XXII SEMEAD
Seminários em Administração

novembro de 2019
ISSN 2177-3866

Qualis Guidelines: Inconsistencies of Quality Indicators for Scientific Management Journals

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Abstract
In this paper, we take a glimpse at the possible inconsistencies that exists within Qualis system created by CAPES. Using the approach of quality as value for money we set identify what are the criteria used in the Qualis system for the field of Management, Accounting and Tourism and which of those criteria have the effect of hindering the improvement of the field by not allowing journals that are better suited for the area to be classified in higher strata (A1 and A2) but contradictorily allows journals with scope outside of the aims of the field to be better ranked. Evidences suggest that the criteria of using international indexes overestimates the relevance of such journals with non-aligned scope and underestimate journals more relevant to the field because of its publishing language. We discuss these issues and suggests ways in order of prevent these kinds of discrepancies and improve both the quality assurance systems and the dissemination of scientific production in Brazil and internationally.

Keywords: Management of Graduate programs; Qualis system; International Index; Quality; Assessment.

INTRODUCTION

Research and development in a country, which develops it economically, socially and politically, is most commonly advanced by higher education institutions (HEI) in the shape of master's degree and PhDs, otherwise known as *stricto sensu* post-graduate programs (Maccari, Hsu, Storopoli, & Silva, 2018). These post-graduate programs are also responsible for the main corpus of Brazilian intellectual production, researches and studies (Hutz, Rocha, Spink, & Menandro, 2010; Marchlewski, Silva, & Soriano, 2011).

In order to assure quality for those productions of these post-graduate programs, an evaluation system called Qualis were developed and classify papers based on the journals that they are published in, ranking journals based on their relevance in each specific field and serves as the main guideline for funding agencies and to evaluate researchers from the academia (CAPES, 2016a; Lucena & Tibúcio, 2009).

Issues rise on the account of what is deemed as quality by the Qualis guidelines and how this definition would affect the evaluation process.

As we see, this system tries to ensures quality, reliability and relevance of what is produced and published in Brazil (Costa & Yamamoto, 2008). The Qualis system or guidelines was created to be part of the whole post-graduation evaluation system and also provides data and information for this system through a data collection application, known as Sucupira system (Maccari et al., 2018).

Qualis system is, based on the findings of previous work (Maccari et al., 2018), an important component of quality assurance for the scientific community and its development in Brazil but we argue that there are evidences of inconsistencies between what is posed as improvement, maintenance and assurance of quality with the indicators proposed by the Qualis guidelines.

These inconsistencies of criteria make it possible for journals that are not good fit for the field of management to be ranked high, and diminishes space for otherwise more apt and better journals for the management field to be on the top bracket of the Qualis ranking.

We seek to also provide alternatives to better adjust this quality assurance criteria in an attempt to better balance the Qualis guidelines for it to better reflect the scientific productions that are adequate for the field of management, accountancy and tourism. Based on the

arguments above, we introduce the research question: How the inconsistencies in the Qualis guidelines for management, accountancy and tourism affect the journals that comprises the ranking and what can we propose in order to better adjust these disparities?

To answer this question, we intend to firstly discuss about quality and its assurance in the context of journals rankings in Brazil through Qualis. Secondly, we will show how the criteria used in the guidelines contradicts with what is expected as to be the main objective of said guideline. Thirdly, we offer some ideas on how some of these criteria can be changed for it to better conform with the main purpose of the evaluation.

CAPES EVALUATION SYSTEM

Coordination of Improvement of Higher Level Personnel (CAPES), created in 1951, is the evaluator for post-graduation programs (PGPs) in Brazil and the research and teaching activities performed by these PGPs must be recognized and be legitimized both legally and bureaucratically by CAPES through its evaluation (Mello, Crubellate, & Rossoni, 2010).

CAPES evaluation system serves as the main tool for accepting entry or continuation of PGPs in Brazil through determination of academic production, adequacy of highly trained human resources prepared to work in the market and strengthens the entire scientific, technological and innovative base (CAPES, 2014).

The goals of the evaluation is to: a) certify the quality of Brazilian PGPs, which is used as a reference for allocating research resources and b) provide guidance for the creation and expansion of PGPs by identifying regional differences and differences in the strategic fields of science in the SNPG and is performed by ad hoc academic and scientific consultants with instructions from CAPES evaluation directorate and results in documents from each of the 48 fields of knowledge, each comprised of elements used to record the quadrennial evaluation are registered, their current status, their characteristics and perspectives and the issues that are considered priorities in the evaluation of PGPs (CAPES, 2014).

