Itineraries of CiRM scientific production: What do researches say about the effectiveness of Citizen Relationship Management?

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ITINERARIES OF CiRM SCIENTIFIC PRODUCTION: WHAT DO RESEARCHES SAY ABOUT THE EFFECTIVENESS OF CITIZEN RELATIONSHIP MANAGEMENT?

1. INTRODUCTION

According to Lara and Gosling (2016), the Directive Plan for the Reform of the State Apparatus, published in 1995, guided the State Reform in Brazil in the 1990s. For (Bresser, 1996), such reform was based on the Managerial Public Administration principles as a response to two phenomena that have been pushing States to redefine their duties worldwide: the crisis on the role of the State seen in the 1980s and the economy globalization.

Bresser (2010) suggests that the increase in State service costs contributed for the adoption of the Managerial Reform guidelines so that the States become more efficient and for legitimizing the Welfare State initiatives as to face the neoliberal movement. In this context, Abrucio (1997) states that the emergence of the New Public Management was due to the Bureaucratic Model limitations and has been originally implemented in the Great-Britain, United States, Australia and New Zealand.

Thus, the administrative reforms helped developing new discourses and practices inspired by the public sector, that became benchmarks for public institutions in different government levels. In this sense, the Public Administration started implementing productivity mechanisms, service-oriented actions, administrative descentralization, efficiency on service delivery, service improvement, marketization and accountability (Secchi, 2009).

Further, the use of information and communication technologies in the public service delivery, known as electronic government, has been seen as an important movement in the Public Administration in the late 1990s. These tools simplify the access to information and public services offered to citizens, enterprises and public employees, improving service quality and generating costs reduction (Demo & Ponte, 2008; Lara & Gosling, 2016).

Therefore, this new government environment enabled the emergence of electronic government and informatization of internal processes in the Public Administration, which help improving the relationship between State and citizens (Ponte, 2015). Thus, with a more dynamic relationship, the citizen more often provides information to the Public Administration, through internet-based service platforms, call-centers, one-stop shops and through the traditional administrative routines (Xavier, Gouveia, & Gouveia, 2003).

In the private sector, the information technology tools had already been used as a strategy to obtain information for improving and integrating people, operations, processes and competences, in various functions and organizations by the implemention of Customer Relationship Management – CRM. Such managerial approach is used by companies to establish more effective commercial strategies and to build long-term relationships with clients (Duque, Varajão, Vitor, & Dominguez, 2013).

In this sense, Xavier et al. (2003) state that the Citizen Relationship Management – CiRM or CzRM can be considered the CRM applied to citizens. Although there are major diferences between both models, the relationship between the State and citizens are more complex. Based on this historical process in the Public Administration and the use of CiRM models, due to its potential to improve service delivery and quality, service image, as well as to promote citizenship, this study set the following question: how is the international scientific production on CiRM outlined?

Thus, this research aims at mapping the international scientific production on Citizen Relationship Management. Medeiros and Demo (2018) identified the national production on the subject and pointed the need to map the international production on CiRM. The purpose of

this study was to fulfill this gap and evolved by broadening the previous review, focusing on the international production, which includes Brazil. In this sense, we hope to have contributed to consolidating the researches focused on the citizen relationship management.

2. THEORETICAL FRAMEWORK

Companies want to know their clients' buying habits, in order to increase loyalty, to boost sales, to segment clients and, thus, expand revenues. Advances in technology favored the adoption of Customer Relationship Management – CRM as a tool to streghten the relationship between clients and organizations. CRM emerged in the private sector (Kavanagh, 2007), based on seminal studies by Vavra (1993), McKenna (1997) and Morgan and Hunt (1994), which evolved to the concept proposed by Payne (2012), as a holistic strategic approach to manage the relationship with clients, combining the strategies of relationship marketing with the information technology potencial.

Nevertheless, Kavanagh (2007) argues that citizens interact with the government through different channels: websites, service counter, post, call centers or in-person service, where each interaction will result in different service experience. Thus, the author believes that the use of CRM in the public sector has a major potential to governments.

Further, the need to provide quality public services similar to the service offered by the private sector pushed governments to generate social value to the service provision, while companies are focused in making profits. Thus, the CRM components are similar to those of CiRM, with different perspectives in terms of profits and public value (Al-Khouri, 2012; Fiľa, Schwarczová, & Mura, 2015; La Falce, Muylder, Pressot, & Toivanen, 2015).

