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## Editor's Word

Dear readers, we are delivering the second issue of 2021. First, we want to congratulate the authors of the published papers and thank all those who submitted their manuscripts but unfortunately did not have their papers approved.

The invited editorial is written by professor Norma Scagnoli, Ph.D. in Education, former director of e-learning at the University of Illinois at Urbana-Champaign (UIUC) and currently working at Northeastern University. Her paper addresses education and mainly refers to the use of recorded videos for presentation in synchronous online and hybrid classes. I believe it will benefit several readers at a time we have to reinvent ourselves.

Turning to the papers approved through blind review, the first was written by Karina Rocha Henriques Gehlen, Luciano Gomes dos Reis, and Kelli Juliane Favato. Its objective is to understand the institutionalization process of the topic sustainability in the Accountancy program at FEA/USP. The results show that the topic of sustainability is transitioning from the semi-institutionalized to the institutionalized stage. The nature of the sustainability concept the program adopts has status quo maintenance and reformist characteristics. The conclusion is that the discipline that addresses sustainability is more holistic and interdisciplinary than the Accountancy program as a whole.

The second paper was written by Camila Paniz Mallmann, Vitor Hideo Nasu, and Maria José Domingues and was intended to investigate and compare the relationship between extracurricular reading and students' performance in applied social sciences programs. Microdata was collected from 338,977 students from nine undergraduate programs who took the National Assessment of Student Achievement (Enade) in 2018. The students' performance in the Enade was measured considering the scores obtained in the tests addressing specific content and general knowledge. Data were analyzed using descriptive statistics, Chi-square, and regression models.

The results show that the undergraduate program is associated with extracurricular reading. Additionally, there is a positive relationship between the number of books and academic performance. This relationship is valid for the performance obtained in the tests addressing specific components and general knowledge, thus influencing the students' general performance in the Enade 2018.

The third paper was written by Isnaldo de Souza Bonfim and Cláudio Wanderley. Its objective is to identify whether the frequency and importance of management accounting practices adopted by the small and medium Chinese entrepreneurs in Brazil are similar or different from the practices adopted by Brazilian entrepreneurs. How one's national culture influenced the group of Chinese entrepreneurs was also verified using questions addressing national cultural dimensions. The results showed that Brazilians more frequently adopt management accounting tools and find them more important. Regarding the importance given to management accounting tools, the hypotheses test was significant for all four groups: budget, performance assessment, decision-making information, and financial control and evaluation. Regarding the frequency of use, the hypotheses test was significant for three groups: budget, decision-making information, and financial control and evaluation, but not for performance assessment.

The fourth paper was written by Ian Blois Pinheiro and Marcia Juliana d'Angelo. It is intended to identify the antecedents and consequents of the process of obtaining and renewing the Social Assistance Beneficent Certification (Cebas) based on Organizational Legitimacy theory. Evidence indicates five antecedents (accounting disclosure, training, and professionalization of Third Sector Organizations (TSOs) and accountants, external audit, legal uncertainty, and other situations) and four consequents (tax immunity, TSOs' credibility, fundraising, and cultural change). Evidence also shows controllable and uncontrollable vulnerabilities in the antecedents, which the social players involved in the process have to face and may compromise this certification's pragmatic and moral legitimacy. Tax immunity remains one of the main consequents of this process.

The fifth paper, written by Paulo Frederico Homero Jr., is a critical paper presenting reflections on critical research in the field of accounting in Brazil. The author presents an autobiographic narrative of the processes that led him to develop his habitus as a critical researcher and argues that epistemological rejection to objectivism and axiological commitment with a notion of social justice are the characteristics that define critical research. Additionally, he points out surveillance mechanisms present in the Brazilian accounting research field and discusses some weaknesses identified in the incipient community of critical Brazilian researchers, including an unwillingness to confront the mainstream, low receptivity to criticism, and no previous contact with the theoretical framework commonly adopted in critical research.

Finally, the paper written by Alexandre Corrêa dos Santos and Ilse Beuren was intended to analyze the effect of decision-making styles, cognitive flexibility, and personality traits on the task performance of forensic accounting experts. The results show that behavioral factors such as cognitive flexibility and personality traits were positively related to task performance, whereas decision-making styles were negatively related.

I would like to inform our readers that REPeC is not a journal only directed to education, but many other fields, as shown in its objectives: Financial, Management, Public, Auditing, and Taxes, among others.

Without further ado, I thank all the researchers who submitted their articles to REPeC, in addition to the referees, always very cooperative. Congratulations to those who had their articles approved, as the demand is considerably high and the road to the final publication very arduous.

Thank you very much to the readers, and I hope you will enjoy this new issue.

Academic Greetings,

**Gerlando Lima, Ph.D.**  
**Editor-in-Chief**

# Common Practices in the Creation of Educational Videos

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## Abstract

**Goal:** To present an analysis of production and common uses of educational video in online higher education courses.

**Method:** This research followed a qualitative inquiry approach, and data came from three sources: secondary data from communication logs during faculty training; analysis of 320 videos in business education and their course designs, and literature review.

**Results:** The use of videos for education, also known as video-lectures, started to be widely used for online and hybrid university classes in the last 10 years. The practice grew with the appearance of the Massive Open Online Course (MOOC) movement in the early 2010s, and became normal during the pandemic in 2020, when some classes incorporated the use of mini lectures together with, or instead of, synchronous online classes. The use of pre-recorded video is not new, but it is definitely a practice for which none or very few instructors received training as they were preparing to become university professors.

