausência de cultura gerencial*; (iv) *prática tradicional de burocratizar o processo de avaliação*; (v) *gratificação por desempenho ineficaz*-. Uma das principais implicações práticas discutidas - além da necessidade de aprimorar o desenho e a implementação da política - é que as políticas tradicionais de AD no Brasil confrontam as características da administração federal, o que gera uma rejeição do processo, que se tornou um processo proforma. A pesquisa detalha os obstáculos organizacionais à AD no serviço federal brasileiro, que poderiam ser testados em outros contextos.

Palavras-chave: administração federal brasileira; servidores públicos; avaliação de desempenho; barreiras do setor público; ciclo da política pública.

IMPACTO DE LAS DEFICIENCIAS EN LA IMPLEMENTACIÓN DE LA POLÍTICA Y RESTRICCIONES DEL CONTEXTO EN LA EFECTIVIDAD DE LA EVALUACIÓN DEL DESEMPEÑO DE LOS FUNCIONARIOS PÚBLICOS: EL CASO DE LA ADMINISTRACIÓN FEDERAL BRASILEÑA

La literatura señala las restricciones que existen a la evaluación del desempeño (ED) en el servicio público relacionadas con la percepción de la justicia y los aspectos culturales, entre otros. Con el objetivo de analizar la efectividad de la política de ED de los funcionarios públicos en la administración federal brasileña, se realizó una evaluación ex post de la política, considerando su impacto y su proceso de implementación. Fue aplicada una metodología cualitativa, con una estrategia de estudio de caso, un análisis del ciclo de la política, involucrando a actores relevantes e instituciones clave en el proceso. Los resultados mostraron una efectividad reducida de la política derivada, por un lado, de fallas en la implementación identificadas en cada etapa de la política. Por otro lado, se identificaron barreras estructurales - (i) *estabilidad en el trabajo*; (ii) *contratación por oposición*; (iii) *frecuente rotación de gestores*; (iv) *autonomía y discrecionalidad de los funcionarios*; (v) *alto número de actores con poder de decisión y veto* - que producen limitaciones culturales en la ED - (i) *compañerismo entre los trabajadores*; (ii) *no aceptación de la crítica al desempeño*; (iii) *ausencia de cultura gerencial*; (iv) *práctica tradicional de protocolizar el proceso de evaluación*; (v) *bonificación por desempeño ineficaz*-. Una de las principales implicaciones prácticas discutidas - más allá de la necesidad de mejorar el diseño e implementación de la política- es que las políticas tradicionales de ED en Brasil confrontan las características de la administración federal, lo que genera a un rechazo del proceso, que se convirtió en un proceso protocolario. La investigación específica y amplía los obstáculos organizativos a la ED en el servicio federal brasileño, que podrían testarse en otros contextos.

Palabras clave: administración federal brasileña; funcionarios públicos; evaluación de desempeño; barreras del sector público; ciclo de la política pública.

I INTRODUCTION

Performance appraisal (PA) is a tool that can bring benefits to organizations and workers themselves (KIM & HOLZER, 2014). In the public sphere, it is one of the main dimensions of any government modernization initiative. Thus, the classic perception that civil servants do not work with the same intensity as private employees exists (MARVEL, 2015). This general view, along with the reform agenda driven by the New Public Management, generates a constant demand for further effectiveness and efficiency of governments, which is why performance management has become a fundamental issue in public organizations (HONDEGHEM; VAN DORPE, 2012).

However, public servant performance appraisal policies continue to be a challenge for governments that intend to use it as a management tool and to improve the effectiveness of their institutions. Literature identifies multiple cases, in different countries and contexts, of performance management systems in public bodies that have resulted in restricted effects.

This research develops an ex-post evaluation of the main performance appraisal policy in the Brazilian federal administration. After several years of implementation, it was necessary to carry out a comprehensive analysis. As it is emphasized in literature (RAMOS; SCHABBACH, 2012), policy evaluation has several purposes: improve the decision-making process; enable the appropriate allocation of resources; promote accountability of government officials to parliament, regulatory agencies and citizens; and also allow policymakers and managers to design more effective, efficient and higher quality policies.

The evaluation identifies implementation policy issues, as well as the existing barriers in Brazilian public service to effective civil servant performance appraisals, and the misconception of traditional administrative and political PA reforms — which are designed from the standpoint of private management.

This article is justified by scarcity, in the literature on the matter, of a study of civil servant PA from the analytical perspective of the policy cycle stages (DENISE; MURPHY, 2017). Likewise, this policy evaluation brings relevant results for the identification of Brazilian public administration barriers in relation to the implementation of PA policies that could share common elements with other cases.

2 CONTEXT AS A POLICY IMPLEMENTATION CONSTRAINT IN CIVIL SERVANT PERFORMANCE APPRAISAL

AD processes encounter several elements, especially context-derived, that restrict their effectiveness. In the public sector, taking into account its particularities, which differentiate it from the dynamics of private sphere, PA policies for public employees still face additional obstacles that constrain their implementation.

Literature points out distal factors as dimensions of the social context that influence the performance appraisal process. According to the model proposed by Levy and Williams (2004), four groups of variables would condition the results of the performance evaluation: (i) *distal variables*, (ii) *process proximal variables*, (iii) *structural proximal variables* and (iv) *rater and ratee behavior*. Unlike proximal factors, distal factors come from other aspects outside the performance appraisal and go beyond the process and design of systematics. Some of these elements would be the organizational climate, organizational culture, people management strategies, external economic conditions, technological advances and the configuration of workforce, among others. The last group of variables alludes to the psychological elements of the actors involved, both in the way of rating and in the reactions of ratees to the judgment about their performance and in relation to the entire process (LEVY; WILLIAMS, 2004).

Studies such as the Chiang and Birch (2010) stress the relevance of organizational and cultural elements, both national and organizational, for the effectiveness of PA processes. As well as the transnational research by Peretz and Fried (2012), which concludes that national culture affects the design and practice of PA in organizations. Thus, it influences the use or not of multiple sources, the purpose of PA, the percentage of workers rated or the individual or collective focus of the appraisal. In the same vein, the paper by Chen and Eldrige (2010) on the adaptation of a Western performance management model to a Chinese subsidiary highlights the need to adapt performance management systems to the reality of each organizational and national context.

In the public sector, O'toole Jr. and Meier (2014) identify three groups of main context variables in performance management: (1) *political context-concentration of power*, which studies the trade-offs between unitary versus shared powers, single or multiple-level, corporatist versus adversarial, with or without a formal performance appraisal system;

(2) *environmental context*, considering the extent of complexity, turbulence, munificence, and presence versus absence of social capital; and (iii) *internal context*, that must pay attention on the extent of goal clarity and consistency, organizational centralization versus decentralization, and degree of professionalism.

Dixit (2012) also explores the incentives of bureaucracies from the perspective of *principal-agent* theory and emphasize some differences regarding the public sector. In this sense, public administration has a greater degree of complexity as it responds to a multiplicity of principals. It must manage a large number of tasks, some of which are not clearly observable, and has different levels of hierarchies with many actors, which presents confusion to diverse principals. Assis & Reis Neto (2013) also allude to the multiplicity of principals and multitasks, which can lead from the perspective of rational choice theory to servers performing the easiest tasks.