The evaluation is performed once in four years, resulting in a quadrennial evaluation report grading PGPs in a scale of 01 to 07. Grade 01 to 02 means that the program does not meet the minimum requirements. These programs will no longer be recognized or authorized to function by CAPES (Maccari et al., 2018).

A grade 3 the minimum required on a PGP to gain CAPES approval and is awarded to programs with minimum (regular) quality in their quadrennial evaluations. A grade of 04 means good performance, while a 05 is considered very good, having achieved a level of national excellence (Maccari, 2008).

Grade 05 is the highest possible grade for programs offering only a master's degree and a grade of 06 or 07 is awarded to programs whose performance is comparable to the finest international research centers (CAPES, 2015b).

QUALITY ASSURANCE: QUALIS SYSTEM

The production of papers in the scientific journals is evaluated by the CAPES and the classification is published in the Qualis System and is conducted separately for each field of knowledge by a committee of (ad hoc) consultants, in accordance with the specific criteria for each field (Maccari et al., 2018).

CAPES encourages all fields of knowledge to give priority to definitive papers that are published in journals and their quality is rated in strata, in descending order, as follows: A1

(highest quality), A2, B1, B2, B3, B4, B5 and C (lowest quality), each strata with its own criteria (Beuren & Souza, 2008; CAPES, 2015a).

Journal papers are considered an efficient way for the academic community to communicate new discoveries and the growth in the number of journals aids the development of science. It also requires a categorization of the journals in terms of the quality of what is published in these journals (Beuren & Souza, 2008; Leite & Codato, 2013; Oliveira, Rodrigues, Blattmann, & Pinto, 2015).

To guarantee a balanced evaluation system and to avoid distortions between fields, CAPES created the Qualis system with checks and controls regarding the strata (A1, A2, B1, B2, etc.), and all fields are required to adapt to it. The number of journals classified as A1 cannot surpass 12% of the total. Up to 13% can be classified as A2 (A2 journals must be higher than A1). The sum of A1 and A2 journals can't surpass 25% of all journals. A maximum of 25% can be classified as B1. The following logic is applied: A1 < A2; A1 + A2 < B1; (A1 + A2 + B1) < (B2 + B3 + B4 + B5). (Maccari et al., 2018).

Based on the criteria shown above, we can clearly see that Qualis deems quality as what can be described as value for money (Harvey & Green, 1993), shown in Table 1.

Quality as Value for money	Categories	Definition
Notion of accountability to funders as provision fits the institution's mission, but this is contingent upon the accountability implicit in quality as value for money	a) Performance indicators	Performance indicators are used to monitor efficiency and provide a measure of accountability for the treasury;
	b) Customer Charters	Accountability to the customers, by specifying what customers can expect for the money they pay. Customer charters, league tables and watchdog groups are all designed to create a pseudo-market so as to effect change through competition.

Table 1 – Quality as value for money
Source: Adapted from (Harvey & Green, 1993).

Quality of higher education, or in this case, a specific part of scientific production quality, value as return on investment, have accountability in its core, using performance indicators to measure and monitor efficiency and customer charters to illustrate what they to expect for the money they pay, it also used in policy and accountability, in which higher education quality is utilized in the service of accountability (Harvey & Green, 1993; Harvey & Knight, 1996).

External Quality Monitors (EQM), such as CAPES, are the usual adoptees of this perspective on quality, emphasizing quality as means to deliver policy requirements for distributing available resources, making it a mechanism in which quality is used to legitimate its decisions (Harvey & Green, 1993).

We see that funder (in this case CAPES, which monitors quality in post-graduation) set indicators for institutions (post-graduation programs and academia) in order for the later to be accountable for their output (scientific papers), in return for value for money (be legitimized) although there's critique about the methods used, as is difficult to establish causal relationship between indicators and quality itself because it not consider wider factors present on the context of the last (Harvey & Newton, 2004).

Another issue is that predominantly accountability-led view on quality leave quality improvement to a secondary role, as results tend to be the development of an accountable autonomy model. Accountability is normally achieved in three ways: self-assessment, peer evaluation, normally in the shape of an institutional visit and statistical or performance indicators (Harvey & Knight, 1996).