**Contribution:** This article aims to demystify the creation of educational videos by sharing what are common practices in the creation of video-lectures, and how to prepare for a successful “on-camera” experience.

**Keywords:** video, video-lectures, online video, educational video

## Introduction

Starting with the Khan’s Academy model of *home-made* videos for educational purposes in 2006, more people became aware of the usefulness of instructional videos, and the inclination to create or select a video to *teach* something expanded. With an abundance of cellphones including high quality cameras, and an easier use of the technology, video capture became ubiquitous, and the practice of creating video to teach something exploded. Today we can find how-to videos on every topic that you can think of: cooking, investing, workouts, car repair, finance, and so on. You name it and YouTube has it.

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In higher education, the use of pre-recorded videos, or video-lectures, grew especially with the appearance of the Massive Open Online Course (MOOC) in the early 2010s. This practice became usual in 2020 to replace class meetings given the suspension of face-to-face classes in response to the Covid-19 pandemic. The use of pre-recorded video is not new, but it is definitely a practice for which none or very few instructors received training as they were preparing to become university professors. Today, instructors, administrators and students in higher education are impacted by the use of video. Professors are trying to better understand how they go from classroom teaching to teaching on screen, and also how much effort it takes to produce good videos for their teaching. Administrators want to know how many resources are needed to develop quality videos in teaching. Additionally, students are hoping that they video quality is good, and that video-lectures can be accessed in their mobile phones as well.

## Methodology

This article focuses on an analysis of the top questions that instructors' have when they plan to use video in their teaching, and find answers to them in reports of best practices in the literature and through our analysis. This research followed a qualitative inquiry approach, and data came from three sources: secondary data from communication logs during faculty training; analysis of course designs, and literature review. The survey of faculty training logs included communication with instructors where we identified and classified questions and requests regarding the use of video; the analysis of online course designs helped to identify video types and uses; and the review of current literature provided foundation to expand the analysis on the uses of video in education. The sources included over 320 educational videos in graduate courses in business.

## The Questions that Instructors Have

The questions that instructors have before they start working on their courses can be categorized in three different areas: a) general knowledge; b) best practices; and c) implementation, see Table 1 for detailed questions.

Table 1

**The most common questions that instructors had**

Category	Question
General Knowledge	What is a video-lecture, mini lecture, video clip?
	How do you estimate the amount or length of video-lectures needed?
Best Practices	What are the types of educational videos?
	What are the most common uses of video-lectures in a class?
Implementation	Where do I (instructor) start?
	How do I build a story for this topic with video?
	Do I have to author all videos? Is it ok to use videos authored by others?

## The Answers Based on Best Practices and Literature

### General knowledge

#### What is a Mini-Lecture, Video-Lecture or a Video Clip?

Mini-lectures, video-lectures and video-clips are “videos purposefully created and fragmented” into meaningful chunks of information, and embedded in lessons and online modules (Scagnoli, et al, 2015). The lengths of videos take into account learners’ factors such as attention span, and cognitive load, and infrastructure factors, such as learners’ internet’s speed and bandwidth to stream videos. Hence, when the instructor takes 30 or 40 minutes to explain a concept in a video, the recording will be chunked into meaningful 6-10 minutes clips or less, depending on the topic. The breaks between chunks of information will help the learner process, understand or apply (Costley & Lange, 2017). Learning can be reinforced by interspersing interaction with the content between the video clips (Rasi & Poikela, 2016). Carefully planned multiple-choice questions; prompts for in-depth reflections, problem-solving, or another type of activities connected to the videos will create engagement with the topic and the instructor (Geri, et. al, 2017; Guo, et.al, 2014; Zhang, et. al., 2006). The video-lectures give learners the ability to play them anytime, play them multiple times, and pause them to take notes, which are the most appealing aspects, since this is not something that they can do in an in-person lecture (Berg et.al., 2014).

#### How do you estimate the amount or length of video-lectures needed?

“Video length matters, especially as a consideration before the video is viewed” (Clossen, 2018). There are several factors that determine the number of video-lectures needed in a course, such as a) cognitive load theory (Clark et al, 2005); b) replication of face-to-face time in class; and c) contact hours required for credential or accreditation.

- a. Considering cognitive load theory and theories of multimedia learning, the use of video enhances learning, and educational video needs to follow principles such as *segmenting*, or chunking the information into short clips, to enhance the level of cognitive activity necessary to reach the desired learning outcome (Geri, et. al., 2017; Mayer & Moreno, 2003).
- b. Some instructors wonder if they need to replicate the duration of a regular face-to-face class. In such case it is important to consider which of the role that the lecture plays in the in-person meeting: is the lecture key to understand the topic, or is it a complement to other sources? If the lecture is the most important source of information, then the video-lecture has a key role, has to be carefully planned and prepared. When the key content or theories are already provided via textbook, readings or third-party videos, the instructor could focus on telling a story, engaging with the topic, or explaining the application of that content (Chowdhry, 2018; Scagnoli, et. al., 2018). A video-lecture that includes a story or application will achieve several things that benefit the learning process:
  - Embed social and teaching presence for the class
  - Engage learners with application of content that is unique to this class and instructor
  - Provide opportunities for learners to go beyond core concept to critical thinking or transfer into specific application.