Klein and Mascharenas (2016) studied the motivation and satisfaction of Brazilian federal civil servants. They concluded that, in line with literature, employees in public organizations are strongly motivated by intrinsic aspects of work, and the influence of extrinsic elements is smaller than that of collaborators in private organizations. Thus, their job satisfaction is greater when intrinsic factors predominate, which is why the authors recommend that public management policies must be aligned with the culture and internal dynamics of organizations.

Weibel, Rost and Osterloch (2010) point out, through a meta-analysis and an experiment, that economic bonuses have modest effects on performance in public administration. It can have positive effects on motivation and in the effort to perform tasks that are unattractive to officers, but it has a negative effect on intrinsic motivation and self-determination to develop the most interesting tasks. Furthermore, they consider that budgetary limitations in the public service generally result in insignificant bonuses, generating limited positive effects and important costs in terms of motivation.

Ohemeng, Zakari and Adusha-Karikari (2009) also observe, under the expectancy theory, that the effects of PA on the motivation and effort of public servants in Ghana are scarce. Workers do not expect significant effects from the process, and since promotions derived from performance are automatically produced in practice, economic rewards do not improve motivation. Likewise, local culture prevents honest and rigorous appraisals from being made, resulting in maximum marks in most cases, which distorts the potential use of appraisal results.

Another contextual factor studied by Zheng et al. (2012) is the *organizational*

citizen behavior, which relates to performance within the social and psychological climate of the environment where the tasks are performed. In this sense, the PA process has a positive relationship with the organizational citizen behavior when there is an organizational commitment from workers.

Park (2014) studies the motivations of public managers to carry out rigorous or lenient appraisals. The study highlights that their motivation for an accurate appraisal is conditioned by the organization's incentive system and by the perception of having more audience accountability. They consider that formal bonuses can improve the accuracy of their appraisals, but forced distributions on scores are a negative practice to assess correctly. They conclude that the norms and internal dynamics in organizations condition rater accuracy.

Maia and Bastos (2019) studied, in a Brazilian federal agency, variables that are positively related to an improvement in performance and that could be inductors for the effectiveness of the evaluation processes. Thus, when employees realize their expectations regarding their obligations and those of the organization with them, stipulated at the time they were hired (fulfillment of the psychological contract), their performance increases.

Finally, recent Brazilian research by Bezerra et al. (2019), which was implemented in a federal entity, also stress the lack of adaptation of the performance appraisal systematic to the organizational culture and political nature interactions that occurs among the actors involved.

3 METHODOLOGY

The evaluation aimed to analyze the effectiveness of the Brazilian federal administration's public servant PA policy, outlined mostly in the Law 11.780/2008 and the regulation Decree 7.133/2010, which affect most federal careers. We set effectiveness as the end-objective of the policies: the expected and unexpected impacts on the target population and the changes occurred beyond the established objectives (SILVA, 2013). Hence, we studied the existence of the expected effects of the individual PA, compiled from scientific literature. Therefore, the research had an evaluative characteristic, be it of the impacts and of the policy process. In this sense, in order to examine the process, we analyzed the PA cycle and the public policy cycle. We observed the stages of work planning, management and monitoring, performance rating, and use of results in the PA cycle (DECREE, 2010). Regarding the analysis of the public policy cycle, we took into

account seven phases inspired in the model proposed by Saravia (2006): inclusion of the issue in the political agenda, elaboration, formulation, planning, execution, monitoring, and evaluation. Likewise, we considered both top-down and bottom-up approaches (Sabatier, 1986) while studying the policy. Considering the indications of the IPEA guide (2018), this ex-post evaluation carried out an analysis of the diagnosis of the problem, an evaluation of the design, an evaluation of the implementation and an impact evaluation.

We adopted the qualitative research method with the case study strategy and a constructivist perspective. The data collection techniques began with semi-structured interviews, followed by documental analysis, some of which had been initially chosen while the later ones were recommended by the interviewees, to understand the policy and entities studied. This analysis included the study of the federal government PA norms from the 20th century until 2017. We then carried out participant observation, made through the involvement as external evaluators, in a PA committee of a federal autarchic entity. This participant observation took place for two years, over four periods in each one, lasting between 5 and 10 days.

We preserved the identity of all studied entities and actors. They were six significant federal institutions participating in the evaluation, three of which are among the organizations with larger budget and workforce, including the bodies that participated in the design, formulation, and planning of the policy.

There were 22 individuals interviewed. The number was determined by the collected information saturation criterion (GASKELL, 2002). Likewise, we made the actor selection primarily through successive suggestions that were given by the interviewees themselves. Nevertheless, our directive was to seek those who had held different roles in the policy, such as: policymakers; current policy planners and the ones holding the charge when the law was approved; academic specialists; PA coordinators in different entities; PA officials in government schools; unionists; organization planners; people management director; work team leaders; members of PA committees; and public servants placed in work teams.

Therefore, the selection of the sample was not random and risks generating a selection bias problem (IPEA, 2018). However, there were some key actors at the time of policy formulation, planning, and execution that necessarily had to be heard in order to obtain an adequate evaluation of the policy. It was also ensured that a reasonable variety of profiles in relation to their positions and designed institutions were included. Likewise, the saturation criterion recommended by Gaskell (2002) also helped to neutralize this bias,

as the interviews continued until the interviewees stopped offering new contributions or insights.

We interpreted the information obtained from the interviews, documents, and participant observations through the content analysis technique (BARDIN, 2004) and using data triangulation (GONDIM et al., 2005).

4 RESULTS AND DISCUSSION

4.1 Research context

In Brazil, each administrative level currently has the competence to regulate its own PA system. Hence, the Union and each municipality and state have specific normative. The 2008 Federal Law N° 11.784 (LAW, 2008), which is regulated by the 2010 Decree 7.133 (DECREE, 2010), rules 49 federal careers performance bonus system, out of 87, which applies for 80 federal institutions, including direct administration of executive, judicial and military nature, along with independent bodies (COELHO JR., 2013). It should be emphasized that this regulation was an inspiring norm for the subnational administrative levels, which incorporate the main principles of the system established by the Decree 7.133/2010 to their own laws (SILVEIRA; PINHEIRA; ANTUNES, 2012). In Table 1, the main outlines of this regulation are summarized.

TABLE 1- Main characteristics of the PA system established in the Decree 7.133/2010

Characteristic	Content
Evaluation criteria	Targets and minimal competences (art. 4).
Rating method	Must be determined by each entity. (art. 7).
Planning tool	Work plan of the unit evaluated. (art. 6).
Who evaluates	Multiple sources – 360° (art. 4).
Evaluation objective	Individual evaluation (art. 1).
Connection to organizational objectives	Individual targets linked to intermediary unit targets, which are then linked to the annual global targets of the Organization (art. 5).
Participation	Knowledge of used criteria and tools, process monitoring and nomination to disclose and guide (art. 21).
Right to appeal	A request to the immediate supervisor and a final appeal to the CAD (art. 22).
Bonus	Tied to the bonus, 20 points for individual performance, 80 points for institutional performance (art. 8); the value of each point shall be determined by specific career plan normative (art. 9).
Use of information	Training, career or job development, remuneration and personnel transferences, but without detailing the procedure (art. 12 Decree 7.133 e art. 140 Lei 11/784).
Organs created	Commission for the Monitoring of the PA (In Portuguese, Comissão de Acompanhamento da Avaliação de Desempenho, CAD) (art. 23).