However, while CRM has its origin in the business environment, for generating strategic competitive advantage, the CiRM aims at improving the relationship between government and citizens (Mostafa, Mohammad, & Seyed, 2011). In this sense, the main purpose of CiRM is to help changing the self-reference approach of governments into a citizen-centered strategy. Thus, the State pursues a holistic view of the public policy formulation cycles, in order to obtain legitimity of leaderships, efficacy results or by generating consensus in terms of government vision (Mostafa et al., 2011).

The change of the governamental approach as to consider the citizen as clients may be considered a turning point in the process of implementing the CiRM in the Public Administration, although citizens have a multifaceted relationship with the government that goes beyond the idea of being a regular service consumer. This new perception towards citizens encouraged public entities to better assess the service demands and to implement the CiRM model in order to reduce operational costs, to manage complaints and to reduce the response time to citizens (Demo & Pessôa, 2015; Kavanagh, 2007).

For Keramati, Saremi and Mofrad (2012), there are important differences between CRM and CzRM, since citizens are obliged, to some extent, to use services that are monopolized by governments, whereas in the private sector the goal is to maximize profits based on client's attraction and loyalty. Thus, the improvement of the relationship between governments and citizens, by enhancing the government responsiveness to social demands and developing pro-active citizens, contributes to strenghen citizenship. It also contributes to improve the government image, since the society, ultimately, is the owner of the Public Administration (Silva & Batista, 2007).

The growing consuming experiences concerning both the convenience to purchase products, as well as the access to services in the private sector, supported by technological advances, has encouraged the society to demand efficient public services. This scenario has also expanded service availability and loyal interaction between government and citizen (Duque

et al., 2013; Fiľa et al., 2015). On the other hand, governamental structures may face significant demographic changes, associated to the expansion of the society's technological knowledge and unwillingness to pay taxes (Bresser, 2017; Fiľa et al., 2015).

In this context, the adoption of managerial tools by the Public Administration may be seen as a result of the need to balance public finances, to support the tax role and to deliver public services with the same efficiency of the private sector. This dynamics requires a State-citizen relationship based on the necessity to legitimize the state functions (Abrucio, 2007; Bresser, 2001, 2017; Fiľa et al., 2015; Silva & Batista, 2007).

In this perspective, the CiRM emerges to help improve service, quality in delivery, efficiency and to meet the citizen's real needs. Further, it contributes to promote citizenship and to improve the image/reputation of public services in general (Demo & Pessôa, 2015; Schellong, 2008). Therefore, the Public Administration should be concerned about responsiveness, regularity, consistence and availability to public services in all service channels available for citizens (Fiľa et al., 2015). Hence, the CiRM can be defined as a strategy that aims at creating and supporting long-term and fruitful relationships between State and citizens (Duque et al., 2013).

In this context, the use of information technology helped expand the government/citizen interaction, promoted transparency and provided public managers with information and the citizen's perception regarding their relationship with the State (Demo & Pessôa, 2015; Lara & Gosling, 2016b; Mostafa et al., 2011). In Brazil, the citizen-centered government performance has included initiatives such as government websites, one-stop shops, call centers and social media for citizen communication (Lara & Gosling, 2016b).

This new relationship between government and citizen requires the establishment of digital plataforms, for providing self-service tools with lower costs, reducing service time and exempt citizens of unecessary displacements for ordinary transactions such as tax debits statement of traffic tickets issue. Thus, the provision of self-service facilities by the public sector is similar to those offered in the bank sector, as pointed by Abensur, Brunstein, Adalberto and Ho (2003).

According to Kavanagh (2007) and Ponte (2015), a successful CiRM strategy is only achieved by commited public employees in providing good service and through processes that generate public value to citizens. In this regard, according to Ponte (2015), the Public Administration should allign the strategy to the citizen needs by integrating technological tools with organizational design and public employees. The creation of a strategic plan based on the citizen needs can be achieved by converging governments and citizens enabled by CiRM.