It is worth mentioning that presentations through video-lectures take less time to deliver than in-person lectures, because the presentation without an audience is more focused, there are no interruptions, or the small talk opportunities that happen in the classroom.

- c. The length of the video-lectures may count as contact hours for credit units or accreditation (Adler, 2020). However, contact hours include lecture time as well as labs, field trips, and activities that imply interaction between learners and content, or learners and instructors, and learners and peers.

All in all, going back to the question of how much video, how long the videos have to be, the answer will rely on the above factors as well as on the number of class meetings required for a particular course; or how much of time of class is spent in lectures.

## Best Practices

### What are the types of educational videos?

Exploring over 320 video clips of different courses in business education, six most common types of videos were identified. Table 2 shows the type of videos, the infrastructure used to create them, their common uses, and the amount of preparation required to produce them.

Table 2

**Type of videos according to the source of the videos**

Type of video	Location	Quality	Common Use	Preparation
Studio-type Recordings	Studio setting or "on-location" set up for professional recording	High - Formal	Video lectures on key topics	Instructor preparation is high Script and visuals needed ahead of time
	Instructor and guest speaker or expert on site			Instructor may act as interviewer
Instructor's Self Recording	Instructor's office or space of his/her choice	Medium - Formal or informal	Video lecture Announcements Feedback to learners Instructions Informal discussion	Instructor needs training on how to create a quality video at home
	Zoom or other web-conference	Medium-Formal	Guest speaker	Training for both instructor and guest
(Instructor) Screencasts	Instructor or producer's computer	Medium-Low	To explain technical processes (i.e., How to use an app)	Familiarity with the capture tool. Familiarity with the app to be captured
(Instructor) Narrated presentation	Instructor or producer's computer	High-Medium	Presentation	Instructor needs training on how to create video narrated presentation
Third party (Curated) videos Publishers or public sites	n/a	n/a	All of above	Careful search and curation Permissions to use may be needed (even videos in public sites may have restrictions) Learner's may need pay/access
Learner's produced videos	Learner's studio or own space	n/a	Presentation of project or assignment	Assignment Training on creation of quality videos

## What are the most common uses of educational videos?

The uses of educational video were analyzed based on well-known instructional design frameworks such as Gagne's *nine events of instruction* (Gagne et. al, 1992), and the *phases of instruction* (Alessi & Trollip, 2001). The uses identified in Table 3 were listed based on the phase of instruction when they are used, how they are used and what are the common types in each phase according to the types described in Table 2 before.

Table 3

### The use, examples and types of videos in different phases of instruction

Phases of instruction	Use of video	Examples (Watch and ...)	Types of videos
Activation of previous knowledge	<ul style="list-style-type: none"> <li>To trigger recall</li> <li>As prompt for discussion</li> <li>Check level of understanding on a topic</li> <li>Prepare for main topic</li> <li>On demand / Just in time training</li> </ul>	<ul style="list-style-type: none"> <li>Multiple Choice activity</li> <li>Discuss or comment</li> <li>Express opinion</li> <li>Do and reflect</li> <li>Remember how to ...</li> </ul>	<ul style="list-style-type: none"> <li>Third party (YouTube or Ted or Publisher's)</li> <li>Instructor's formal or informal video</li> </ul>
Connection with other sources for learning	<ul style="list-style-type: none"> <li>To introduce or enhance other source of information like a reading, simulation, game, or exercise</li> </ul>	<ul style="list-style-type: none"> <li>Follow up with the reading</li> <li>Start the simulation or game</li> <li>Expand with X reading</li> </ul>	<ul style="list-style-type: none"> <li>Instructor's formal or informal video</li> </ul>
Present new knowledge	Introduce new concepts (these are usually class required)	<ul style="list-style-type: none"> <li>Short video lectures, very focused on specific topic</li> </ul>	<ul style="list-style-type: none"> <li>Instructor in studio or informal</li> <li>Instructor's narrated slides</li> </ul>
Practice and Guidance	<ul style="list-style-type: none"> <li>As prompt for discussion</li> <li>Check level of understanding on new topics</li> <li>To provide demonstrations</li> <li>Extra practice</li> </ul>	<ul style="list-style-type: none"> <li>Multiple Choice activity</li> <li>Discuss or comment</li> <li>Do as in the video</li> <li>Test your skills</li> </ul>	<ul style="list-style-type: none"> <li>Instructor self-recording or screencasting</li> <li>Third party practice</li> </ul>
Demonstration and Assessment	<ul style="list-style-type: none"> <li>Instructions for assessment</li> <li>Presentation of problems or cases</li> <li>To provide feedback</li> <li>Informal tips or help</li> </ul>	<ul style="list-style-type: none"> <li>Follow instructions or examples</li> <li>For further understanding</li> <li>Receive feedback</li> </ul>	<ul style="list-style-type: none"> <li>Instructor's studio, self-recording or screencasting</li> </ul>
Application and Integration	<ul style="list-style-type: none"> <li>In depth presentation</li> <li>Follow up on live or asynchronous discussions</li> <li>Connection with world of work</li> <li>Examples from real applications</li> </ul>	<ul style="list-style-type: none"> <li>Do</li> <li>Comment</li> <li>Reflect or react</li> </ul>	<ul style="list-style-type: none"> <li>Third party (YouTube or Ted or Publisher's)</li> <li>Instructor's formal or informal video</li> </ul>
Informational	<ul style="list-style-type: none"> <li>Update on course status</li> <li>Modification in schedule or assignments</li> <li>Inform about current events</li> </ul>	No task attached	Instructor's self-recording or studio.