Source: elaborated by the authors, based on the Decree 7.133 (Decree 2010).

The Decree 7.133/2010 designs an individual appraisal by competences and targets with a set of them being mandatory, establishes the 360-degree-feedback, mandates the drafting of work teams and institutional plans, and it results in a remuneration incentive process due to the performance bonus. This bonus is obtained according to the final evaluation grade attained, individual, and at the entity-level. Similarly, it establishes, among other things, general lines of the servant participation in the planning of the connection of results to training and the relation between internal monitoring organisms, which must be established within the entities.

4.2 Policy Process Analysis

Entry of the Issue in the Political Agenda

The first stage of the policy cycle studied was the entry of the issue into the political

agenda, also known in literature as *agenda building*. The way in which the agenda building of the issue is set is crucial to the later elaboration and formulation of the policy and also to its effectiveness (KINGDOM, 2006). In this sense, the entry of PA policy revision in government political agenda during the second term of President Lula was subsidiary to other political objectives. Therefore, it pragmatically fits into the National Policy for Personal Development (DECREE, 2006), which promotes the democratization of labor relations in public service and strengthens officer remuneration (GARCIA et al., 2006). It should be noted that the Fernando Henrique Cardoso administration, in the context of political measures which were framed in the Director Plan of the State Apparatus Reform (PDRAE, in Portuguese), reduced the number of federal public servants and froze the salary adjustments (ANDREWS, 2010). Thus, the Lula administration had as one of its main federal administration projects the goal of correcting this situation and upgrade salaries, and this correction was made mostly through performance bonuses. The I-3 (third interviewee) reported:

“In 2006 (...) one of the government directives was the strengthening of the public service salary, because it some renewal was really needed (...) It was a moment (...) of restaffing government organs, strengthening careers, mostly on this remuneration aspect, and the government dedicated itself strongly to that matter” (Testimony of I-3, involved in the PA federal policy monitoring).

This fact caused the Policy to lose some of its autonomy and focus on problem resolution and, as indicated by Sabatier and Mazmanian (1979; 1981), when the Policy elaboration is detached from the causal explanations of the problem, its implementation success is in risk.

Elaboration

At the elaboration stage, the moment in which different alternatives are proposed and studied before taking a decision on the final direction of the policy (SARAVIA, 2006), the choice of alternatives was not based on studies. Rather, it was mostly made through suppositions of actors participating in the meetings, a typical procedure of policies made by bureaucracy (HOWLETT; RAMESH; PERL, 2013). In this sense, the internal character of the discussions by public servants of the Planning Ministry hindered the participation and consensus of other key actors in the process. Therefore, the union confederations

expressed their opposition towards the policy design at the discussion board *Mesas de Negociação*. In their view, it had a productivity character and was focused on remuneration through bonuses.

“Since its inception, we have been critical of this systematic, and now we can see that from the moment we presented these criticisms we were correct. (...) The way it is applied today, with a remuneration character, a financial character, it has not had the effect for which it was created”
(Testimony of I-20, head of a federal public servant union confederation).

The absence of this support, which would afterward be reproduced in the different federal organs, compromised the legitimacy of the policy. It also provoked, in the execution stage, more resistance towards correctly implementing the normative among public employees. This is known as *bureaucratic competition* and is motivated by those excluded from the policymaking and contrary to the original policy guiding lines (NICHOLSON-CROTTY, 2005).

Formulation

The new federal PA policy formulation phase was quickly developed in the National Congress, without any resistance. The Provisional Measure 431 (PROVISIONAL, 2008) was presented by the Federal Government to National Congress on May 14th, 2008. It was approved four months later by both houses without substantial modifications, even regarding provisions related to the PA chapter. It was sanctioned by Vice-president José Alencar and published on September 22nd, 2008, designated as Law 11.784 (LAW, 2008). The regulation, which was similar to the text dedicated to PA in the Law, was approved by the government much faster, surprising even the planners with the celerity of its procedure. Thus, one and a half years later on March 19th, 2010, the Decree 7.133 (DECREE, 2010) was published and signed by President Lula and the Planning Minister Paulo Bernardo Silva.

Planning

The planning stage in the public policy cycle implies the preparation of the implementation of the laws or normative defined in previous stages (SARAVIA, 2006). Hence, significant efforts were made during this phase, such as training and disclosure

actions, which included: regional congresses, a thematic course in the government school (ENAP – National School of Public Administration, in Portuguese), the publishing of a guiding manual, and one explanatory regulation of the Decree 7.133. Likewise, there were preparation actions such as the creation of a specific monitoring unit in the Ministry of Planning and a knowledge exchange experience with the Portuguese administration as part of a European Union cooperation program.

Considering the preparatory actions carried out at this planning stage and the time invested in them, it is possible to affirm that the necessary efforts were made to prepare the implementation of the new PA in federal entities, which is one of the requirements identified by Sabatier and Mazmanian (1979, 1981) for the success of public policy implementation.

Execution

As Saravia (2006) points out, this stage is decisive to the success of policies, and the bureaucracy has a fundamental role in transforming the policy formulations into reality. In effect, the federal administration, represented by servants who are participating in the new PA in the affected entities, was responsible of the implementation of the policy and, simultaneously, was the target of it. We identified some failures in the process of this key phase, mainly caused by barriers derived from formal structures and from the organizational culture of the Union administration.

The federal entity adaptations to the Decree 7.133 (DECREE, 2010) were made with the support and backing of the Ministry of Planning. The room for maneuvering in internal formulation ended on, mostly, the rating criteria and the definition and operationalization of personal factors of competence. According to the statements of multiple interviewees, this formulation process was made with little participation and many felt excluded, not having even the option of express any comment on its design. So expressed I-7, chief unit in a federal entity:

“It was conceived in a quite autocratic way, (...) this performance appraisal system was developed without the participation of the institution. There was a presentation on how it would be, but there was no taking part in the constructive process, and in making people understand it” (I-7).

Additionally, there was a rejection of worker union representatives in the organizations, which followed the union confederacy protests. Therefore, although the

new PA was initially well-received because it generated a significant wage increase, the lack of participation and of union acquiescence contributed to discrediting the system and led to its reduced acceptance (KIM; HOLZER, 2014).

