

Administrative Burden Reduction Over Time: Literature Review, Trends and Gap Analysis

Morten Meyerhoff Nielsen
UNU-EGOV and Tallinn University of Technology
Campus de Couros, Rua de Vila Flor 166
4810-445 Guimarães, Portugal
+351 253 510 866
meyerhoff@unu.edu

Nuno Ramos Carvalho
UNU-EGOV
Campus de Couros, Rua de Vila Flor 166
4810-445 Guimarães, Portugal
+351 253 510 866
ramos.de.carvalho@unu.edu

Linda Gonçalves Veiga
UNU-EGOV and University of Minho
Campus de Couros, Rua de Vila Flor 166
4810-445 Guimarães, Portugal
+351 253 510 855
veiga@unu.edu

Luís Soares Barbosa
UNU-EGOV and University of Minho
Campus de Couros, Rua de Vila Flor 166
4810-445 Guimarães, Portugal
+351 253 510 851
barbosa@unu.edu

ABSTRACT

Burden reduction is a key issue in modern public administrations' and businesses' agendas. Compliance with mandatory regulations can have a direct impact on a country's economic performance, growth, and development. Research in this area, contributes to a better understanding of the implications and context of administrative burden, and increases the efficiency of the strategies adopted to reduce it.

The goal of this study is to undertake a review of the current state of the art on Administrative Burden Reduction (ABR), in order to gain a deeper insight about the subject, identify current gaps, and better plan for future research. A total of 122 papers were identified as relevant, out of a pool of 742 papers retrieved from the current literature. The relevant papers were analyzed across four dimensions: methodology, type and focus, and targeted stakeholders. Three key gaps were identified and discussed in relation to: citizen orientated services and burden reduction; empirical research and post-initiative re-evaluation; and, the role of stakeholders, interest groups and end-users in driving ABR. Lastly a conceptual framework model and next steps are proposed.

CCS Concepts

• Applied computing~E-government

Keywords

Administrative burden reduction; red-tape; public administration; trends; literature review; research gaps; state of the art

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ICEGOV '17, March 07-09, 2017, New Delhi, AA, India
© 2017 ACM. ISBN 978-1-4503-4825-6/17/03...\$15.00
DOI: <http://dx.doi.org/10.1145/3047273.3047334>

1. INTRODUCTION

Bureaucracy. Red-tape. Administrative burden. The semantics vary, but essentially Administrative Burden Reduction (ABR) encompasses the costs to citizens, businesses, and institutions of complying with government regulations. Information and communication technologies (ICT) and thus electronic (or digital) government (eGovernment) and governance (eGovernance), plays a relevant role in current approaches for reducing burden compliance on businesses, citizens and institutions [58].

Although there is an extensive body of literature on the subject, there is still room for improvement, in particular on a number of specific sub-topics. The overarching goal of this paper is to gain a deeper insight in the literature and to identify which sub-topics in ABR require further attention. This implies identifying trends and patterns in the current literature, as well as analyzing case studies, and performing comparative analysis. Determining which models (in particular, with respect its quantification) are most popular in modern approaches to ABR is also a purpose of this study. The body of literature analyzed spans from January 1970 up to May of 2016.

The paper is structured as follows: Section 2 introduces some background and definitions; Section 3 describes the methodology used in this study; Section 4 highlights key findings of particular interest; Section 5 discusses the gaps identified in Section 4 in more detail, including the discussion of a conceptual model; Section 6 concludes with a number of closing remarks and explains how the identified gaps will be addressed in future work.

2. BACKGROUND AND DEFINITIONS

For the purpose of this paper administrative burden is defined as *the cost to business or citizens of carrying out administrative activities that they would not carry out in the absence of regulation, but that they have to undertake in order to comply with it* [43]. The exact meaning and semantics of the term may vary from one context to another but the broad definition above is generally agreed upon.

ABR is generally associated with regulations. Merriam-Webster [38] defines regulation as *the act of regulating, i.e. an authoritative rule dealing with details or procedure, a rule or order issued by an executive authority or regulatory agency of a government and*

having the force of law. Put simply, regulation is introduced to achieve a given objective or outcome.