## Implementation: Building Videos for a Class

### Where to start

In building video assets for a course, it is important to identify the core content from what is temporary content that will only be used or mentioned in a term or with a particular cohort.

**Core concept videos** are those that refer to the core content of the module. This content is permanent, it is based on theoretical foundations that will not change frequently. For example, the principles of physics or math, the core tenets of chemistry, or history. This content will be recorded in a studio or in a more professional setting. They will have a longer *shelf life* and may become available in a library catalog of videos on a topic to be added to other courses and modules in the future.

**Temporal references in videos** will be limited by different factors, such as the *academic term* when the course is taught (“*this spring term we are going to ...*”); the *audience* who will be taking the course this term, (i.e. “*When your parents say X to you*” v. “*when your supervisor says X to you*”); the *program* where this module or course is embedded in, (i.e., a same module about *Managing Conflict* can be part of a course on Organizational Behavior, or School Administration, or Human Resource Management). So temporary videos will need to be renewed probably every term the course is used.

### How can a story for this topic be built with video?

Creating the roadmap for a course is like building a documentary on the topic of the course; or writing a book. Each module is an episode of that documentary, or a chapter of a book. To build a documentary with videos, instructors will focus on the core concepts that learners need to know to learn that topic. Here are some recommendations from the literature (Shieh, 2009), and practice of those who have created successful videos telling the story of a course:

When creating the story board or the roadmap for the course, follow these recommendations,

- List the key concepts, each topic is a module, or a chapter, and they will become the core of the video-lecture.
- Think of a metaphor, a background or a context that may add a meaningful context to the video-lecture.
- Identify activities and assignments that will reinforce the student’s learning after they watch the video. Guiding questions, interactive elements, or associated homework assignments will enhance learning.
- When recording videos, these recommendations are key:
- Do not mention temporal references related to a particular course, such as a date, academic term, course name or number, or activities connected to the video, because all those temporal references may change in future offerings and by mentioning them in the video will invalidate its content.
- Keep the video-lectures brief and targeted on learning goals.
- Use audio and visual elements to convey appropriate parts of an explanation; make them complementary rather than redundant.
- Use signaling to highlight important ideas or concepts.
- Use a conversational, enthusiastic style to enhance engagement.

## Do I have to author all videos? Is it ok to use videos authored by others?

The vast amount of video and multimedia resources on the Internet may seem overwhelming and instructors sometimes question if their video-lecture is needed or can be replaced by a video from another expert. It is possible that the content has already been created by others, but existence does not guarantee the trustworthiness of information. The video sources need to be checked and confirmed by the instructor, as well as the permission to use, or distribute through the learning management system. When using videos from publicly accessed social media sites such as YouTube, Facebook, LinkedIn, and others, instructors need to beware that these sites do not guarantee shelf life of the video on their site (Madathil, et. al., 2014). Content may disappear without further notice. At the same time, some videos may not be downloaded and distributed via our local servers, unless permission has been granted by explicit permission or licensing.

To evaluate the quality of video from the Internet, especially if it is not from a reliable source, such as a well-known author, an academic institution, a government unit, or a textbook publisher; we recommend to use the same system that is often used to evaluate any Internet resources: purpose and intended audience, authority and credibility, accuracy and reliability, currency and timeliness, and objectivity or bias of the source. This method follows the recommendations of what is known as “RADAR” (Relevance, Authority, Date of publication, Appearance, and Reason for the publication) (Mandalios, 2013). Focus in these elements has proven to be efficient in the assessment of public sites’ content in text, multimedia or video formats.

## Conclusion

The educational transformation that started several decades ago with broader access to technological tools and the Internet, has now brought the possibility of enhancing learners’ engagement in online courses through the use of video. Research has shown the relevance of video-lectures in removing distance between students and instructors, students and content and among peers. Still, video production is a new frontier in the creation of educational materials, and instructors are trying to better understand new ways to create and use pre-recorded video in their teaching. This article aimed to demystify the use of educational videos by sharing our analysis of common practices in the creation of video-lectures. The multiple examples and tangible experiences that we observed in this study inspired us. We could witness a clear demonstration that the instructors who love their art make every effort possible to reach their learners over time and space, not only meeting their teaching goals, but also building that human connection that was very hard to achieve in earlier versions of online or distance education. We hope that this article has also inspired instructors and learning designers to continue innovating to improve contact, connections and learning overall.

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# Including the sustainability topic in the Accountancy program in the light of Institutional Theory: FEA/USP

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## Abstract

**Objective:** Understand the institutionalization process of the sustainability topic in the Accountancy program at the School of Economics, Business, and Accounting at the University of São Paulo (FEA/USP).

**Method:** Exploratory case study with semi-structured interviews held with 8 professors involved with the topic and/or who witnessed the inclusion of sustainability in the program. Content analysis was used, from which 6 categories emerged. Data were triangulated using the interviewees' responses and the Pedagogical Political Projects (PPP) from 2000, 2006, 2009, 2013, and 2016.

**Results:** The topic sustainability is semi-institutionalized, transitioning towards institutionalized. The nature of the sustainability concept adopted by the program has *status quo* maintenance and reformist characteristics. The conclusion is that the courses addressing sustainability has more holistic and interdisciplinary attributes than the accounting program as a whole.