Andrade (2013) and Ponte (2015), in turn, add that the CiRM has been strenghtening for over a decade with successful cases in social and political systems, but with several unsuccessful attempts, since governments are not able to provide quick answers to demands and needs of public services. Thus, studies focused on CiRM has consolidated over time, either through researches on governamental ombudsman (Lara & Gosling, 2016a); assessment of citizen's satisfaction (Ghodousi, Alesheikh, & Saeidian, 2016); development of seminal citizien relationship scale (Demo & Pessôa, 2015); reviewing of the national production (Medeiros & Demo, 2018); assessment and implementation in municipalities (Duque et al., 2013; Eslami, 2012; Keramati et al., 2012); proposition of CiRM models (Al-Khouri, 2012; Lara & Gosling, 2016b; Pollard, Young, & Gregg, 2006); or by studying the impact on the government perception (Silva and Batista, 2007).

In short, it is clear that the Citizien Relationship Management has become relevant among public organizations as an alternative to face challenges in terms of representativeness, State legitimation and in offering public services in consumer societies. This phenomenum in the Public Administration has been subject to academic studies, which has contributed to deepen researches in order to understand and strenghten the use of CiRM models.

3. METHODOLOGICAL ROUTE

The present research has a descriptive nature, with qualitative approach and aims at portraying the scenario of the CiRM international scientific production, as a means to fulfill the gap in the literature pointed by Medeiros and Demo (2018). This study was performed through bibliometric research and systematic literature review. Document database collection and quantitative techniques of descriptive statistics were used for data analysing. According to Araújo (2006), the bibliometric review is an important qualitative research method for assessing academic production and scientific communication in a certain area of knowledge.

Thus, in June 2019, scientific publications on CiRM were searched in two important scientific databases: Web of Science and Scopus, that are considered the two major databases in Administration Chadegani et al. (2013). For the articles selection, the keywords "CzRM", "CiRM" and "Citizen Relationship Management" were used, with the Boolean operator "OR". The researches opted not to limit the analysis period, since the research subject is new, and the search filters used were "articles" as the type of publication and Management, Business and Public Administration for the knowledge area.

From this research, 11 articles were identified in the Web of Science database and 15 in the Scopus database, totalling 26 documents. After excluding duplicated articles, the data were tabulated and summarized for the analysis of the 19 articles considered for the present research, based on the systematic review protocol proposed by Crossan and Apaydin (2010).

For the data tabulation, the software VOSviewer 1.6.11 was used to proceed with the descriptive analysis of the articles, of those journals with more publications on the subject and highest number of citation; from the countries with more publications and more often cited; of the authors with larger number of publications; of the articles with highest number of citation, which have been summarized to highlight the state of the art of the subject; assessment of bibliographic coupling that shows through network the connection between peer publications with common cited references; and the elaboration of a word cloud of the terms used in the articles summaries (van Eck & Waltman, 2010, 2017). Also, the *Microsoft Excel* 2007® was used for data tabulation, the Wordle.net to create the word cloud, the wordcounter360 to count the words and the Google Scholar to proceed with additional verification of the cited articles.

4. RESULTS AND DISCUSSION

The search for the articles with focus on CiRM was conducted in the Web of Science and Scopus databases, the main scientific databases in Administration (Chadegani et al, 2013). In this search, 17 international journals were found, from 11 countries. These studies were developed by 32 research institutions, distributed in 8 countries, including Brazil. In the process of systematic investigation, 19 articles were found, being 2013, 2015 and 2016 the years with higher number of publications, as presented in Figure 1. However, limited scientific production and relatively stable pattern regarding publications were identified. It was noted that no publications were found in the last two years (2018 and 2019, until June) and that 2017 presented only one publication.
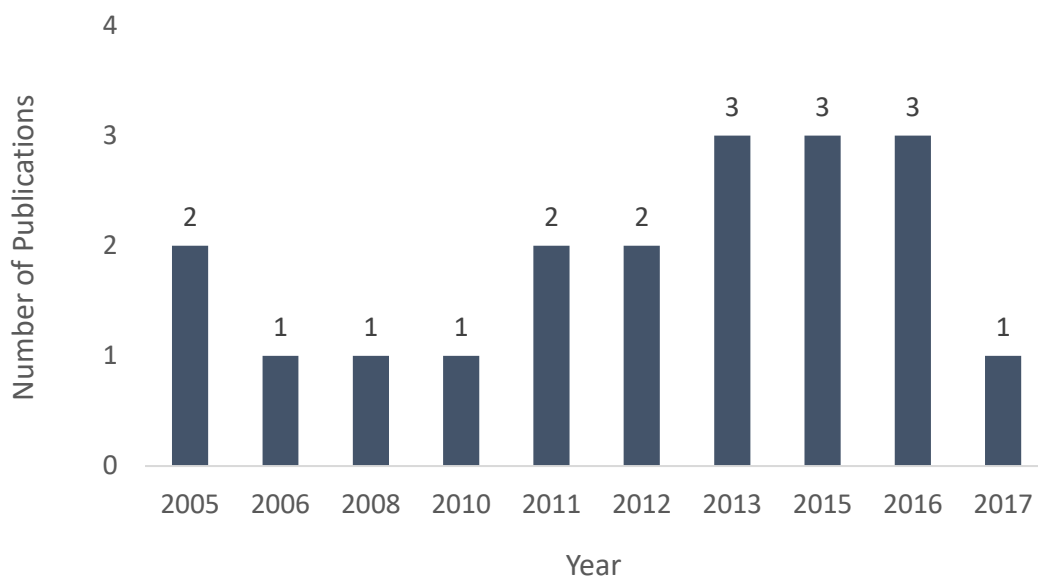
Figure 1. Number of published articles on CzRM (2005-2017)
Source: Prepared by the authors