The cost associated with administrative burden can be divided into two general types: administrative and compliance costs. Generally, they are defined as *the costs to business or citizens of carrying out administrative activities in order to comply with regulations that impose information obligations (IOs)* [43]. IOs require businesses or citizens to provide information to government to demonstrate that, and how, they are complying with a given regulation. This means that administrative and compliance cost is also associated with the access to public services and their delivery, e.g. registering an address, a vehicle, marriage, or applying for an ID card, a pension or a building permit. So, while administrative costs include the administrative activities that businesses would choose to continue doing even in the absence of regulation [58], compliance cost is defined as *the total costs incurred in complying with a given regulation* [43].

It should be noted that, in academic circles, there is neither a clear definition of ‘costs’ (e.g. whether they should include discretionary tax planning costs) nor what allowance should be made for the monetary value of time, for example, employees’ taxes withheld at source and therefore available to business for their use before having to be remitted to revenue bodies [43]. There is, however, a common and expanded concept of ‘cost’ associated with ABR, which has emerged from different research efforts. It considers all learning, psychological, and compliance costs that citizens and businesses face when interacting with the public sector [23, 58]. This broader definition of costs therefore applies to any situation in which public authorities regulate private behavior, or structures, in relation to IO as well as public service delivery (PSD). Learning costs by contrast result from the time spent acquiring information about public service requirements and determining their relevance. Psychological costs in turn are associated with the stigma of participating in unpopular programs [22].

3. METHODOLOGY

This literature review is based on a systematic review methodology [31]. This section describes the procedural steps of the method used.

First (step 1), a number of research papers were identified and collected. In order to bootstrap the set of papers during this stage, a query was devised and applied to the search engine of the Scopus database¹. Scopus was chosen as it is one of the largest multi-disciplinary database of peer-reviewed literature including more than 60 million scientific journals, books and conference proceedings in fields such as public administration, political science, eGovernment, computer science, and management research.

The following query was used for the period 1 January 1970 to 31 May 2016:

TITLE-ABS-KEY(
"administrative burden" OR
"administrative simplification" OR
"regulatory burden" OR
"regulatory simplification")

This query searches documents that contain one of the terms ("administrative burden", "administrative simplification",

"regulatory burden", or "regulatory simplification"), in the title, in the abstract, or in the authors’ keywords set. The query was limited to the following subjects: "Social Science", "Engineering; Business, Management and Accounting", "Economics, Econometrics and Finance", "Environmental Science", "Energy", "Computer Science", "Decision Sciences", "Arts and Humanities", and "Multidisciplinary". The query returned a total of 742 publications.

Second (step 2), the 742 publications identified in step 1 were screened. Based on a manual screening each paper’s title, abstract, and authors keywords list were reviewed to determine whether it could be relevant, or out of scope, for the topic at hand. The subsequent list of publications deemed relevant consisted of 122 papers, i.e. 16.44% of the initial total number originally identified in step 1.

Third (step 3), the 122 papers deemed relevant in step 2 were reviewed. Unfortunately, 25 of the identified papers, i.e. 3.67% of the total or 20.49% of the relevant papers, were not publically available and, thus, could not be reviewed. The remaining 97 papers were reviewed and tagged according to the key aspects described in table 1. The tags emerged from the review of the literature and are based on the clusters identified in it. Similarly, a process of “berry picking”, was applied in step 3 to ensure that publications deemed out of scope, irrelevant or of low quality were eliminated [62]. The final set yielded 97 papers. Section 4 below describes some insights and conclusions concerning this data.

Table 1. Tags used for summarization

Methodology	Qualitative, Empirical or Theoretical
Type of study	Single or Comparative
Sector, policy or topical focus	Education, Growth, Business, Participation, Corruption, Innovation, Environment, Health or Tax
Targeted stakeholder and end-users	Institutions i.e. authorities and employees, Business incl. stakeholders and interest groups, Citizen incl. stakeholders and interest groups

Four (step 4), involved the discussion among the research team about the relevance of each paper identified, thus constituting a second round “berry picking” [62]. The “berry picking” did not lead to the exclusion of any of the previously identified papers leaving the final tally at 97 papers. Section 4 highlights the key topics of discussion, patterns and trends observed as well as the research gaps identified in relation to ABR.

4. FINDINGS

To structure the findings of the literature review section 4 summarizes the different areas of interest. Section 4.1 provides an overview of identified publication patterns while section 4.2 presents a summary of the main methods used in the ABR literature. Sections 4.3 and 4.4 in turn identify main themes covered in the literature and categorize them in terms of the key dominating

¹ Available from: <https://www.scopus.com/> (Last accessed: 31-08-2016).

topical sectors, stakeholders and end-users covered by the reviewed ABR literature.