**Contributions:** This study's practical contribution is to serve as a basis for other institutions to include sustainability in their pedagogical projects. Regarding its theoretical contribution, this study shows the empirical applicability of the Institutional theory beyond the organizational business level, entering the educational sphere.

**Keywords:** Institutional theory; Sustainability; Bachelor's degree in Accountancy.

## 1. Introduction

The commotion brought about by the book *Silent Spring* (Carson, 1962) was a milestone for environmental discussions. Subsequently, agendas and conferences motivated discussions involving government policy, business corporations, and society regarding sustainability challenges (Adams, Heijltjes, Jack, Marjoribanks & Powell, 2011). The need for a more sustainable world was even more evident in the face of the 2008 global crisis. Since then, sustainability has been established as a field that needs the attention of business leaders, governments, universities, and non-governmental organizations (Annan-Diab & Molinari, 2017).

Over the past decade, the United Nations (UN) has placed education at the center of its strategy to promote sustainable development, promoting strategies such as the Principles for Responsible Management Education (PRME), which is committed to leading transformational changes towards a more socially and environmentally responsible leadership (Assumpção & Monzoni Neto, 2020). Annan-Diab and Molinari (2017) and Figueiró and Raufflet (2015) corroborate that there is a push to incorporate sustainability in pedagogical projects considering that educational systems reflect the aspirations and challenges posed by society (Assumpção & Monzoni Neto, 2020). Additionally, universities significantly influence a number of the world's future leaders and have the responsibility to train leaders and change agents to support the development of a more sustainable society (Assumpção & Monzoni Neto, 2020, Adams et al., 2011; Jacobi, Raufflet, & Arruda, 2011; Adams, 2018).

The discussion became urgent in recent years, and sustainable and ethical practices are a growing concern for accounting professionals (Wyness & Dalton, 2018). Higher Education Institutions (HEI) face the challenge of facilitating and contributing to a sustainable society (Jacobi, 2003). Part of the universities includes the sustainability topic in various fields of knowledge, including programs in the business field, the impact of which in the corporative world is indisputable (Jacobi, Raufflet & Arruda, 2011; Gonçalves-Dias, Herrera & Cruz, 2013).

However, despite the various initiatives and a growing number of universities seeking to engage with sustainable development, most HEIs have a traditional approach and continue to employ reductionist and mechanistic paradigms (Lozano, Lukman, Lozano, Huisingsh & Lambrechts, 2013). Thus, we highlight Chulián's (2011) criticisms, which note that accounting schools continue to develop technical skills only, i.e., focusing merely on economic and financial management. Even more problematic is when these schools disregard the possibility of discussing sustainable contexts. Wyness and Dalton (2018) state that although the inclusion of sustainability in undergraduate accounting programs has been discussed in recent years, the extension with which it has been included in accounting schools varies considerably worldwide.

In this context, the teaching of accounting has to change to incorporate more current formats and include critical, trans-disciplinary, and communicative competencies to support a transformation in the discipline and protect the public interest (Gray & Collison, 2002) (Saravanamuthu, 2015). Institutional theory precepts (Dimaggio & Powell, 2005) favor these changes, considering that organizations are led to incorporate specific changes and procedures established by rationalized concepts (Meyer & Rowan, 1977). According to Berger and Luckmann (2011), human existence results from a context that involves order, direction, and stability.

Therefore, considering the relevance of accountants in the corporate world decision-making and how incipient the discussions within HEIs are regarding training leaders with a critical view of the business model from a sustainable perspective, the following study question emerges: **How does the process of institutionalization of the sustainability topic occur at FEA USP?** To answer this study question, the objective of this single case study was to understand the institutionalization of sustainability in the Accountancy program at FEA/USP.

The relevance of this topic lies in the fact that research addressing the institutionalization of the teaching of accounting considering sustainability is incipient. Discussing this topic promotes a reflection upon the need to include sustainability in undergraduate programs and consider the importance of training critical professionals aware of the social, economic, and environmental relationships.

The practical contribution of this study is to serve as a basis for other institutions to include sustainability in their pedagogical projects. The theoretical contribution shows the empirical applicability of the Institutional theory beyond the organizational business level, entering the educational sphere. Hence, an investigation on how sustainability is institutionalized in an Accountancy program is relevant for higher education. Accountancy is a discipline that trains professionals who will work as managers, and accounting information of an economic, social, or environmental nature supports decision-making and, therefore, is vital for society as a whole.

## 2. Theoretical Framework

### 2.1 Including sustainability in higher education and in the teaching of accountancy

There are international agreements and declarations addressing sustainability in higher education (Wright, 2004), such as the Talloires Declaration (TD), Halifax Declaration (Canada, 1991), Kyoto Declaration (Japan, 1993), Swansea Declaration (Wales, 1993), Copernicus Charter (Barcelona, 1994), Declaration of Thessaloniki (Greece, 1997), and Lüneburg Declaration (Germany, 2001). In 2005, the United Nations General Assembly established the Decade of Education for Sustainable Development (ESD), a time when education was emphasized as an indispensable element for achieving sustainable development (UNESCO, 2005). After the ESD initiative, the UN Global Compact established an initiative to promote the Principles for Responsible Management Education (PRME). It was created in 2007 and launched at the UN Global Compact Leaders Summit, in a meeting attended by more than 1,000 business, society, and government leaders. PRME's primary objective is to develop competencies for students to promote sustainable value for a more inclusive global economy through education, research, and extension activities (Parkes, Buono & Howaidy, 2017).