Other criticism is that, although the main benefit of these EQM methods is that it makes quality open and explicit but there is less consistency on dissemination of the outcomes as

evaluation methods are determined before purpose so it is complicated to link improvement and accountability (Harvey & Knight, 1996; Harvey & Newton, 2004).

Accountability assures value to private and public resources and ensures proper programs with fitting educational experience for students and offers information to the public about quality of institutions and programs, this way, transformation is needed for a dynamic interaction to be created between the EQM systems and the development needs of the institutions, in the way that institution leadership should be "balancers" of many claims, demands and expectations related to higher education to transform external quality evaluation so that it can transform student learning experience (Harvey & Newton, 2004; Stensaker, 2003).

METHOD

The study is qualitative in nature, and we sought to analyze the inconsistencies within Qualis guidelines created by CAPES for the field of management, accounting and tourism.

We used secondary data retrieved from the CAPES website, including data manuals, field documents, documents, ministerial bulletins and other sources that constitute the bases to determine the criteria and supports the collection and analysis of data and information (Cervo, Bervian, & Silva, 2007).

The research efforts aimed to investigate how intellectual production is evaluated in the field of management, accounting and tourism and what criteria are given more importance. We then sought to identify what are the criteria used in all strata on the Qualis system for the field and, eventually, inconsistencies within these criteria that hinders improvement and limits more scientific productions to be shown in the higher strata.

ANALYSIS

We begin our analysis by pointing that there are two elements that needs to be met for a journal to be added in the CAPES **Webqualis** database (online database for the Qualis system): the need of scientific editors and editorial teams (called intrinsic element of quality) and the need to follow international norms or editorial practices (extrinsic element of form and presentation) (Maccari et al., 2018).

Criteria for the field of management, accounting and tourism are shown in Table 2, categorized in strata.

	Management, Accounting and Tourism
A1	ISSN; at least two issues a year; JCR >1.4 (67%) or H-Scopus > 24 (75%) whichever is more favorable. Journals in the limits above, but not listed as of the field in their Impact Factor calculation basis, were classified in stratum A2
A2	ISSN; at least two issues a year; 1,4 >= JCR > 0.7 (33%) or 24 >= H-Scopus > 9 (50%) whichever is more favorable. Journals in the limits above, but not listed as of the field in their Impact Factor calculation basis, were classified in stratum B1
B1	ISSN; at least two issues a year; in Scielo with IF > 0,01 and be part of the field based on the criterion from the index; or 0,7 >= JCR > 0 or 9 >= H-Scopus >0 or Spell Index >0,225 (67%) whichever is more favorable. JCR or Scopus related journals, within the limits above but not listed as of the field in the respective impact indicator, were classified in stratum B2
B2	ISSN; at least two issues a year; be in the Redalyc or edited by Publishers indicated by the field or in Scielo but not listed as part of the field in the Scielo database or 0,225 >=Spell > 0,114 (33%).
B3	ISSN; at least two issues a year; delay of no more or equal to 0.5 years; 3 or more years of existence; and have at least one of the indexes defined by the field; or Spell Index <= 0.114
B4	ISSN; at least two issues a year; delay of no more or equal to 0.5 years; 2 or more years of existence;
B5	ISSN; at least two issues a year; delay of no more or equal to 1 year;
C	Journals whose content was identified as being technical or strictly applied were classified as C

Table 2 – Impact criteria for the field of Management, Accounting and Tourism
Source: Documents published by the field Committees (2016).

The Impact Factor (IF) of the Journal Citation Reports (JCR) and the Scopus H-Index were incorporated by Management, Accounting and Tourism evaluation and According to Sandes-Guimarães and Diniz (2013), the restriction forced by CAPES Scientific and Technical Council (CTC-ES) on the percentage of journals eligible for inclusion in the upper strata was due to the proliferation of journals in the fields, which means that there were a high amount of journals that does not necessarily translated to quality. Therefore, the adoption of the impact factor emerged as a deciding criterion for the Qualis system. By complying with this directive, the council for Management eliminated some criteria from the previous three-year period (2010-2012) and added new criteria/requirements (such as the impact factor) in the current evaluation for strata A1, A2 and B1.

As we can see, the only criterion considered in upper strata (A1 and A2) is impact factor. In the case of JCR, it offers "quantitative tools for ranking, evaluating, categorizing, and comparing journals" and they argue that it helps in better understand the significance of absolute/total citation frequencies over bias as paper counts (favoring bigger journals), issue frequency (favoring more frequent issued journals) and older journals. It also provides estimation of prestige of journals (Garfield, 1994).