In addition to these issues in the early stages of implementation, the main identified problems were the lack of dialogue and prominence from the leaders on PA management, and the leniency of evaluators, expressed by unambitious planning and by the assignment of higher grades at the assessment results. The role of leaders is recognized, according to the literature, as essential in the PA success (DESTLER, 2016), as they should supervise and enhance the evaluation cycle process during all its stages. However, scarce proactivity was perceived by those who held managerial positions. First, in the dialogue-establishing moment with their staff in the construction of unit planning. Second, in the absence of either plan monitoring, interaction with the team members, and also in the restrict use of targets middle term review. Third, we also verified failures regarding managers practices in the general absence of dialogue results feedback with the public servants evaluated. This absence of dialogue eliminates an essential element on PA process (MIEROOP; VROLIX, 2014). I-2, a specialist on performance management and civil service consultant, related this situation:

“Some bosses don’t want any commitment, they don’t want to monitor or supervise. Some bosses do not want problems, and they say, (...) we shall establish any pro forma goal and stay in a comfort zone. Then, the system flows slowly when it could run faster and more effectively” (I-2).

Lastly, the managers did not take advantage of the evaluation results in order to provide information to the next term planning process, which establishes the circularity nature of the PA cycle (COELHO JR., 2013).

The other issue that jeopardizes the policy process effectiveness in the execution phase is the benevolence of evaluators. The agreed upon goals and objectives are unambitious, easy to be fulfilled, and, at the same time, the raters (managers, employees, peers and the evaluated) grant the maximum grades on the judgment of civil servant performance. This generalized leniency was caused, according to most interviewees, by the fact that the performance bonus was considerably high, and also perceived as part of the salary. Thus, raters do not want to harm employees, as they perceive any bonus reduction as a punishment and a restriction on their rights.

“I will not grade badly (the employee) because I know the financial impact into the civil servant’s life, and I can juggle the civil servant performance because I do not want to reduce wages. We have these contradictions currently running” (Testimony of I-19, involved in a PA coordination at a federal ministry).

However, these were not the only constraints detected. There are other elements related to structures and the organizational culture of federal administration which also led to this benevolence. These elements will be thoroughly analyzed in the next item, where are outlined the constraints of traditional PA in the federal service.

Regarding the PA justice perception analysis (CROPANZANO; BOWEN; GILLILAND, 2007), the conclusion is that the process is not perceived as fair, generally, among employees and, therefore, is not accepted. In the procedural justice dimension, most interviewees claimed the evaluation was not real – it was done in a protocolary manner. As for distributional justice, PA is conceived as punishing because the bonus is understood as a right and any reduction of this value is seen as an injustice. For the same reason, it also does not reward those with the best performance because most obtain the maximum grade. I-15, involved in personnel management in a government school, explained:

“It has a direct repercussion over the salary, it has a negative repercussion, that is, it can only decrease salaries, it does not raise wages. There is a saying in public management: if you do everything correctly, you will not lose anything, but you also will not earn. One can only lose, one does not earn anything with it, so, there is no bonus, (...) but if there is a quite good worker, I cannot raise the salary, I can only harm it, therefore this is a premise which makes this model inapplicable, it does not work” (I-15).

Finally, in the dimension of interactional justice, although most relationships are based on respect and companionship, several interviewees denounced the existence of multiple cases of persecution and harassment by leaders through the evaluation process.

Monitoring and evaluation

In relation to the actions of monitoring and evaluation of the PA policy, there is, firstly, an internal control of federal agencies in charge of PA and also external by bodies such as the Ministry of Planning or the Federal Court of Auditors (TCU, in Portuguese).

However, in both cases, it is an annual monitoring of the assessment results, and these entities are not able to motivate or change to the development of real PA actions.

“We do not have any mechanism to force people to rate or that motivates people to rate properly, even using the best instrument, the best appraisal form... Most of the time, the question is: Is it [the PA] well elaborated? The forms may be good enough, but people most of the times – not every time – do not take them seriously, and it turns out that the results are only fictitious” (Testimony of I-21, involved in the PA federal policy monitoring).

Secondly, no mid-term policy evaluation has been made until the elaboration of this research, which could help improve its implementation. Internal adjustments were made within some entities, but they did not solve the existing obstacles and the results of the processes remained the same. That is, maximum scores in all cases, with some marginal exceptions.

4.3 Policy Impact Evaluation

The research revealed the failures experienced by the policy, ranging from the entry of the issue on the agenda to its current execution, as well as the existence of barriers throughout the process. Derived from these elements was the absence, or limited presence, of the expected impacts of PA was evidenced and, therefore, reduced effectiveness. In order to present the conclusions about the existence of the effects of PA in the policy object of study, which are recognized in the literature (CLEVELAND et al., 1989; COELHO JR., 2013; SCHIKMANN, 2010), Table 2 displays the degree of presence of these potential effects is indicated in a simplified form. We classified the effects according to the actor typology -based on the focus of their impact and the degree of presence in three levels: *habitual presence*, in which the effect takes place in a regular way; *limited presence*, in cases where the effects are exceptionally present; and *null presence*, where the effects do not happen.

TABLE 2 - Analysis of the degree of presence of PA effects in Brazilian federal policy

	Habitual presence	Limited presence	Null presence
Employee	<p>Employees are aware of the work demands of the Organization.</p> <p>Develops commitment to achieve team goals.</p>	<p>Makes employees' efforts more efficient.</p> <p>Improves worker performance and productivity.</p> <p>Improves employee confidence in managers.</p> <p>Improves motivation for employees' work.</p> <p>Favors the reevaluation of daily routines.</p> <p>Provides feedback to employees about their work.</p> <p>Improves or corrects aspects of their work.</p> <p>Sanctions employees.</p> <p>Develops the skills of the employees according to their needs.</p> <p>Encourages self-knowledge and reflection on the professional development of workers.</p> <p>Rewards employees.</p>	<p>Encourages worker participation and democratizes decision-making processes.</p> <p>Involves employees in the strategic decisions of the Organization.</p> <p>Promotes the identification of workers with the mission of the Organization.</p> <p>Maximizes employees' work skills through individual work plans.</p> <p>Develops commitment to achieve the goals of the Organization.</p> <p>Promotes employees on basis of fair criteria.</p> <p>Recognizes the efforts and role of each employee within the Organization and can contribute to their motivation.</p>
Work teams	<p>Forces work units to the realization of a results-based planning.</p>	<p>Defines the competencies and goals of each work team.</p> <p>Aligns the goals and competencies of the employees to the strategic objectives of the units.</p> <p>Encourages collaboration among work team colleagues.</p> <p>Improves work unit performance and productivity.</p> <p>Promotes the managers' work in relation to the direction and motivation of the workers.</p> <p>Improves dialogue and communication among managers and subordinates.</p>	<p>Creates pressure among colleagues to improve performance.</p> <p>Creates more information for decision making.</p>

	Habitual presence	Limited presence	Null presence
Organization	<p>Contributes to results management.</p> <p>Contributes to compliance with regulations and norms.</p> <p>Requires conducting a results-based planning for the Organization.</p>	<p>Defines the competencies and goals of each job post.</p> <p>Aligns employees' goals and competencies with the Organization strategic objectives.</p> <p>Improves organizational performance and productivity.</p> <p>It adds the perception of interdependence between units and people.</p> <p>Identifies training and people development needs.</p>	<p>Identifies readjustment needs in the functions and transfer of workers.</p> <p>Identifies conditions of hygiene, safety and life quality at work which influence performance.</p> <p>Allows evaluating the success of training initiatives in performance.</p>

Source: elaborated by the authors.