Considering the ranking of journals that published articles on CiRM, as presented in Table 1, the Journal Cities and Journal Electronic Government contributed with two publications each, which represents around 21% of the total number of studies found in the present research. The other journals have only one publication each, what makes it difficult to identifiy a prominent journal regarding the scientific production on CiRM, although 17 journals have randomly published articles on the subject.

Table 1
Top-ranked journals on CiRM publications

Ranking	Journal	Number of published articles
1st	*Cities*	2
	Eletronic Government	
2nd	*Australian Journal of Basic and Applied Sciences*	1
	Australian Journal of Public Administration	
	African Journal of Business Management	
	Espacios	
	Information	
	Information and Management	
	International Journal of Electronic Governance	
	International Journal of E-Planning Research	
	International Journal of Public Administration in the Digital Age	
	International Research Journal of Finance and Economics	

	Journal of E-Government	
	Lecture Notes in Computer Science.	
	Local Government Studies	
	Revista de Administração Publica	
	Serbian Journal of Management	

Source: Prepared by the authors.

By using the VOSviewer 1.6.11 software, the Australian Journal of Public Administration was ranked the journal with the highest number of citations, with seventy three citations with only one article. The second most cited journal, with forty four citations, was the Journal Electronic Government with two published articles. The Information and Management Journal was the third with twenty seven citations with only one published article. The fourth was the Journal of E-Government with one article and 9 citations. The Journal Cities with two articles has been cited seven times. The results are presented in Table 2.

Table 2
Top-ranked Journals with highest number of citations on CiRM

Ranking	Journal	Number of Citations
1st	*Australian Journal of Public Administration*	73
2nd	*Eletronic Government*	44
3rd	*Information and Management*	27
4th	*Journal of E-Government*	9
5th	*Cities*	7

Source: Prepared by the authors.

Amongst the countries, Iran has the highest number of published articles on CiRM and accounts to 31,58% of the global publication. In this same ranking, Brazil, Taiwan and the USA are placed second and account to 10,53% each, but altogether are responsible for 31,58% of all international production. Thus, the countries that place the first two positions are responsible for 63,16% of the international production.

Brazil has also played an important role regarding the scientific production on CiRM, accounting to 10,53% of the international production, with emphasis being placed in the work of the Research Group on People and Clients Management, from the University of Brasilia (UnB); Center for Studies, Strategies in Integrated Marketing Communication and Tourism, from the Federal University of Minas Gerais (UFMG); and from the Central Superintendency of Electronic Governance of the Minas Gerais State Government. Table 3 summarizes these results.

Table 3
Top-ranked countries with highest number of publications on CiRM

Ranking	Countries	Number of published articles
1st	Iran	6
2nd	Brazil, Taiwan and USA	2

3rd	Germany, Denmark, Greece, China, Singapore and Slovakia	1

Although Iran has featured as the most proeminent country in terms of global production on CiRM, it is not listed among the countries with highest number of citations. Thus, it was noted that China, Greece, Germany, the United States and Taiwan are protagonists in terms of number of citations. Even though Iran accounts to aproximately one third of the international production, the country has only 4,6% of the citations, whereas China is responsible for 37,10% of the citations, Greece for 15,7% and Germany/USA for 13,7% each, as shown in Table 4.