Impact factor measure the frequency in which a given paper in a journal is cited in a given year or period, so the annual JCR impact factor is calculated as ratio between citations and citable items published in a particular year. This way, JCR is measured by dividing number of citations of a journal in current year to published items in the given journal in previous two years (Garfield, 1994), as shown in Figure 1.

Figure 1: Calculation for journal impact factor.

A= total cites in 1992

B= 1992 cites to articles published in 1990-91 (this is a subset of A)

C= number of articles published in 1990-91

D= B/C = 1992 impact factor

Figure 1 – Calculation for journal impact factor
Source: (Garfield, 1994).

What determines a journal as A1, then, is based primarily from this calculation of JCR impact factor, in which case a journal must meet the minimum impact factor of 1,4 in JCR and the percentage (67%) means that it consists of 67% of all journals from the field with the minimum impact factor shown above.

The h-Scopus is also a measurement of productivity and impact of published work proposed by Hirsch (2019) and is calculated by the number of papers that has at least h citations each and the other papers have no more than h citations each. What it means is that the score that you get is, for example, 50 papers that have been cited at least 50 times and the 51th paper has been cited less than 51 times, then you would score H-Scopus of 50 (Elsevier, 2014).

Based on the explanation above, we see that the upper strata (A1 and A2 journals) have the criteria of JCR and h-Scopus only, meaning that in order for a journal to be classified as A1 or A2 it must meet JCR >1.4 (67%) or H-Scopus > 24 (75%) and 1,4 >= JCR > 0.7 (33%) or 24 >= H-Scopus > 9 (50%) respectively.

Our reservations about these criteria in higher strata is that it limits several journals making them being in the Qualis/CAPES Management ranking, mainly those that are published in Portuguese and, because of the language, are not listed neither in databases that calculate JCR (ISI Web of Science) nor in H-Scopus (Scopus).

This causes several journals to be unable to rank higher, independently of their quality, exclusively because of its publishing language and not considering them by their impact on the development of science, technology and theory of the field, which arguably is the ultimate goal of the papers.

The increase in worth of international indexes and impact factor downgraded various Brazilian national journals, turning it a risk for the same journals as the lower Qualis also diminishes the quantity of paper submissions in said journals that can make their improvement harder or can even make the organizations behind those journals to cease their support, this vicious circle will end up eliminating more and more journals in Brazil and dwindle the publications in Portuguese (Crespi, Preusler, Luna, & Ferreira, 2017).

Previously in our work (Maccari et al., 2018) we also listed the distribution of Brazilian journals in the A1 stratum, as well as the A2 in the Qualis via the Sucupira Platform. The distribution and total number of journals for the fields in question are summarized in Table 3.

	Classification (Number of Journals)		
Fields of Evaluation	A1	A2	Total Journals (upper stratum)
Management, Accounting and Tourism	--	11	11

Table 3 – Distribution of Brazilian journals in strata A1 and A2 for Management, Accounting and Tourism

Source: (CAPES, 2016b).

We see clearly that in Qualis A1 there are no Brazilian journals whatsoever, and the 11 journals classified as A2 are all published in English. Attempts of editors and institutions, that manages Brazilian journals published in Portuguese, to stay in higher Qualis strata is limited to at most B1 as the consideration of criteria apart from those international indexes indicators only began here with the addition of the Scielo database, a multidisciplinary open sourced database for Brazilian journals created in 1998 (Crespi et al., 2017).

But the addition of this criteria brought another difficulty, as editors chose the only practical way of trying to improve their journals: through indexation of their journals in the Mexican Redalyc and in the Brazilian SCIELO bases. However, the Redalyc and SCIELO were overwhelmed with submissions from Brazilian editorial teams and their requests could not be addressed in time by the understaffed technical staff of these databases (Maccari et al., 2018).

Our focus was put mainly in the upper strata (A1 and A2) because they are deemed the most relevant journals and, in turn, inconsistencies in these strata would affect the field and its journals the most. That said, in addition for what we argued above, the second point of inconsistency that we point is the existence of journals that are arguably not a good fit for the area of management, accounting and tourism, illustrated in Table 4.