By taking on professors as educating agents for subsequent generations and the current generation of business leaders, business schools are in a unique position to influence the mindset and actions of some of the largest and most influential organizations in the world (Parkes et al., 2017). Hence, the commitment to improving education addressing responsible management is indispensable. Gonçalves-Dias, Herrera, and Cruz (2013) conclude that changes in higher education go beyond the inclusion of new content in curricula as teaching-learning models should be reformulated and new skills should be included in the training of professors. However, academia may fail to propose this reformulation regarding the need for reformulations in the empirical sphere. Figueiró and Raufflet (2015) performed a literature review in the management field, and few studies address, from a philosophical and broader design of education, how this change could and would be achieved by the programs' design or through explicit educational paradigms.

Hahn and Reimsbach (2014) are concerned with the mere superficial integration of sustainability in the programs' curricula. Even though accountants do not directly work with sustainability practices, they communicate these practices; thus, sustainability should be part of management key courses, such as Accounting and Finances, considering that optional courses do not reach all students (Rasche et al., 2013; Hahn & Reimsbach, 2011).



Considering the information and concerns reported earlier, Silva Junior, Vasconcelos, Silva, and Campos (2019) addressed a sample of 1,882 undergraduate and graduate students attending business and accounting programs in Brazil and concluded that the respondents do not share the sustainability notion. The conclusions reveal that the economic dimension prevails above other dimensions, based on an opportunistic and utilitarian logic that permeates the training of accountants. Hence, there is a need to reflect upon educational training, especially the need to rethink the current educational model towards a sustainable logic.

The previous discussion shows that the teaching of sustainability among accounting students is incipient. Gray and Collison (2002) consider a series of problems related to the accounting profession, among which the fact that accounting is closely linked to modernity structures and environmental issues is marginal. The problem seems to be caused by the fact that accounting professionals do not receive “philosophical education”, but what the authors call technical “training”. They argue that sustainability should be central in all accounting programs to meet the interests of students, the profession, and society in general, to progress from a “welcome guest” (Gray, 2013) to a permanent resident in the accounting field (Wyness & Dalton, 2015).

## 2.2 Institutional Theory

DiMaggio and Powell (1983) talk of an isomorphic tendency among organizations, a tendency of organizations to resemble each other. An isomorphic institutional change occurs due to three mechanisms (Table 1).

Table 1

**Institutional isomorphism mechanisms**

Coercive isomorphism	Mimetic isomorphism	Normative isomorphism
<b>Results from formal and informal pressure exerted on organizations by other organizations. It results from a dependence relationship or society's cultural expectations toward organizations.</b>	Derives from complex situations, the solutions of which are not clear. Hence, organizations take other organizations as models and sources of organizational practices.	Results mainly from professionalization intended to define conditions, methods, and controls. Derives from formal education through legitimation based on cognition produced in college specialization and the growth of professional relationship networks responsible for disseminating new models.

Source: Based on DiMaggio and Powell (1983).

### 2.2.1 Institutionalization Processes

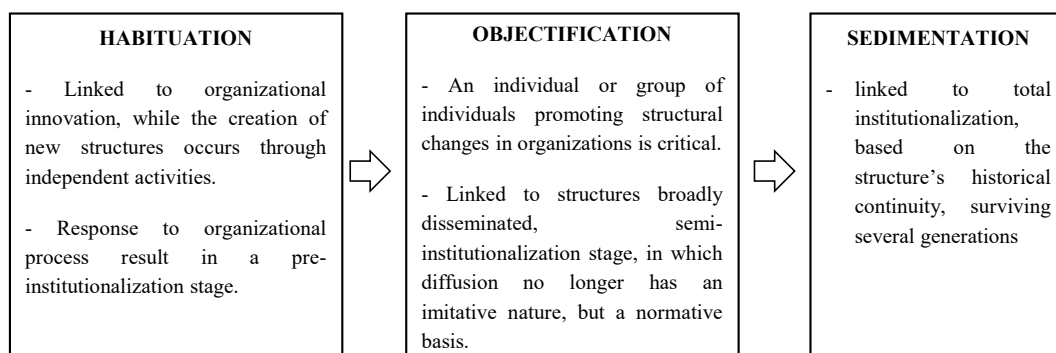
This subsection is based on the study by Tolbert and Zucker (1999) that specifically addresses institutionalization processes. The authors adopted definitions provided by Schutz for habitual actions and typification. The first is characterized by behaviors developed empirically and adopted by actors to solve routine problems. Typification involves the reciprocity of definitions or shared meanings linked to habitual behavior. The institutional coercive power of institutions influences individuals, and typifications have their own and external reality. According to Zucker (1977), exteriority is related to the historical continuity of typifications and transmission to new members. “Every institution has a body of knowledge transmitted as a recipe, that is, knowledge that provides institutionally adequate rules of conduct” (Berger; Luckmann, 2011, p. 90).