Table 4
Top-ranked countries with highest number of citations on CiRM

Ranking	Country	Number of Citations
1st	China	73
2nd	Greece	31
3rd	Germany	27
4th	United States	27
5th	Taiwan	14
6th	Iran	9
7th	Singapore	9
8th	Portugal	4
9th	Slovakia	3

As of 21 june 2019, a total of 344 citations were registered at Google Scholar regarding the articles selected for this research. Only two articles were not cited. To some extent, this finding contributes to the premise that Web of Science and Scopus are indeed two important scientific databases in Administration, in line with Chadegani et al (2013) conclusions. Table 5 presents the ranking of citations of the 19 articles analized in this research.

Table 5
Ranking of the researched articles by citation at Google Scholar

Ranking	Articles	Year	Authors	Citations
1st	Creating public value in e-government: A public-private-citizen collaboration framework in Web 2.0	2010	Hui, G. and Hayllar, M.R.	137
2nd	Citizen Relationship Management and E-government	2005	Larsen, B. and Milakovich, M.	45
3rd	A hybrid fuzzy group ANP-TOPSIS framework for assessment of e-government readiness from a CiRM perspective	2013	Tavana, M., Zandi, F. and Katehakis, M.N.	34

4th	The semantic electronic government: Knowledge management for citizen relationship and new assessment scenarios	2006	Lytras M.D	33
5th	Reengineering municipality citizen electronic complaint system through citizen relationship management	2008	Chu P.-Y., Yeh S.-C., Chuang M.-C.	20
6th	Integration challenges towards increasing e-government maturity	2005	Lam W.	12
7th	FTiS: A new model for effective urban management: A case study of urban systems in Iran	2013	Akhondzadeh-Noughabi, E., Alizadeh, S., Ahmadvand, A.-M. and Minaei-Bidgoli, B.	11
8th	CRM in the public management: Development and validation of a Citizen Relationship Scale (CiRS)	2015	Demo G., Pessôa R	10
9th	Analyzing public participant data to evaluate citizen satisfaction and to prioritize their needs via K-means, FCM and ICA	2016	Ghodousi, M., Alesheikh, A.A. and Saeidian, B.	8
10th	Implementation of CRM systems in Portuguese Municipalities	2013	Duque J., Varajão J., Vitor F., Dominguez C.	7
11th	Citizen satisfaction survey as a tool of citizen relationship management of local government in Slovakia	2015	Fila, M., Schwarczova, L. and Mura, L.	7
12th	A comprehensive conceptual framework for the E-government realization	2012	Dehkordi L.F., Sarlak M.A., Pourezzat A.A., Ghorbani A.	7
13th	The value chain of citizen relationship management (CzRM): A framework for improvement	2011	Zamanian, M., Khaji, M.R. and Emamian, S.M.S.	5
14th	Citizen relationship management critical success factors: An empirical study of municipality of Tehran	2011	Keramati A., Saremi M.S., Afshari-Mofrad M	3
15th	Citizen Relationship Management System Users' Contact Channel Choices: Digital Approach or Call Approach?	2017	Wu, W.-N.	2
16th	A study on the customer relationship management model adaptability with the municipality services and duties environment	2012	Eslami S	2
17th	Concerns Management, E-Government and E-Participation: Experiences and Findings from Germany	2015	Vaerst, T., Steffens, T. and Lokaiczyk, R.	1

18th	Factor analysis that make up the ombudsman on relations with the citizen	2016	Lara R.D., Gosling M.	0
19th	Systems Administration in Ontology-Based Applications: The Case of Citizen Relationship Management	2016	Alexandrova, A., Iordanov, B., Abbas, S., Upadrasta, P., Sarasti, M. and Hilpold, T.	0

Source: Prepared by the authors.

The most cited article was "Creating public value in e-government: A public-private-citizen collaboration framework in Web 2.0", that proposes a perception framework of the public value creation, making use of Citizen Relationship Management strategies. Hui and Hayllar (2010) assessed electronic government tools in 2.0 internet platforms and studied the citizen-centered government platforms, such as those used by New Zealand, Australia, United Kingdom and the states of Virginia and South Carolina in the United States, in order to obtain information on the public value perception.

The second most cited article discusses the need to adopt CiRM strategies to respond to citizens needs, making use of the electronic government environment. Larsen and Milakovich (2010) point that governments, worldwide, are pressed by the population growth, demographic change, knowledge and technological increase and by the increase of citizens expectations, combined with fiscal resistance. Larsen and Milakovich (2010) conclude that CiRM is adequate and that governments play a fundamental role in securing both quality and equality of services, not losing sight of the specificities and characteristics found in the public sector.