Based on the general patterns identified, the authors have categorized the analyzed literature by overarching sectors and addressed stakeholders (see also table 1, section 3). Where multiple sectors, stakeholders and end-users are analyzed in a given study, each individual paper was tagged accordingly.

4.1 Publication Patterns

As illustrated in figure 1, ABR as a research area emerged in the 1980s with studies for example on red tape [22], or on frameworks for analyzing the effects of regulatory burdens [60]. The 1990s saw a steady stream but relatively low number of publications. Typical sectorial studies began to loom, for example on medical care programs [50]. Beginning with Silverstein publication in 1997 [50], the topic of ABR gathers pace and reaches its largest number of publications in 2015.

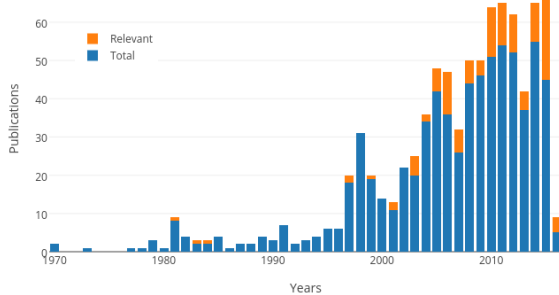


Figure 1. Number of relevant publications identified out of total publications by year (1 January 1970 – 31 May 2016)

Between 2000 and 2015 the review shows a steady growth in publications looking at the topic of ABR. Figure 1 also shows that the number of papers found relevant during this review is fairly consistent during the analyzed period. The study of the burden generated by taxes by Bannock [8], or of the links between business ownership and business complexity by Stel and Stunnenberg [55] are examples of studies in the early stage of this period. The link between corruption and burden by Duvanova [18], or the analyses of quantification trends concerning ABR by Voermans [61] are examples of studies in the latter part of this period. The number of publications for 2016 seems low, but is a natural result as the literature review only covers the first 5 months of this year.

The focus on ABR, and associated topics, is exemplified by the set of key words used in the period of analysis, as illustrated by the word cloud in figure 2. The word cloud was computed using the frequency of the words found in the abstracts of the papers marked as relevant during the review (a total of 122 papers); the higher word frequency the bigger the font size. The most prominent words found: “administrative”, “regulatory”, and “burden” help to sustain the claim that the pool of selected papers is directly related with the focus of the study at hand.



Figure 2. Word cloud of words found in relevant papers' abstracts, by frequency (bigger font size implies higher frequency).

4.2 Methodology Patterns

Three main methodologies are found to dominate ABR research: classical qualitative studies, often single or comparative case studies; empirical analyses focusing on either single cases or large panels with multiple countries; and, theoretical work. While many researchers use a mixed method approach, the following analysis categorizes the literature by the dominating methodology in each of the relevant papers.

When reviewing the relevant publications, it becomes clear that most of the studies used qualitative (38.6%) or empirical (33.7%) methodologies, as illustrated in figure 3. However, a quarter of the research analyzed consists of theoretical assessments (27.7%).

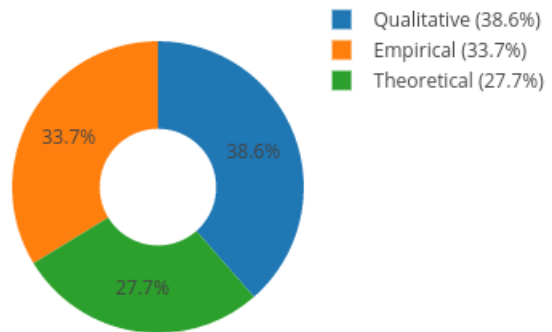


Figure 3. Prevailing methodologies used as a percentage of relevant papers identified (1 January 1970 – 31 May 2016)

Looking at the prevailing methodologies used in five year intervals, it becomes clear that the theoretical potential of ABR dominated from 1995 till around 2004. Between 2005 and 2009, the research focus changes and becomes dominated by qualitative case studies, after which empirical anchored research takes a lead. However, in 2015 and 2016 qualitative research once again takes prominence and dominates published ABR research. As illustrated in figure 4, it is difficult to draw conclusions on the prevailing methodologies used over time. That said, it is clear that, the literature and research initially focused on the theoretical promise of ABR, moved on to qualitative case studies once the result of actual ABR initiatives emerged to an increased focus on the actual effects as empirical data became more available from 2005 onwards.