Considering this classification resulting from the research findings, it is possible to observe that the impacts of PA policy are limited and, therefore, to verify that its effectiveness is low. Most effects at all three levels (employees, work teams, and organization) do not occur, or happen exceptionally. We observed *limited presence* when the effect was not generally recognized but occurred in certain divisions or entities, being a minority. The effects that happen *habitually* have to do, mainly, with the obligation to carry out the planning in each cycle, which derives from the regulation of the PA since it is one of the requirements to gain the performance bonus. Likewise, it is pertinent to point out that the specific objectives pursued by the policy are also achieved in a limited way. In this sense, Law 11.784 (LAW, 2008) aimed to improve the qualification of public servants and subsidize the personnel management policy, classified with the degrees of limited presence and null presence, respectively. I-21, linked to the planning and monitoring of federal PA policy, pointed out, with determination, these limitations:

“We cannot take today the results of performance appraisals as results which are real and which we can use to determine development actions, training actions, improvement actions of an Organization, an institution, a team...Nowadays, it is unrealistic for one to say that we can do this, we cannot do it” (I-21).

Although the policy design has brought innovative elements, such as the 360-degree appraisal, these would not solve the existing problem, nor modify the behavior of civil servants facing PA. However, it should be noted that the majority of interviewees, while acknowledging the limited impact of the policy, perceived an improvement in the current PA process in relation to past policies, a matter that is still relevant. Many

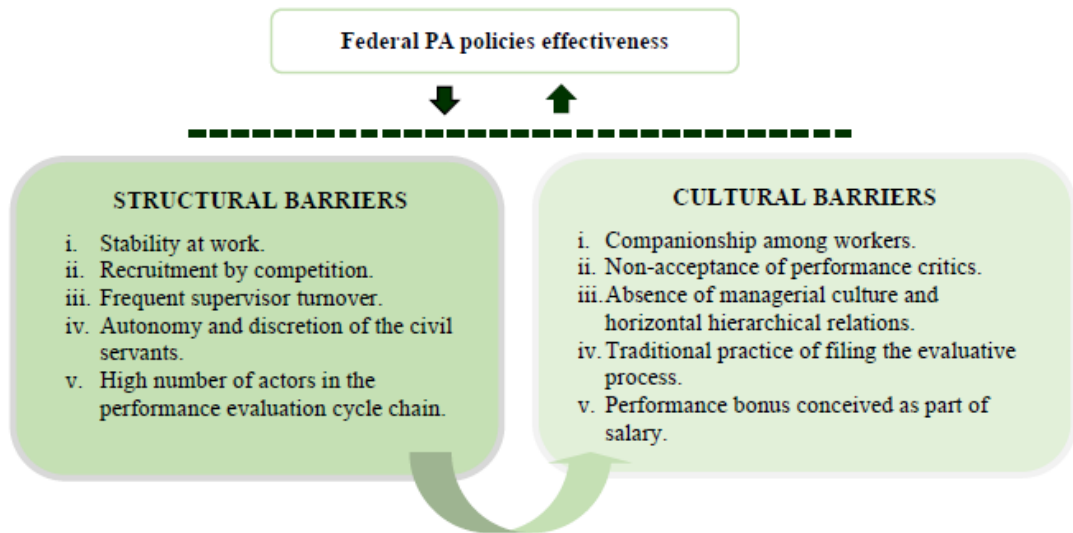
have alluded, as a positive aspect, the consolidation of planning practice because of the requirements of the standard of evaluation. Likewise, some of them pointed out that, with the passing of time and the maturing of the evaluation culture in organizations, the process would progress. A teamwork leader in a federal entity, I-6, believed that the PA process, still with its limitations, contributed at least to improve the personnel management:

“I think the positive point (...) is that, at least once or twice a year, it is necessary to have that conversation, it is necessary to have that monitoring. So, I think it also forces you to take a look at personnel management. I think it lacks a bit of preparation for the head himself too, (...) how to do that, but I think this is an initial kick-start. (...) Here, [at the entity], even I, as a boss, cannot see another instrument, another project or any other initiative that really forces me to talk to the civil servant, to give feedback. So, in that sense, nowadays it is the only tool we have” (I-6).

4.4 Brazilian Federal Service Constraints to the Implementation of traditional PA Policies

Based on the analysis of the process and the impacts of this federal policy case, it is possible to identify consolidated barriers existing in Brazilian central administration that interfere with the effectiveness of civil servants’ traditional PA policies.

These barriers are of two natures: those derived from *formal structures*, which refer to the norms that determine the action and organization of government and its workers; and those which originate from the *organizational culture*, understood as the “rituals, myths, habits and beliefs common to the members of an organization, thus producing rules of behavior generally accepted by everybody” (PIRES; MACÊDO, 2006, p. 83). It should be noted that formal structures influence and shape the organizational culture, as it will be detailed, so both types of barriers are closely linked. In the same way, these formal and cultural elements differ significantly with the dynamics that take place in private organizations. The barriers identified to the traditional PA in the federal government are represented in Figure 1.

FIGURE 1 - Barriers identified in Brazilian federal service to PA policies.

Source: elaborated by the authors.

Regarding formal structures, the following barriers were observed:

i. **Stability at work:** civil servants can hardly be dismissed and are usually placed in the same entity throughout their careers. This favors their autonomy and companionship among co-workers. At the same time, personal conflicts could be magnified, and PA is a significant source of them. This was explained by I-10, a union representative in an autarchic entity:

“In the federal system there is a lot of companionship, it is the sprit de corps of the house... (...) You are in an institution where you interact with the person for twenty or fifteen years, and it seems that this person is a part of your family ... If you are in daily life, and you have a guarantee of your job, and if you are going to lose salary money, (...) that brings you a hassle, you will create enemies in here... In private initiative, the boss fires you, here you cannot do it, then you get people with identity conflicts with each other” (I-10).

ii. **Recruitment by competition:** the access to a public stable job in federal administration involves a difficult and long period of preparation, even years, in order to surpass hundreds of candidates for a few positions’ competition. Moreover, those who overcome that phase must pass a three-year performance evaluation to consolidate the position and become permanent. In contrast to the private sector, federal employees primary merit efforts burden in the first career stages.

These criteria and dynamics of access to the federal service have several effects on workers’ behavior and organizational culture, which gain the right to occupy their

position after considerable effort and to overcome multiple competitors. This leads to a very common situation observed as federal public employees are reluctant to receive criticism about the way they work.

iii. **Frequent supervisor turnover:** civil servants in managerial positions, who are appointed by trust and on a temporary basis, are afraid of negatively evaluating co-workers, who could in the future occupy their position and, therefore, they prefer not to raise potential personal problems through PA.

“Today you are boss, maybe tomorrow you are not, the role can be reversed. So if you suddenly demand, regardless of how you demand and who the people are, the staff can see things to the personal side and afterwards... now it's my turn ... you did it so now I'm also going to do it. This is inadequate, but it happens, so there is this changing issue, sometimes in a fairly pre-programmed way, (...) from election to election there will be a team change. (...) It ends up influencing how people interact with each other” (Testimony of I-18, an academic specialist in performance management).