Tolbert and Zucker (1999) note that when actions acquire the quality of exteriority, they are called sedimentation. In this sense, with emphasis on externality in a set of behaviors, the transmission increases the degree of institutionalization of behaviors, which interferes with future transmissions (Tolbert & Zucker, 1999). Thus, the set of processes that are sequential (habituation, objectification, and sedimentation) suggests the variation in institutionalization levels concerning the degree of depth of connection with the social system, stability, and power to determine behaviors. The process starts with innovation, which arises through technological change, market forces, or legislation. From this, habituation begins, which, by having inter-organizational monitoring and theorization, moves on to the next stage, objectification. By analyzing the positive impacts, the level of resistance, and defense on the part of the interest group, it is possible to verify whether the process reached the level of sedimentation.

Hence, habituation is a response to organizational problems or a formalization of arrangements into policies and procedures, which may occur in one or more organizations facing similar problems. Therefore, these processes result in a pre-institutionalization stage. According to Dimaggio and Powell (2005, p. 84), in fields with a high degree of uncertainty, entrants “who could serve as sources of innovation and variation will seek to overcome mandatory innovation by imitating practices established in the field.” In this context, in the pre-institutionalization stage, similar organizations may adopt a structure according to their correlated circumstances.

In this sense, the movement that would lead to a more permanent status is the process of objectification (Tolbert & Zucker, 1999; Zucker, 1977). Objectification may have a crucial element called *champion*, or the individual or group of individuals who fight for and defend a cause, promoting structural changes in organizations. For champions to be successful, they need to identify the organizational problem and then develop theories that will serve to diagnose the sources of dissatisfaction or failure, thus presenting a solution for the problem (Tolbert & Zucker, 1999, p. 209). Therefore, the structures that were objectified and widely disseminated are in the semi-institutionalization stage, in which diffusion ceases to acquire an imitative nature, starting to have a normative basis, reflecting the implicit or explicit theorization of structures, and a higher survival rate than in the pre-institutional phase, although these do not last.

Sedimentation is characterized by the propagation of its structures throughout the group of actors theorized as suitable adopters and by the perpetuation of structures over a considerably long time (Tolbert & Zucker, 1999, p. 209). Therefore, the understanding of the sedimentation process is the identification of factors regarding the scope of the diffusion process and the conservation of the structure in the long term. Figure 1 presents a summary of the institutionalization processes’ characteristics.



**Figure 1.** Institutionalization Processes

Source: Based on Tolbert & Zucker, 1999; Zucker, 1977.

A structure's full institutionalization will depend on a few factors: low resistance from opposition groups, continued support is provided and promoted by the defender groups, and there is a positive relationship with the results achieved (as shown in Table 2)

Table 2

**Institutionalization stages and comparative dimensions**

Dimension	Pre-institutional stage	Semi-institutional stage	Total institutionalization stage
Processes	Habituation	Objectification	Sedimentation
Adopters' characteristics	Homogeneous	Heterogeneous	Heterogeneous
Impetus for diffusion	Imitation	Imitative/normative	Normative
Theorizing activity	None	High	Low
Variance in implementation	High	Moderate	Low
Structure failure rate	High	Moderate	Low

Source: Tolbert and Zucker (1999, p. 201).

Thus, this work has great value for empirical tests and is directly linked to this study's purposes. Through the processes presented here, we will seek to identify in which institutionalization stage the case analyzed here is included.

### 3. Methodological Procedures

This is a qualitative study with a single case study (YIN, 2010). Public institutions were considered to be the object of study because they do not restrict the disclosure of documents necessary for analysis. The second criterion was that the HEIs had Accountancy programs addressing sustainability in their pedagogical projects, and the third criterion was having a center of studies directed to sustainability within the program.

Two teaching institutions were found with these characteristics, FEA/USP and another HEI. After contacting both institutions, only the first authorized the study.

The institution chosen for this study was FEA/USP. This choice is justified considering that USP ranks first in the Webometrics ranking, classifying universities in Latin America. Its faculty body includes professors who are opinion leaders in the field of accounting and sustainability in Brazil. For instance, the first dissertation addressing environmental accounting was advised by Dr. Eliseu Martins. The professors are aligned with important movements, such as the participation of Dr. Nelson Carvalho in the International Integrated Reporting Council (IIRC) and Dr. Eduardo Flores as a board member in IIRC, and Dr. José Roberto Kassai's participation in the Brazilian Integrated Reporting Committee (CBARI). FEA/USP is a PRME signatory member and seeks to provide responsible executive education aligned with Unesco.

Data were collected using semi-structured interviews and by consulting educational laws and standards and PPPs available at the institution regarding 2000, 2006, 2009, 2013, and 2016 currently in place. This process is necessary to identify when the courses linked to sustainability were included in the program, to compare with the literature, and establish the historical context.

As for the interviews, open-ended questions, even when guided by a script, collect the respondents' implicit assumptions (Flick, 2004, p. 106). In the beginning, it became established that there would be five interviewees as they were involved with the topic or witnessed its inclusion in the program. During the interviews, another three participants were included to contribute to the study, and eight people participated.

Data were analyzed through content analysis according to the stages proposed by Moraes (1999), namely: preparation (pre-reading the materials), unitization (dividing the topic into units of analysis), categorization, description, and interpretation. The categories and subcategories (Table 3) were developed according to the theoretical framework, that is, pre-established. Based on this theoretical construction, the categories were defined in two ways. The categories concerning the institutionalization process were taken from Beltrame (2015), while new categories emerged from the theoretical framework on sustainability, education for sustainability, and accounting.