An analysis of the literature also highlights that empirical studies rely on a number of key data sources. This includes international

institutions like the World Bank, OECD and European Union and are exemplified by studies such as [11], [61] and [34] respectively. Similarly, single case studies focus largely on national or single organizational data. Such is the case of the empirical study by Adams and Gramlich concerning regulatory burden on banks establishment in the US [1], or of the study of administrative requirements in the Swedish sea shipping industry by Österman and Hult [48].

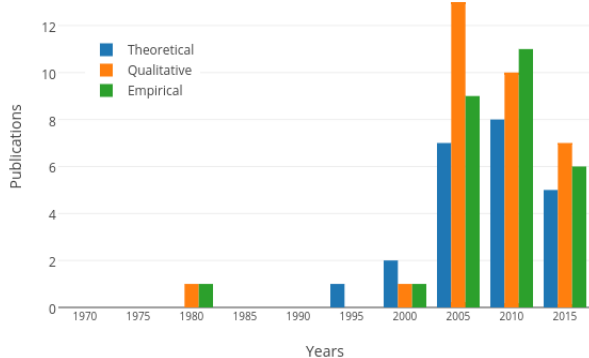


Figure 4. Main methodology used by the relevant papers identified in five year intervals (1 January 1970 – 31 May 2016)

Another interesting aspect in the analysis of the relevant literature is the prevalence of the Standard Cost Model (SCM) [39] within empirical studies. The Dutch government pioneered the ABR process and the SCM model by committing to reduce administrative burden in the Netherlands by 25% between 2002 and 2006. Countries like Denmark and the UK rapidly adopted similar procedures [30], as did Portugal [45], Germany, France, Italy and Spain [36] and by December 2016, 17 European countries had adopted the SCM model [63].

In contrast, 2.86% of the papers analyzed, or 7.14% of empirical studies, use the SCM model – mainly from 2010 onwards, highlighting the influence of the Dutch government’s work in the area [63]. The analysis of the long-term impact of ABR initiatives is nonetheless limited. This is particularly relevant as the SCM essentially is an ex-ante (i.e. forecast and estimate) and ex-post (i.e. actual) model and seems to be missing a post-ABR initiative evaluation (i.e. x years after change). Voermans [61] does look at the quantification of ABR, and various studies analyze changes over time [11]. While individual country studies [41, 45, 46, 63], policy and project type reports on ABR are aplenty – e.g. OECD [42–44, 46, 47] and WiFo [63] – little is available on the specific ABR initiatives and whether the initial benefits are eroded by subsequent regulatory.

The literature review also reveals that the majority of case studies focus on a single country and/or organization (63.2%) with a mere third (36.8%) comparing two or more countries, as illustrated in figure 5.

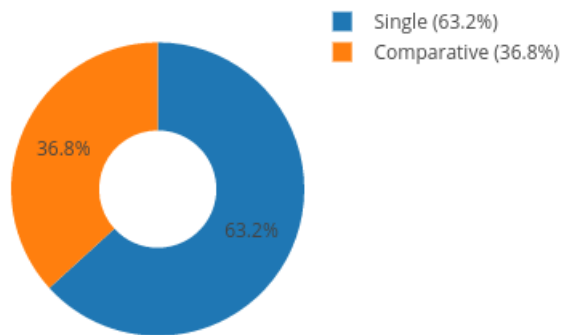


Figure 5. Type of studies as a percentage of relevant papers identified (1 January 1970 – 31 May 2016)

Figure 6 breaks down data in five year intervals in relation to the type of studies prevailing in the academic ABR literature. In all periods, single case studies represent at least one third of the papers. The only exception is the period 2005-2009, where the number of single and comparative ABR studies published was the same (i.e. 12). By comparison, a high number of comparative cases studies are based on big empirical datasets from international organizations, and cover a relatively large number of countries.