This structural element is also a differentiating element in relation to most common dynamics in the private sphere, where turnover is lower and it is rare that an employee occupying a managerial position returns, after a time, to a position with a lower hierarchy level.

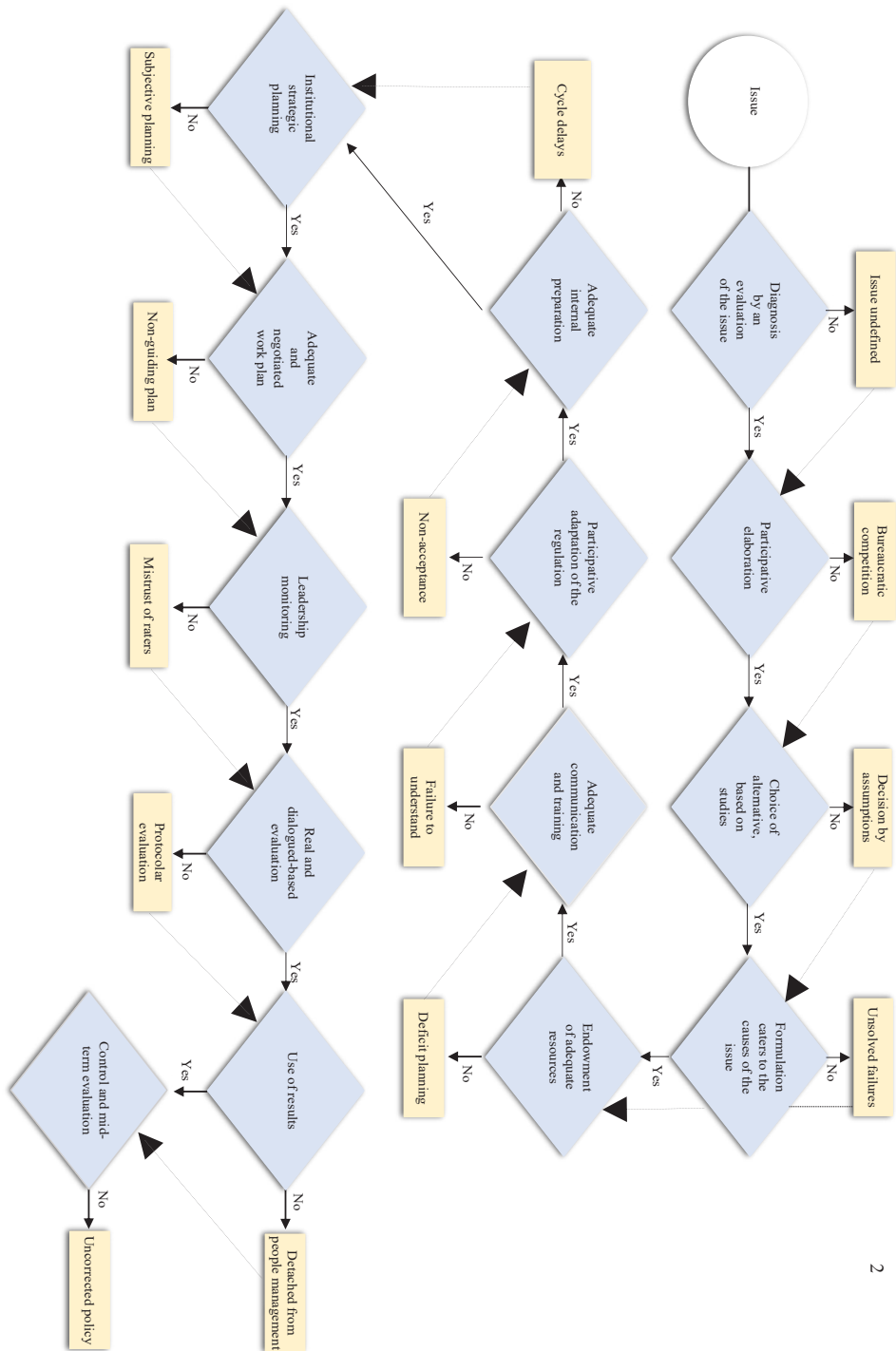
iv. **Autonomy and discretion of the civil servants:** in the view of the Lipsky (2010) *street-level bureaucrats*, the success of policies depends largely on the officials on the last stage of implementation. Therefore, the autonomy of civil servants allows them to resist the initiative of greater control over their work by means of PA, altering, in their discretion, the meaning and reach of the normative. Under this point of view, employees do not violate the requirements of the law, but, as Oliveira (2012) points out, in these cases they may restrict themselves to complying with the letter of the normative in a purely protocolary manner, which is known as *work-to-rule*.

v. **High number of actors in the performance evaluation cycle chain:** the PA policy entails a high number of decision points and agents with different interests throughout its development, motivated by the need to properly execute the evaluation cycle – composed, in the analyzed case, by the institutional planning, planning of work teams, monitoring of the execution, performance rating and use of the results. According to Pressman and Wildavsky (1998), a long chain of decisions implies a greater risk of failure in the implementation chain, so that the probability of a deterioration of the

quality process is higher. In addition to this multiplicity of decision points, PA policy depends on a wide margin of action on the part of the agents involved, civil servants of public administration. The range of their decisions are quite expansive, the options are numerous, and they require significant pro-activity. Therefore, this policy contains a higher degree of causal links requirement than others.

In Figure 2, the primary decision points of the PA federal policies and the repercussions of the direction of each of them are represented. We simplified the options into the possibilities *yes* and *no* in order to make the scheme feasible, although, partial or intermediate solutions were identified in actuality. The lozenges represent the decision points and the action that the policy design intends. When the agents involved in each decision point do not conform to the expected ideal, they generate negative repercussions for the effectiveness of the policy, represented by rectangles, and the cycle continues to drag failures, represented by the discontinuous arrows.

FIGURE 2 – Representation of decision points in PA Brazilian federal policies inspired by Pressman and Wildavsky (1998) model.



2

Source: elaborated by the authors.

Regarding the obstacles of organizational culture, the following elements were identified:

i. **Companionship among workers:** fraternal values predominate over professional values. There is a preference to earn the sympathy of others and maintain a good relationship with colleagues, and therefore they avoid conflicts that may arise from the PA. Unlike the private sector, the stability and continuity of servants for many years in the same organization implies that they have special care for the coexistence. In this sense, the I-7 head unit in a federal entity alluded to this collegiality as part of the organizational culture:

“By the public service culture, having a good peer relationship is sometimes more important for your work to be successful than you being a good worker solely at your operating unit. (...) Today it is increasingly important that this thing of having a good interpersonal relationship, (...) generates a procedural smoothness. (...) And if you also have a good relationship you can get into meetings, getting meetings to improve the interface ... so I understand that it helps a lot in the team environment, even the team spirit itself” (I-7).

ii. **Absence of managerial culture and more horizontal hierarchical relations:** leadership practices are devoid of personnel management and hierarchical control relations, but are based on companionship and the protection of workers' autonomy. This also means that, with few exceptions, there is no monitoring of compliance of work planning, turning the PA into a static process or an isolated task which occurs twice a year. Structural elements such as stability and recruitment by competition, as noted, could influence this limited culture of personnel management.

iii. **Traditional practice of filing the evaluative process:** the policy intended a drastic change in the habits of servants, who have long developed lenient PAs, with no real commitment to PA objectives. According to Sabatier and Mazmanian (1979, 1981), the greater the degree of behavior change required in the target public, the more difficult the achievement of the objectives pursued by a policy will be.

iv. **Non-acceptance of performance critics: interviewees** indicated that there was no culture of feedback in the federal administration and that workers felt evaluation was a personal offense and could not accept them professionally. Thus, civil servants usually appeal when they obtain negative PA results. It has also been observed that, in some cases, they appeal even when results do not negatively affect the complete gain of the performance bonus. This situation generates a cost for rigorous raters.