ISSN	Title of Journal	Strata
0961-9534	BIOMASS & BIOENERGY	A1
0304-422X	POETICS (AMSTERDAM)	A1
1472-6920	BMC MEDICAL EDUCATION	A1
1385-8947	CHEMICAL ENGINEERING JOURNAL (1996)	A1
1389-1286	COMPUTER NETWORKS (1999)	A1
1082-0132	FOOD SCIENCE AND TECHNOLOGY INTERNATIONAL	A1
1466-8564	INNOVATIVE FOOD SCIENCE & EMERGING TECHNOLOGIES	A1
0964-8305	INTERNATIONAL BIODETERIORATION & BIODEGRADATION	A1
0898-5898	LINGUISTICS AND EDUCATION	A1
2179-3786	VOLUNTAS (DORDRECHT. ONLINE)	A1

Table 4 – Inconsistency of A1 Journal Management, Accounting and Tourism

Source: Elaborated by the authors (2019).

We indicate that these journals should be revaluated in the reasons to be put in the upper strata by reason of the lack of connection between their scope and the scope of the field of management, accounting and tourism. We don't disagree that they have aspects in common with the field, but there are journals that the scope is more central to the subjects of our field more than those. The presentation of their scope in their websites can provide evidences to support this claim, summarized in Table 5.

Journal	Scope	Website
Biomass & Bioenergy	Biomass & Bioenergy is an international journal publishing original research papers and short communications, review articles and case studies on biological resources, chemical and biological processes, and biomass products for new renewable sources of energy and materials. The scope of the journal extends to the environmental, management and economic aspects of biomass and bioenergy.	https://www.journals.elsevier.com/biomass-and-bioenergy
Poetics (Amsterdam)	Poetics is an interdisciplinary journal of theoretical and empirical research on culture, the media and the arts. Particularly welcome are papers that make an original contribution to the major disciplines - sociology, psychology, media and communication studies, and economics - within which promising lines of research on culture, media and the arts have been developed.	https://www.journals.elsevier.com/poetics
BMC Medical Education	BMC Medical Education is an open access journal publishing original peer-reviewed research articles in relation to the training of healthcare professionals, including undergraduate, postgraduate, and continuing education. The journal has a special focus on curriculum development, evaluations of performance, assessment of training needs and evidence-based medicine.	https://bmcmededuc.biomedcentral.com/
Chemical Engineering Journal (1996)	The Chemical Engineering Journal focuses upon three aspects of chemical engineering: chemical reaction engineering, environmental chemical engineering, and materials synthesis and processing.	https://www.journals.elsevier.com/chemical-engineering-journal
Computer Networks (1999)	Computer Networks is an international, archival journal providing a publication vehicle for complete coverage of all topics of interest to those involved in the computer communications networking area. The audience includes researchers, managers and operators of networks as well as designers and implementors.	https://www.journals.elsevier.com/computer-networks
Food Science And Technology International	Food Science and Technology International (FSTI) shares knowledge from leading researchers of food science and technology. Covers food processing and engineering, food safety and preservation, food biotechnology, and physical, chemical and sensory properties of foods.	https://journals.sagepub.com/home/fst
Innovative Food Science & Emerging Technologies	Innovative Food Science and Emerging Technologies (IFSET) aims to provide the highest quality original contributions and few, mainly upon invitation, reviews on and highly innovative developments in food science and emerging food process technologies. The significance of the results either for the science community or for industrial R&D groups must be specified.	https://www.journals.elsevier.com/innovative-food-science-and-emerging-technologies
International Biodeterioration & Biodegradation	nternational Biodeterioration and Biodegradation publishes original research papers and reviews on the biological causes of deterioration or degradation. – The causes may be macro– or microbiological, whose origins may be aerial, aquatic, or terrestrial. – The effects may include corrosion, fouling, rotting, decay, infection, disfigurement, toxification, weakening or processes that liquefy, detoxify, or mineralize. – The materials affected may include natural, synthetic or refined materials	https://www.journals.elsevier.com/international-biodeterioration-and-biodegradation

Linguistics And Education	Linguistics and Education is an international peer-reviewed journal that welcomes submissions from across the world that advance knowledge, theory, or methodology at the intersections of linguistics and education. The journal is concerned with the role played by language and other communicative/semiotic systems in mediating opportunities for learning and participation in a globalized world.	https://www.journals.elsevier.com/linguistics-and-education
Voluntas (Dordrecht. Online)	Unavailable	Unavailable

Table 5 – Selected A1 Journals and their Scope
Source: Elaborated by the authors (2019).