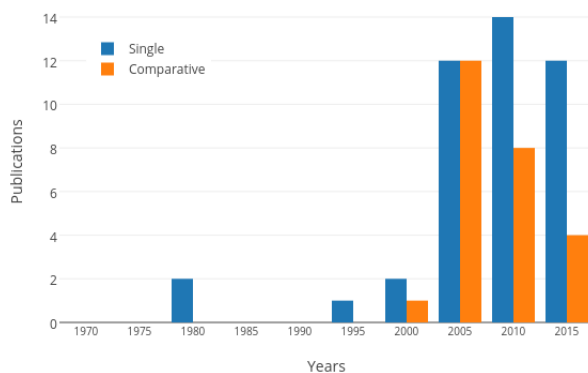


Figure 6. Type of studies as a number of relevant papers identified in five year intervals (1 January 1970 – 31 May 2016)

The review highlights the existence of a relative gap in current research in terms of empirical and comparative studies of ABR.

4.3 Topics Covered Over Time

An analysis of the most recurrent topics of research since 1 January 1970, shows that ABR for business (43.5%), economic growth (21.7%), and tax (15.2%) dominate. A related, but secondary topic is innovation, which represents 3.26% of the papers.

Figure 7 also shows that research on ABR in public health represents a significant share (7.61% of the total). Most of the studies are carried out in a US context, namely on *Medicaid* [23] and *Medicare* [51, 53]. However, there are also examples of ABR in healthcare provision in Chinese cities [24]. By contrast, participation (2.17%) covers a broad spectrum of studies, e.g. optimization of electoral processes [12], increased transparency and decision making in general [25, 52, 60].

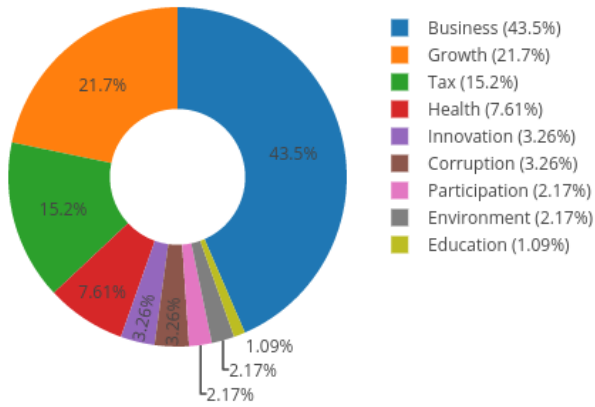


Figure 7. Topics covered by papers as a percentage of total relevant papers identified (1 January 1970 – 31 May 2016)

Splitting the data into five year intervals, as illustrated in figure 8, confirms that the main topics of research since 2000 have consistently been on three interrelated clusters, i.e. growth and job creating initiatives (growth), the easy of doing business and attracting investment (business), and tax regulations (tax). Innovation and health related ABR have also received considerable attention since 1980.

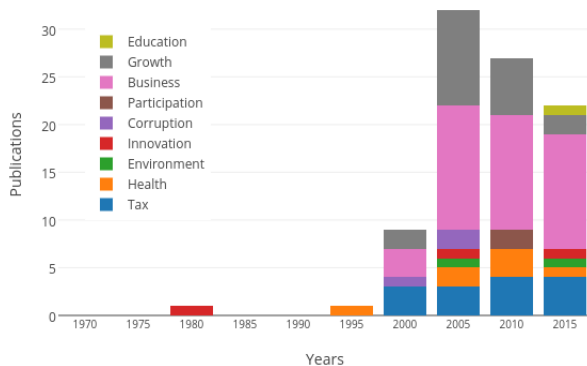


Figure 8. Topics covered by the relevant papers identified five year intervals (1 January 1970 to 31 May 2016)

In relation to ABR, research on economic growth and job creation (i.e. growth), three sub-domains of research are identified: studies on employment regulations [32], on the effects of eGovernment and cost-effectiveness [14], and on changes in regulation targeted at small firms [3]. Other areas of research relate to innovation [20] are funding options [22], ICT and infrastructure enabled ABR back-office [7, 64], and front-office redesign, reengineering and reorganization [4, 6, 28, 40].

Regarding the impact of ABR initiatives on increasing the ease of doing business (i.e. business), most studies focus in Eastern European [18, 32, 54, 59], and Northern European countries [6, 9, 10, 26, 52]. However, there are also case studies for East Africa [35]. Other areas of interest include ABR measures to attract foreign direct investment [13] and to facilitate corporate investment decisions [15].