“It has already happened here... some bosses made an evaluation the way it should be done, and what happens is that the servant immediately goes through the reconsideration process. And it has often happened that the boss does not reconsider (...) the way the servant wanted. He submits the appeal, which goes to a commission, and then there is a whole process, thus, the servant does not admit he has a salary reduction” (Testimony of I-14, involved in coordinating the IPA policy in a federal entity).

v. Performance bonus is conceived as part of salary: federal civil servants conceive that pay for performance gratification is part of the salary, a right rather than a bonus, so any restriction of it is understood as a punishment for them. This view is motivated, on the one hand, by the past government’s use of bonuses as a less onerous way of increasing public servant salary, as it was pointed out in the policy cycle analysis. On the other hand, it has been assimilated to salary after years of automatic wining of the complete bonus by almost all employees.

5 CONCLUSIONS

This article presented elements which explain why the individual PA policies in Brazilian federal administration do not work as intended, and how this process works. The main obstacles, in addition to the failures verified in the phases of the policy cycle analyzed, are related to the characteristics of federal service. We identified elements of its formal structure and organizational culture which conflict directly with the pretensions of PAs.

Traditional federal civil servant PA designs and its improvements over time have outlines that are inspired by private sphere practices. Thus, they are focused on developing a real, rigorous evaluation of civil servant performance. Techniques such as forced distribution ratings were proposed, as well as external evaluation committees, introduction of high remunerative bonuses, devices for dismissing low-performing employees, etc. Results found a bias of control and punishment for the civil servants, who are broadly perceived as performing less than the private organization’s workers. The general purpose of such legislation confronted the reality of the existing structures and culture. This provoked a rejection from the initial implementation phases of civil servants, who have the autonomy to decide the real reach of the evaluation systems and to empty of the substantial meaning of the process.

Policymakers must change the traditional approach to evaluating individual performance. Attention should be paid to the adequate fulfillment of the evaluation cycle stages, seeking formulas that guarantee that all stages are carried out. In this sense, care must be taken to ensure the quality and existence of a participatory and collaborative planning, managerial monitoring, intermediate reviews, performance evaluation through face-to-face interviews, and authentic use of the results, linked to training and personal development. The main goal should be a greater commitment of managers to accomplish these stages, with the existence of a reflection on the performance of employees during the evaluation time, pointing out their strengths and weaknesses, as well as recommendations for improvement, indicating the means to their professional development.

Ratings may continue to be benevolent, but ensuring compliance with all stages of the evaluation cycle will lead to greater achievement of the effects pursued in the PA and may lead to workers' acceptance. Supervisors can consider the maximum score in PA results of collaborators, but the process must provide a space for reflection and communication of the strengths or weaknesses about their performance. Placing the focus on the process and not on the results of the evaluation can contribute to a significant improvement in the effectiveness of PA policies in Brazil public service. In the long term, if the policies are accepted and the stages are fulfilled with normality, the evaluation culture will be consolidated.

It is recommended, in future research, to study models and policies aimed at consolidating the stages of the performance evaluation cycle and that overcome civil servant rejection. Likewise, it is suggested to test and quantify the grade of influence of formal structures and organizational culture barriers highlighted in this article in other public contexts.

References

- Andrews, C. W. Da Década Perdida à Reforma Gerencial: 1980-1998. In: Andrews, C. W.; Bariani, E. (Org.). **Administração pública no Brasil: Breve História Política**. São Paulo: Editora Unifesp, 2010, 85-118.
- Bardin, L. **Análise de conteúdo**. 3. ed. Lisboa: Edições 70, 2004.
- Bezerra, L.; Orlando, O.; Gomes, M.; Zouain, D. Avaliação de Desempenho Individual da Comissão Nacional de Energia Nuclear: um estudo meta-avaliativo. **Meta: Avaliação**, v. 11, n. 32, p. 495-512, 2019.
- Chen, J.; Eldridge, D. Are “standardized performance appraisal practices” really preferred? A case study in China. **Chinese Management Studies**, vol. 4, n. 3, p. 244-257, 2010.
- Chiang, F.; Birtch, T.; Appraising Performance across Borders: An Empirical Examination of the Purposes and Practices of Performance Appraisal in a Multi-Country Context. **Journal of Management Studies**, v. 47, n. 7, 2010.
- Cleveland, J. N.; Murphy, K. R.; Williams, R. E. Multiple uses of performance appraisal: prevalence and correlates. **Journal of Applied Psychology**, v. 74, n. 1, p. 130-135, 1989.
- Coelho Jr., F. **Manual de orientação para a gestão do desempenho**. Brasília: SEGEPE – Ministério do Planejamento, 2013.
- Cropanzano, R.; Bowen, D. E.; Gilliland, S. W. The management of organizational justice. **Academy of Management Perspectives**, v. 21, p. 34-48, 2007.
- Decree No. 7.133 (Brazil). March 19, 2010. <http://www2.camara.leg.br/legin/fed/decret/2010/decreto-7133-19-marco-2010-604126-publicacaooriginal-124971-pe.html>.
- Denise, A.; Murphy, K. Performance Appraisal and Performance Management: 100 Years of Progress? **Journal of Applied Psychology**, v. 102, n. 3, p. 421-433, 2017.
- Destler, K. N. A Matter of Trust: Street Level Bureaucrats, Organizational Climate and Performance Management Reform. **Journal of Public Administration Research and Theory**, v.20, n.2, p. 1-18, 2016.
- Dixit, A. Bureaucracy, its Reform and Development. **Review of Market Integration**, v. 4, n. 2, p. 135-157, 2012.
- Garcia, M.; Toni, D.; Piva, G.; Guimarães, J.; Belchior, M.; Rabello, R.; Pomar, V. **Programa de Governo 2007-2010, Lula Presidente**. Disponível em: <http://bvsmms.saude.gov.br/bvs/publicacoes/plano_governo.pdf>. Acesso em: 10/09/2017.
- Gaskell, G. Entrevistas individuais e grupais. In: Bauer, M.; Gaskell, G. (Org.). **Pesquisa qualitativa com texto, imagem e som: Um manual prático**. Petrópolis: Vozes, 2002, p. 64-89.
- Gondim, S. M.; Sá, M.; Melo, L.; Barbosa, S.; Vasconcellos, C.; Gomes, S. Da descrição do caso à construção da teoria ou da teoria à exemplificação do caso? Uma das encruzilhadas da produção de conhecimento em administração e áreas afins. **Organizações & Sociedade**, v.12, n. 35. 2005.
- Hondeghem, A.; Van Dorpe, K. Performance management systems for senior civil servants: how strong is the managerial public service bargain? **International Review of Administrative Sciences**, 79, v. 1, p. 9-27, 2012.
- IPEA. **Avaliação de políticas públicas: Guia prático de análise ex post, vol. 2**. Casa Civil da Presidência da República, Instituto de Pesquisa Econômica Aplicada. Brasília: Ipea, 2018.
- Howlett, M.; Ramesh, M.; Perl, A. **Política Pública: seus ciclos e subsistemas – Uma abordagem integradora**. Rio de Janeiro: Elsevier, 2013.
- Kim, T.; Holzer, M. Public Employees and Performance Appraisal: A Study of Antecedents to Employees’ Perception of the Process. **Review of Public Personnel Administration**, p. 1-26, 2014.
- Kingdon, John W. (1995). Agendas, Alternatives, and Public Policies. 2nd Edition. Harper Collins College Publishers. In: Saravia, E.; Ferrarezi, E.