We reiterate that we do not assume these journals as journals of poor quality or low impact, as their impact factor (only criterion used by Qualis) are considerable and they are responsible for the publishing of evidently impactful papers, we dispute their addition in the A1 strata in the Qualis for the field of Management, Accounting and Tourism, in which they seemingly aren't appropriate.

Analyzing the scope from their journals, their aim and scope are considerably distant from our field and has only vaguely and loosely common interests. Take Biomass & Bioenergy journal, for example, their scope lies on "review articles and case studies on biological resources, chemical and biological processes, and biomass products for new renewable sources of energy and materials", definitely a journal focused on biological and chemical subjects that are not closely connected with management, accounting and tourism so that it should be classified as A1 in this field.

Another journal that is worth mentioning is Voluntas (Dordrecht. Online) as we couldn't find anything from it, which is odd, as it seems that the journal ceased to exist somehow, so there is question on why this journal is still present in the Qualis of our field, more urgent, still in the A1 stratum which is agreeably the most relevant stratum.

The existence of these journals cited above in Table 4 brings the issue of taking slot in the A1 stratum that could otherwise be available for journals that are more closely connected in aim, scope and subject, so we argue that because of an inconsistency on the criteria, because this criterion of quality as value for money using indicators, forced more tightly-connected journals scope-wise out of the upper strata, and enforced the inclusion of journals that are not.

Is worth mentioning that there are checks and controls regarding the strata that limits quantity of A1 journals to no more than 12% of the total journals classified in Qualis system.

Observing the Qualis listing from the field of Management, Accounting and Tourism, there are a total of 3562 journals listed, 323 of those are classified as A1, making it 9% of the total, meaning that there is still space for other papers to be added in this stratum, of those, 10 journals that we listed (roughly 3%) as not very consistent with the field.

This issue is even more pronounced in the A2 stratum, as shown in Table 5, that we illustrate even more of the same problem of inconsistency and detachment between the scope of management, accounting and tourism field and the scope of those journals.

ISSN	Title of Journal	Stratum
0377-8401	Animal Feed Science And Technology (Print)	A2
0004-0622	Archivos Latinoamericanos De Nutrición	A2
1011-2367	Asian-Australasian Journal Of Animal Sciences (Print)	A2
1976-5517	Asian-Australians Journal Of Animal Science	A2
0261-1929	Atla. Alternatives To Laboratory Animals	A2
1475-925X	Biomedical Engineering Online (Online)	A2
0960-894X	Bioorganic & Medicinal Chemistry Letters (Print)	A2
0006-355X	Biorheology (Oxford)	A2
1537-5110	Biosystems Engineering	A2