Tax related ABR research focused largely on corporate and value added taxes (VAT), and tariffs hindering trade and growth. Interesting studies include the combination of regulator simplification and the use of ICT within and across countries [2, 11, 14, 37], the impact of abolishing VAT [8], and tariffs in Nepal [49]. Similarly tax legislation, technology use, and ABR has also

been linked to anti-corruption research in a global context [19, 57], with a study of 118 countries finding that high levels of regulation reduces transparency, while increasing corruption [17]. By comparison Thießen [56] attempted to measure the size of the shadow economy in Ukraine with the aim of formalizing these economic activities, thus decreasing the potential need for regulation to improve tax collection and minimizing the risk of corruption in the public sector.

In turn, research focusing on citizen related tax regulation is limited. The OECD has carried out research on how to reduce administrative burden on citizens in general [42], and in specific countries, namely Portugal [45]. Other service areas analyzed include the use of tax credits in the US, to increase healthcare access and coverage for low-income households [16, 21], or streamlining the Australian code for income tax [29].

With the exemption for tax and health regulations (mainly in a US context) the literature review implemented revealed a clear gap in ABR research on citizen orientated services areas and access to public services. Similarly, the review points to the existence of a research gap in relation to the United Nations' Sustainable Development Goals (UN SDGs) such as: education, sustainability, environmental protection, participation of vulnerable groups, transparency and anti-corruption.

4.4 Stakeholders and End-users Addressed in Research

From the literature review it becomes clear that three main stakeholders and target groups can be identified: Institutions themselves, the private sector or businesses, and citizens. Each stakeholder group can be either the instigator of change or impacted by ABR.

An analysis of the targeted stakeholders and end-users, shows that most of the addressed stakeholders are institutions (56.4%), followed by businesses (36.4%). Only a residual set of papers is centered on citizens (7.27%). This is shown in figure 9.

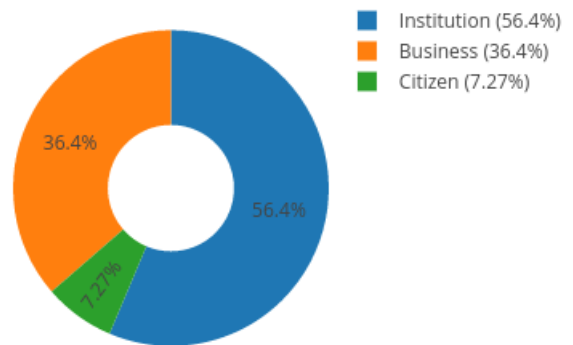


Figure 9. Targeted stakeholders and end-users as a percentage of relevant papers identified (1 January 1970 – 31 May 2016)

Figure 10 illustrates the distribution of papers per targeted stakeholder in five year intervals. The number of studies focusing on ABR for business increased around 2005, and kept stable thereafter. However, the focus on institutions also increased around 2005, but has been decreasing since then. Interest in citizens as end-users affected by ABR picked up around 2010, but the focus on these stakeholders is relatively low and remains relatively consistent over time.

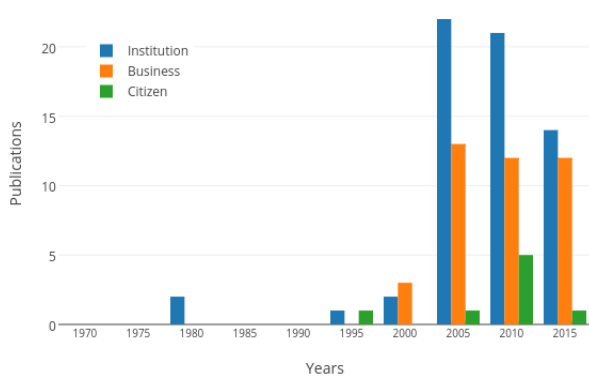


Figure 10. Targeted stakeholders and end-users as a number of relevant papers identified in 5 year intervals (1 January 1970 – 31 May 2016)

The literature review clearly shows the existence of a gap in relation to ABR research focusing on citizen as end-users or stakeholders. Similarly, the role of politicians, civil servants, stakeholder organizations and non-governmental organizations (NGOs), experts and academia is not well researched. This finding points in the same direction as the citizen orientated public sector services delivery gap identified in section 4.3.