Políticas Públicas – Coletânea, v. 1, 2007, Como chega a hora de uma ideia (pp. 219-224); Juntando as coisas (pp. 225-246).

Law No. 11.784 (Brazil). September 22, 2008. <http://www2.camara.leg.br/legin/fed/lei/2008/lei-11784-22-setembro-2008-581033-publicacaooriginal-103882-pl.html>.

Levy, P.; Williams, J. The Social Context of Performance Appraisal: A Review and Framework for the Future. **Journal of Management**, v. 30, n. 6, p. 881-905, 2004.

Lipsky, M. **Street-Level Bureaucracy: Dilemmas of the Individual in Public Services**. New York: Russel Sage Foundation, 2010.

Marvel, J. Unconscious Bias in Citizens' Evaluations of Public Sector Performance. **Journal of Public Administration Research and Theory**, v. 26, n. 1, p. 143-158, 2016.

Mieroop, D. V.; Vrolix, E. A Discourse Analytical Perspective on the Professionalization of the Performance Appraisal Interview. **International Journal of Business Communication**, v.51, n.2, p. 159-182, 2014.

Nicholson-Crotty, S. Bureaucratic Competition in the Policy Process. **The Policy Studies Journal**, v. 33, n. 3, p. 341-360, 2005.

O'Toole Jr., L.; Meier, K. Public Management, Context, and Performance: In Quest of a More General Theory. **Journal of Public Administration research and Theory**, v. 25, p. 237-256, 2014.

Ohemeng, F.; Zakari, H.; Adusha-Karikari, A. Performance appraisal and its use for individual and Organizational improvement in the civil service of Ghana: the case of much ado about nothing? **Public Administration Development**, v. 35, p. 179-191, 2015.

Oliveira, A. Burocratas da linha de frente: executores e fazedores das políticas públicas. **Revista de Administração Pública**, v. 46, n. 6, p. 1551-1573, 2012.

Park, S. Motivation of Public Managers as Raters in Performance Appraisal: Developing a Model of Rater Motivation. **Public Personnel Management**,

v. 43, n. 4, p. 387-414, 2014.

Peretz, H.; Fried, Y. National Cultures, Performance Appraisal Practices, and Organizational Absenteeism and Turnover: A Study Across 21 Countries. **Journal of Applied Psychology**, v. 97, n. 2, p. 448-459, 2012.

Pires, J. C. D. S.; Macêdo, K. B. Cultura organizacional em organizações públicas no Brasil. **Revista de Administração Pública**, v. 40, n. 1, p. 81-104, 2006.

Pressman, J.; Wildavsky, A. **Implementación: como grandes expectativas concebidas en Washington se frustran en Oakland**. México: Fondo de Cultura Económica, 1998.

Provisional Measure No. 431 (Brazil). May 14, 2008. <http://www2.camara.leg.br/legin/fed/medpro/1996/medidaprovisoria-1548-18-dezembro-1996-371726-publicacaooriginal-1-pe.html>.

Ramos, M.; Schabbach, L. M. O estado da arte da avaliação de políticas públicas: conceituação e exemplos da avaliação no Brasil. **Revista de Administração Pública**, v. 46, n. 5, 2012.

Sabatier, P. Top-down and Bottom-up Approaches to Implementation Research: A Critical Analysis and Suggested Synthesis. **Journal of Public Policy**, v. 6, n. 1, p. 21-48, 1986.

Sabatier, P.; Mazmanian, D. The Conditions of Effective Implementation: A Guide to Accomplishing Policy Objectives, **Policy Analysis**, v. 5, n. 4, p.481-504, 1979.

Sabatier, P.; Mazmanian, D. The Implementation of Public Policy: A Framework of Analysis. In: Sabatier, P.; Mazmanian, D. **Effective Policy Implementation**: Lexington, Ma.: Lexington Books, 1981, p. 3-35.

Saravia, E. Introdução à teoria da política pública. In: Saravia, E.; FerrarezI, E. **Políticas Públicas**: Colerânia. Brasília: ENAP, 2006, p. 21-42.

Schikmann, R. Gestão Estratégica de Pessoas: bases para a concepção do Curso de Especialização em Gestão de Pessoas no Serviço Público. In: Pantoja, M.; Camões, M.; Bergue, S. (Org). **Gestão de Pessoas: bases teóricas e experiência no setor público**. Brasília: ENAP, 2010. p. 9-28.

Silva, M. Avaliação de políticas e programas sociais: uma reflexão sobre o conteúdo teórico e metodológico da pesquisa avaliativa. In: Silva, M. O. (Org.). 2. ed. **Pesquisa avaliativa: aspectos teórico-metodológicos**. São Paulo: Veras, 2013, p. 19-108.

Silveira, J.; Pinheiro, I.; Antunes, E. Critérios de Avaliação no Setor Público: um comparativo entre União X seis estados. **Revista Pensamento Contemporâneo em Administração**, v.6, n. 3, p. 53-68, 2012.

Weibel, A.; Rost, K.; Osterloch, M. Pay for Performance in the Public Sector—Benefits and (Hidden) Costs. **Journal of Public Administration Research and Theory**, n. 20, p. 387–412, 2010.

Zheng, W.; Yang, B.; Mclean, G. Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. **Journal of Business Research**, v. 63, p. 763–771, 2010.

Enrique J. Sánchez Elvira

 <https://orcid.org/0000-0002-5970-3830>

Doctor in Public Policies, Strategies and Development from the Federal University of Rio de Janeiro (UFRJ). Researcher and consultant in Political Science and Management.

E-mail: enriquesanchezelvira@hotmail.com

Maria de Fátima Bruno-Faria

 <https://orcid.org/0000-0002-4438-4857>

Doctor in Psychology and Master in Social and Work Psychology from the University of Brasília (UnB). Associate Professor III, at Federal University of Rio de Janeiro (UFRJ).

E-mail: fatimabruno@facc.ufrj.br



Brasília – 2021