Tavana, Zandi and Katehakis (2013) proposed, is the third most cited article, a pilot model to verify the availability and effectiveness of electronic government for government performance, from a CiRM perspective. An analysis was conducted and found that the adoption of electronic government should promote transparency, eliminate distance, remove barriers and enable citizens to engage in political processes that affect them. However, the study also noted that focusing exclusively on technological solutions will not change the minds of bureaucrats who see citizens not as clients, nor participants of the decision making process.

In the fourth most cited article, Lytras (2006) states that managing the relationship with citizens is a tough task and recquires deep analysis about the knowledge infrastructure and flows and the knowledge dynamic transformations. In this sense, the interaction between government and citizen, on the electronic government plataforms, enables the analysis of the knowledge management environment. Thus, the article outlines the main assessment aspects for future researches focusing on the semantic integration of tools regarding electronic governmet.

Chu, Yeh, and Chuang (2008) bring, in the fifth most cited article, an analysis of the Citizens Complaints Electronic Systems from Kaohsiung in Taiwan and demonstrate the benefits of the citizen relationship management. The authors state that through this ombudsman system it is possible to review the electronic government system in order to improve the citizens understanding, optimize the performance of services, encourage the public participation and enhance the internal control management.

Next, to refine the scientific production analysis, the VOSviewer software, version 1.6.11, was used, in order to carry out an assessment of the bibliographic coupling. It shows through a network the connection between peer publications of the 19 articles studied, as illustrated in Figure 1. This technique identifies groups of associated publications, in terms of number of common cited references, for analysing the cooperation networks and partnerships for scientific production (van Eck & Waltman, 2010, 2017).
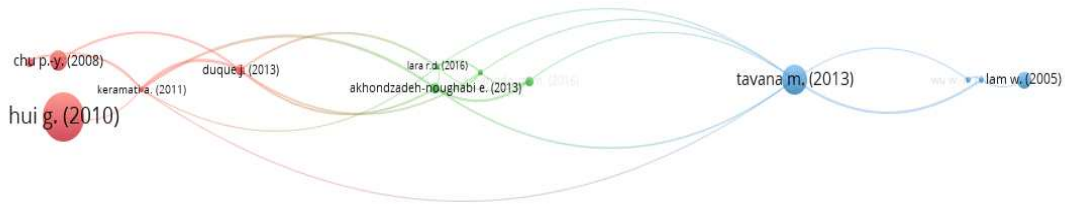

Figure 2. Bibliographic coupling of the CiRM articles.
Source: Prepared by the authors.

In this analysis, three scientific production networks were found. In this regard, the publications of each cluster were analysed to verify similarities among them. The blue cluster was formed by four articles with focus on investigating conceptual frameworks or CiRM systems in electronic governments. For this, Tavana et al. (2013) assessed the availability and effectiveness of the electronic government plataform adopted by the state of East Virginia, in the United States. Wu (2017) assessed the expansion of the SF311 service systems, that offers a call center and application at the San Francisco municipality, also in the United States. Dehkordi, Sarlak, Pourezzat and Ghorbani (2012), in turn, carried out a literature review to identify the theories related to electronic government. They suggest the existence of conceptual framework with the following configuration: the social/demographic context, the creative process of policy making and the content of electronic government database, with result and efficiency indicators. Still about the blue cluster, Lam (2005) conducted a study that evaluates the electronic government maturity, suggesting the necessary steps to consolidate the citizen relationship management.

The red cluster, also formed by four articles, includes studies that investigate the improvement of the relationship between government and citizen and the successful use of CiRM tools. Chu et al. (2008) studied the ombudsman system of Kaohsiung, in Taiwan, to demonstrate the benefits of the CiRM management for improving the citizen's understanding, the public services quality, public participation and control. Keramati et al. (2012) studied the critical success factors in implementing a CiRM model in the Teeran municipaliy, the capital of Iran, that include: process, organization, knowledge management and citizens' demands. Hui and Hayllar (2010) suggested the need to engage the society in the public services definition, suggesting the use of new technological tools in CiRM models, to strenghten the citizens' participation, which will encourage citizenship. Duque et al. (2013), in turn, investigated the Portuguese municipalities that implemented citizen relationship management systems. They concluded that improving the relationship with citizens and information with higher quality are some of the most important results when implementing CiRM.