5. GAPS AND CONCEPTUAL FRAMEWORK

To summarize the review findings, figure 11 illustrates an overview of the analysis discussed in the previous sections, organized by methodology, type of study, focus, and targeted stakeholders and end-users identified in section 4. Note that each of the four quarters (i.e. Type, Focus, Stakeholders and Methodology) of the figure 11 are a representation of all the literature reviewed. That is, each quarter represents 100% of the readings analyzed.

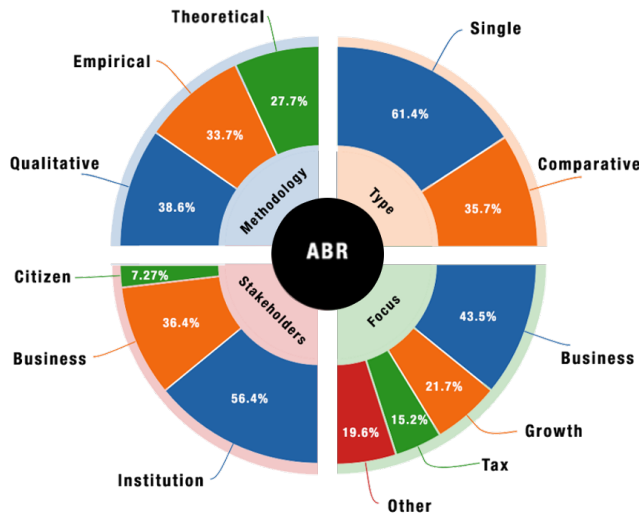


Figure 11. Overview of the relevant papers analysis, across the four analyzed dimensions (1 January 1970 – 31 May 2016).

This analysis identified three key gaps:

1. A relative lack of empirical evidence, of cross-organizational and cross-country comparisons, drawing good practice conclusions.
2. A limited focus on ABR initiatives benefitting citizens, citizen orientated public service delivery and access, as well as addressing the UN SDGs.
3. The role of stakeholders, interest groups and end-users in shaping and influencing ABR, either by proposing, instigating or driving ABR initiatives.

More empirical and comparative research and analyses on the impact of ABR initiatives would therefore be both prudent and beneficial. This is particularly relevant for post-ABR implementation, e.g. 2, 5 or 10 years down the line, to determine whether initial benefits have disappeared as regulation is changed and added over time. Similarly, the lack of cross-organizational and multi-country comparisons means that policy prescriptions on good practices cannot be drawn from the research reviewed.

With the exception of tax and health regulations (mainly in a US context), only limited ABR research has been conducted in areas directly benefitting citizens. This is particularly relevant for citizen orientated service delivery and access to public services where aspects such as personal and proactive service delivery, and channel strategies resulting in ABR have received little attention within the field². To a lesser extent this also holds true in terms of ICT enabled back office reorganization, reengineering and automatization [5]. Finally, a similar observation is justified with respect to the lack of research addressing the UN SDGs in relation to education, sustainability, environmental protection, participation of vulnerable groups, transparency and anti-corruption.

Additional research questions arise from the fact that ABR does not take place in vacuum, but is shaped and defined by the context in which it takes place. For instance, what has been implemented in one setting, and the subsequent, resulting reduction in administrative burden may not work in another. This points to the role of similarities and differences in legal and administrative systems, cultural attitudes, practices and norms. The question is, therefore, which contextual factors and stakeholders are involved in and influenced by ABR initiatives? And how does this affect the process, type of ABR initiatives and results achieved?

There are many reasons for introducing, or adapting regulations, including the ability to achieve a given aim, e.g. avoiding or facilitating an objective or outcome previously identified. This could be, for instance, in the tax collection domain, the set of information, data and statistics used for knowledge and decision-making, environmental or consumer protection, economic growth and job creation.

To address the three gaps identified and to fully understand the ABR environment, or ecosystem, an adapted version of Krimmer's conceptual model is proposed, and illustrated in figure 12 [33]. For the purpose of future research, such a model consists of four main macro dimensions, namely, the legal, political, social and technology dimensions. Each of them explains a key area, which influences the ABR processes, choices and outcomes.

As a context, content, process model (CCP model) the legal dimension essentially consists of the constitution, laws and governmental regulations, which jointly shape the process of

² However, these topics have been the focus of several papers in the public service delivery research area [34].

governing society. The legal dimension generally shapes the way and manner in which ABR may be implemented. The political dimension includes administrative and governance models, discussion around ABR and for what purpose it is implemented. The social dimension covers the potential impact and influence on society. Finally, the technological dimension covers issues such as the availability and organization of suitable supporting technical infrastructure underpinning the type of ABR initiatives in place, such as back office automatization of processes, digital by default, once-only principle, online accounting systems, online information trails, pro-active and personal online service delivery [33, 40].