1471-2229	Bmc Plant Biology (Online)	A2
1471-2393	Bmc Pregnancy And Childbirth (Online)	A2
1935-861X	Brain Stimulation: Basic, Translational And Clinical Research In Neuromodulation	A2
1806-4760	Brazilian Dental Journal (Impresso)	A2
1678-4375	Brazilian Journal Of Biology (Online)	A2
0007-070X	British Food Journal (1966)	A2
0007-1145	British Journal Of Nutrition	A2
0340-7004	Cancer Immunology And Immunotherapy	A2
0263-6484	Cell Biochemistry And Function	A2
0742-2091	Cell Biology And Toxicology	A2
1678-4561	Ciência & Saúde Coletiva	A2
1413-8123	Ciência & Saúde Coletiva (Online)	A2
1413-8123	Ciência E Saúde Coletiva (Impresso)	A2
1755-5930	Cns Neuroscience & Therapeutics	A2
0010-8812	Cornell International Law Journal	A2
0886-9634	Cranio. Journal Of Craniomandibular Practice	A2
0287-4547	Dental Materials Journal	A2
0360-5442	Energy (Oxford)	A2
1413-4152	Engenharia Sanitária E Ambiental	A2
1809-4457	Engenharia Sanitária E Ambiental (Online)	A2
1866-6280	Environmental Earth Sciences (Print)	A2
0944-1344	Environmental Science And Pollution Research International	A2
1614-7499	Environmetal Science And Pollution Research International (Internet)	A2
2045-7960	Epidemiology And Psychiatric Sciences	A2
1525-5050	Epilepsy & Behavior (Print)	A2
0902-4441	European Journal Of Haematology	A2
0301-2115	European Journal Of Obstetrics, Gynecology, And Reproductive Biology	A2
0929-1873	European Journal Of Plant Pathology	A2
1354-3776	Expert Opinion On Therapeutic Patents	A2
1938-5102	Florida Entomologist	A2
1944-0049	Food Additives & Contaminants. Part A. Chemistry, Analysis, Control, Exposure & Risk Assessment (Print)	A2
0960-3085	Food And Bioproducts Processing	A2
0308-8146	Food Chemistry	A2
0956-7135	Food Control	A2
0268-005X	Food Hydrocolloids	A2
1535-3141	Foodborne Pathogens And Disease	A2
1999-4907	Forests	A2
0018-084X	Herpetological Review	A2
0018-8158	Hydrobiologia (The Hague. Print)	A2
1750-743X	Immunotherapy (Print)	A2
1097-0363	International Journal For Numerical Methods In Fluids	A2
0020-7128	International Journal Of Biometeorology (Print)	A2
1364-727X	International Journal Of Dairy Technology (Print)	A2
0129-1831	International Journal Of Modern Physics C	A2
1433-3023	International Urogynecology Journal	A2
1120-1770	Italian Journal Of Food Sciences	A2
0925-8388	Journal Of Alloys And Compounds	A2
0931-2668	Journal Of Animal Breeding And Genetics (1986)	A2
1364-5072	Journal Of Applied Microbiology (Print)	A2
0022-0302	Journal Of Dairy Science	A2
0737-0806	Journal Of Equine Veterinary Science (Print)	A2
0145-8876	Journal Of Food Process Engineering	A2
0145-8892	Journal Of Food Processing And Preservation	A2
2153-5515	Journal Of Hazardous, Toxic, And Radioactive Waste	A2
1359-1053	Journal Of Health Psychology	A2
1932-5150	Journal Of Micro/Nanolithography, Mems, And Moems	A2

1381-1169	Journal Of Molecular Catalysis. A, Chemical (Print)	A2
1061-3749	Journal Of Nursing Measurement	A2
1499-4046	Journal Of Nutrition Education And Behavior	A2
1010-6030	Journal Of Photochemistry And Photobiology. A, Chemistry	A2
0190-4167	Journal Of Plant Nutrition	A2
0315-162X	Journal Of Rheumatology	A2
0895-9811	Journal Of South American Earth Sciences	A2
1064-8011	Journal Of Strength And Conditioning Research	A2
0103-5053	Journal Of The Brazilian Chemical Society (Impresso)	A2
0016-0032	Journal Of The Franklin Institute	A2
0046-9750	Journal Of The Institute Of Brewing	A2
1758-2652	Journal Of The International Aids Society	A2
0306-4565	Journal Of Thermal Biology	A2
1662-9795	Key Engineering Materials (Online)	A2
0265-8240	Law & Policy (Print)	A2
0938-8990	Mammalian Genome (Print)	A2
0025-326X	Marine Pollution Bulletin.	A2
1563-5147	Mathematical Problems In Engineering (Online)	A2
1024-123X	Mathematical Problems In Engineering (Print)	A2
0309-1740	Meat Science	A2
0026-265X	Microchemical Journal (Print)	A2
0893-7648	Molecular Neurobiology	A2
1867-1632	Mycotoxin Research	A2
1556-276X	Nanoscale Research Letters (Online)	A2
1573-0840	Natural Hazards (Dordrecht. Online)	A2
1949-1042	Nucleus (Austin)	A2
1070-5325	Numerical Linear Algebra With Applications	A2
1949-2553	Oncotarget	A2
2167-8359	Peerj	A2
0100-736X	Pesquisa Veterinária Brasileira	A2
0100-736X	Pesquisa Veterinária Brasileira (Impresso)	A2
1678-5150	Pesquisa Veterinária Brasileira (Online)	A2
0378-4371	Physica. A (Print)	A2
0375-9601	Physics Letters. A (Print)	A2
0191-2917	Plant Disease	A2
0981-9428	Plant Physiology And Biochemistry (Paris)	A2
1932-6203	Plos One	A2
1932-6203	Plos One	A2
1932-6203	Plos One	A2
0032-5791	Poultry Science (Print)	A2
0167-5877	Preventive Veterinary Medicine (Print)	A2
1806-9657	Revista Brasileira De Ciência Do Solo (Online)	A2
1806-9290	Revista Brasileira De Zootecnia	A2
1516-3598	Revista Brasileira De Zootecnia	A2
1806-9290	Revista Brasileira De Zootecnia (Online)	A2
1678-9865	Revista De Nutrição	A2
1518-8345	Revista Latino-Americana De Enfermagem (Online)	A2
1518-8345	Revista Latino-Americana De Enfermagem (Usp - Ribeirão Preto)	A2
1806-9460	Sao Paulo Medical Journal	A2
0920-9964	Schizophrenia Research (Print)	A2
1678-9849	Sociedade Brasileira De Medicina Tropical. Revista	A2
1386-1425	Spectrochimica Acta. Part A, Molecular And Biomolecular Spectroscopy (Print)	A2
0039-9140	Talanta (Oxford)	A2
1095-0680	The Journal Of Ect	A2
1041-2905	The Journal Of Essential Oil Research	A2
0022-3913	The Journal Of Prosthetic Dentistry (Print)	A2
1556-9543	Toxin Reviews (Print)	A2