The green cluster includes studies focused in assessing the citizen's perception regarding the quality of public services and service provided by the government. Ghodousi et

al. (2016) conducted a cluster analysis using calls from the 137 service, in the city of Bojnourd, in Iran, and identified that the main demands were related to asphalt quality, garbage collection and park development. With regards to the study conducted by Akhondzadeh-Noughabi, Alizadeh, Ahmadvand and Minaei-Bidgoli (2013), the authors used text mining techniques to assess the information of the Teeran urban services complaint system and the results revealed that the CiRM is useful to improve urban management, in terms of service frequency, service time and citizen satisfaction. Demo and Pessôa (2015) developed and validated a citizen relationship scale applied in the Superior Court of Justice in Brazil, representing a seminal and unprecedented measure in the literature, which enables future relational studies in the area of relationship marketing in Public Administration. Further, in terms of national production, Lara and Gosling (2016a) investigated the relationships generated from the perception of citizens helped at the Integrated Service Unity (UAI) to improve the relationship with the ombudsman of the government of Minas Gerais state.

Lastly, to complement the analysis of the identified studies, a cloud of the words used in the abstract of the 19 articles was done, as presented in Figure 3. The most frequent word found in the abstracts was: "citizen" with 69 occurrences, "management" with 32, "government" with 31, "relationship" with 28, "public" with 21 and "service" with 14. The other words appeared less than 12 times. Therefore, it is clear that "Citizen Relationship Management" is the central object of the analysed articles, as well as the link with ideas regarding government and public services.

Figure 3. Word Cloud of the terms used in the CiRM studies
Source: Prepared by the authors.

5. AGENDA, CONTRIBUTIONS AND PRACTICAL IMPLICATIONS

Although the subject is new in the academia, the studies are distributed in three great areas: conceptual frameworks; the relationship between government and citizen and the use of CiRM tools; and perpection measurement on the quality of public services. In this context, Brazil showed some leadership in the CiRM researches, since it has 3 out of the 32 research centers identified and was responsible for 10,35% of the international production. These results rank Brazil second place among the most fruitful countries in terms of published articles on perpection measurement about the quality of public services.

Thus, studies on CiRM in the Brazilian context offer important research opportunities, mainly on unexplored areas in the national context and in the use of citizen relationship scale, developed by Demo and Pessôa (2015) and in other sectors of the Brazilian Public Administration.

In general terms, the bibliographic coupling demonstrated a clear definition of the scientific prodution networks. The blue cluster investigated the conceptual frameworks or CiRM systems. The red cluster studied the improvement of the relationship between government and citizens as well as successful use of CiRM tools. The green cluster included articles with focus on the citizen's perception about the quality of public services.

An important agenda should consider CiRM not only as a electronic government tool, but also as a broader marketing strategy, based on the CRM concept, for the development and delivery of public services as a result of the contemporary interaction between government and citizen.

Further, we ratify the need and opportunity for multimethod studies. Such studies enable the use of triangulation for a better approach and understanding of research topics. By mixing quantitative methods and techniques to measure a phenomenom, the qualitative approaches help with interpretation, revealing important aspects not perceived only with numbers themselves.

Although the present study used two important international databases, the CiRM production was not fully mapped, which represents the main limitation of this study. Thus, if the objective is to identify all the scientific production on CiRM, a broader research that includes other databases and proceeding papers from scientific congresses and seminars, as well as books and thesis, should be considered.

We expect the results may contribute to developing new lines of research, as a result of the identified gaps. Further, students and researchers may identify excellence centers and references to develop studies and establish partnerships. Finally, the research itineraries may encourage empirical testing by public managers of the CiRM tools, through one-stop shop, as to strengthen effectiveness of the citizen relationship management strategies.

6. CONCLUSION

The objective of the present article was to map the international scientific production on CiRM at Web of Science and Scopus databases, two important international scientific database in Administration. Sistematic literature review, bibliometric and network analysis, descriptive statistics and word cloud were used to assess the international production and therefore contribute to the theoretical development progress of CiRM.

The research identified, with no temporal cut-off and after excluding duplicities, 19 articles, which shows the subject is still unexplored by the international academia, even though the relevance stated by the literature. The research itineraries identified at the moment helped identifying gaps for future investigation. It will contribute to strengthening the relevance in the use of marketing in the public sector, helping the establishment of more transparent and effective relationships between governments and citizens.

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