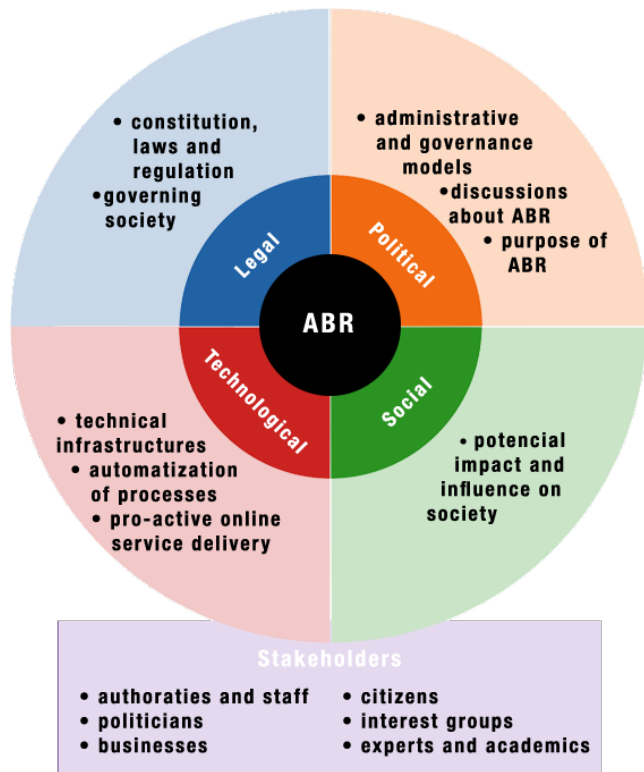


Figure 12. Conceptual model.

The model has a micro dimension related to the actual ABR initiatives and outcomes, i.e. specific service areas influenced by ABR [33]. It also includes the stakeholders who shaped and influenced the dimensions considered, which, for the purpose of this paper, are identified as:

- Authorities and staff who propose, implement and ensure compliance with regulations;
- Politicians who react to issues and establish the objectives to achieve (e.g. tax collection, protection of a group, industry or the environment);
- Businesses who have to comply with regulations or may suggest regulatory changes;
- Citizens who react to an issue (e.g. consumer protection, safety, environmental protection);
- Interest groups such as consumer protection groups, employees' and employers' organizations (e.g. trade unions and business associations), single issue organizations (e.g. environmental protection groups or senior citizen groups);
- Experts and academia (e.g. topical or sectorial experts).

The combination of the qualitative, explorative with-in case methodology enables the conceptual framework to underpin both the current single case analysis and the planned cross-case comparison.

6. CONCLUSIONS

As ABR operates in a given context, and contexts may vary, there is a need to redefine the ways governments and authorities address bureaucracy, red-tape and administrative burden. This includes the different levels of government and the increasing relevance of non-state actors and mixed, heterogeneous civic networks. In such a context, governmental agencies, at all levels, are regarded, more than ever, as public-service centered and are assessed on their abilities to deliver better, more personal, value adding services. This puts extra emphasis of the potential of ABR in public sector innovation and transformation.

To address the three key gaps identified in section 4 and the need for a conceptual model highlighted in section 5, the Electronic Governance for Administrative Burden Reduction project at the United Nations University Operating Unit on Policy-Driven Electronic Governance (UNU-EGOV) will draw on the findings of existing research and practical experience to develop a framework and toolkit. This work will also revisit existing framework for ABR, ICT facilitated innovation [27, 58]. The framework and toolkit will be tested in a number of dedicated case studies and pilot-projects and adjusted as required. The framework, case studies and pilot-project experience will be published subsequently.

7. ACKNOWLEDGEMENTS

This paper is a result of the project "SmartEGOV: Harnessing EGOV for Smart Governance (Foundations, methods, Tools) / NORTE-01-0145-FEDER-000037", supported by Norte Portugal Regional Operational Programme (NORTE 2020), under the PORTUGAL 2020 Partnership Agreement, through the European Regional Development Fund (ERDF).

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