0305-5728	Vine. Very Informal Newsletter On Library Automation	A2

Table 6 – Inconsistency of A1 Journal Management, Accounting and Tourism
Source: Elaborated by the authors (2019).

We see an even more higher number of journals which the scope is questionable in comparison with the field, in this A2 stratum, of a total of 473 journals (13% of the total in the Qualis) we have identified at least 123 journals (26%) as inconsistent. Take the journal BMC Pregnancy and Childbirth as an example, that "considers articles on all aspects of pregnancy and childbirth. The journal welcomes submissions on the biomedical aspects of pregnancy, breastfeeding, labor, maternal health, maternity care, trends and sociological aspects of pregnancy and childbirth". This journal is indeed relevant on its purpose, but for there are more correspondent journals that should be considered in this stratum other than those journals cited above.

We can observe that more than a quarter of the whole A2 stratum is populated by journals that should be reassessed in light of their purpose and on the purpose of the Qualis system guidelines for the field of Management, Accounting and Tourism.

We targeted A1 and A2 strata as they are the most relevant and in turn more impactful for the whole field, and as we can identify, they are also the strata that have the biggest inconsistencies as they do not offer space for Brazilian journals nor journals in any other language than English (as most if not all international indexes do require publications in English language) to be accepted in them.

We defend that other criteria should be considered in the upper strata as one of the methods to fix the inconsistencies found in our analysis, such as the use of measurements and indexes that do give space to Brazilian journals, such as Spell and Redalyc, of which is already used in the lower strata. Considering them as part of criteria used in the strata A1 and A2, we argue it could benefit both the field and the journals, making the criteria more proper for the reality of the Brazilian academia and eliminating journals that are in the upper strata because of their language and not because of their scope and content.

FINAL CONSIDERATIONS

In this paper, we tried to offer a glimpse of the Qualis quality assurance system used by CAPES in Brazil to evaluate and classify journals by a set of criteria. From this we found out that CAPES and Qualis system considers quality as a way for the researchers and academics in Brazil to be accountable and estimate a value for money using a set of performance indicators for journals and customer charters illustrating those criteria.

Changes in the Qualis system and metrics have considerable effect on researchers and universities in Brazil, and with the current Quali criteria a substantial part of Brazilian journals were relegated to lower Qualis strata which affected the evaluation of researchers in the country, this evaluation, in turn, can have influences on the post-graduate programs in Brazil (Crespi et al., 2017).

Analyzing CAPES and Qualis documents, directives and guidelines, we found that the criteria used in A1 and A2 are shown as overestimating the importance of international indexes and publications while it undervalues Brazilian national scientific productions published in Portuguese. This is evident when examine the list of journals classified in the Qualis system, with 10 journals in A1 and 123 journals in A2 strata with scope beyond that of the field of Management, Accounting and Tourism.

An approach that we suggest with the aim to solve these inconsistencies is the use of criteria that other than of international indexes, such as Spell and Redalyc, both with a characteristic of indexing journals published in other languages such as Portuguese.

This paper serves not to criticize the journals cited above, nor does it arguments that the current criteria used in the Qualis system should be eliminated, quite the opposite, we have evidences suggesting that they do help in the scientific improvement and rigor (Crespi et al., 2017). We advise the use addition of other criteria that can also encompass Brazilian journals published in Portuguese with the purpose of better adjusting Qualis system with the national scientific production and improve the dissemination national papers that are relevant and impactful papers nationally and internationally.

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