The pedagogical, political projects of the Accountancy program from the institution selected were analyzed from 2000. The reason is that the institutional theory requires the study to involve many years to verify when the sustainability subject was officially included in the program. Other documents involve laws (Law No. 9.597/1999) on Environmental Education (EE), FEA/USP Resolution No. 4097, from June 1994 (consolidated version with changes), National Curriculum Guidelines for the Undergraduate Program in Accountancy, standards for registration in international certification, in addition to the institutional website, and access to the courses offered through the Moodle platform. Triangulation was conducted using the interviewees' responses, the content of which was organized according to the pre-established categorization and documents collected in the institution. Table 3 presents a synthesis of the study's methodological procedure, showing a connection between this study's objectives, categories of analysis, the questions, and the authors adopted in data analysis. We verified whether sustainability applied to the program was intended to keep the *status quo* (understood here as incremental changes in the current social organization), reform, or radical social transformation based on the work of Hopwood, Mellor, and O'Brien (2005). This classification was performed together with the divisions of institutionalization processes (habituation, objectification, and sedimentation).

Table 3

**Synthesis of the methodological procedure**

Analysis roadmap (section 4)	Categories	Subcategories	Questions script	References
To verify how the sustainability topic was included in the Accountancy program.			How did you come up with the idea to include sustainability in the AS program? Who are the main actors involved? Was there any resistance?	PPPs (2000, 2006, 2009, 2013, 2016)
To identify what type of isomorphism occurred in the case studied here.	Isomorphism	Mimetic Coercive Normative	Was there any type of internal or external pressure to include sustainability in the program? Was there inspiration from any other institution?	Dimaggio and Powell (1983, 2005)
To analyze the level of institutionalization of the sustainability topic in the program	Habituation	Innovation; Structure; Policies; procedures	Is there any kind of consensus on the value of this new structure within USP and with other FEA programs? Is there institutional support?	Tobert and Zucker (1999); Law 9,9795/99; National Curriculum Guidelines for the Undergraduate Program in Accountancy (2004).
	Objectification	Social consensus; Structure diffusion; Presence of champions	Has the presence of sustainability in the AS program brought positive results? Internal or external?	
	Sedimentation	Positive results; Continuity of structure; Low resistance	Do the professors have difficulty in inserting sustainability into their courses? Do they receive support? Do you currently face resistance against teaching sustainability in the program?	
To present the nature of the concept of sustainability adopted by the program.	Sustainability	Concept nature	What is the concept of Sustainability adopted by the FEA/USP AS program? Is more than one concept adopted? According to the concept adopted, is any type of social change expected? What type? Incremental, reformist, or radical?	Gray Collison (2002); Hopwood, Mellor, and O'Brien (2005); Chulián (2011); Rasche et al. (2013); Hahn and Reimsbach (2014); Costa and Loureiro (2013); Jocabi (2003); Gonçalves and Martendal et al. (2013);
	Education for sustainability in accounting	Holistic thinking Interdisciplinary Results for society	Is there a dialogue with other fields of knowledge concerning sustainability? The topic's central idea is to present content in a broad way or with a focus on accounting?	

## 4. Data analysis

### 4.1 Origin and inclusion of sustainability in the program

ESD or EE is not mentioned in the program's pedagogical projects from 2000 to 2008. In 2009, the pedagogical project included the Social Balance optional course, which had Environmental Balance Sheet included in its content. This course remained in 2003.

In 2016, another two optional courses involving environmental issues within the Accountancy were included, namely: *Relato Integrado e Sustentabilidade* [Integrated Reporting] and *Estudos Complementares* [Complementary Studies] (every semester a new topic is addressed). In the second semester of 2016, the topic was "The 17 Sustainable Development Goals and Business Schools." The program of the Integrated Report and Sustainability course includes video presentations of speeches of the CEOs of large companies engaged in the theme of sustainability, lectures and workshops, educational programs, books, and the *Idea Sustentável* magazine. There are also suggestions regarding the most diverse topics related to environmental issues, consumption, politics, and economics.

The study's first phase was to identify why sustainability was included in the Accountancy program at USP. In this sense, interviewees A and B were the professors who promoted this process the most. Interviewee A started teaching the topic within the Complementary Studies course, and interviewee B was one of the IIRC's members, which was the precursor of the Integrated Reporting international body.

Interviewee B points out two origins of the topic within accounting. The first was when he came across the triple bottom line concept, i.e., the idea that one should not privilege the bottom line only, i.e., net profit, but that people and the planet were also important. The second was when B took part in the IIRC, in which the Prince of Wales questioned the role of accountants in a context that had already been taken over by environmentalists, engineers, lawyers, and economists.

IntB. It landed here because I ended up being part of the council (IIRC), [...] so I proposed this course and IntA was enchanted by the idea, [...] he developed a course we administer in partnership. He is teaching all the classes, sensitizing students and this course has been a success [...].

Interviewee G corroborates this statement, as the following excerpt shows:

IntG. The way IntA teaches the course, as IntB says, it attracts many students from other programs, in the same way as accounting attracts many professionals from other fields [...] basically financial managers interested in accounting, [...] you would not have students from other fields interested in the concept of environmental accounting, sustainable accounting.

IntE. So, we started offering this course with some regularity, it was more or less when IntA started investing in this topic, started to specialize in it [...].

Note that champions were first identified. According to Tolbert and Zucker (1999), champions are those responsible for promoting innovations and defending ideas together with the other group members. In this case, the champions are IntA and IntB. Another point is that the topic's inclusion in the program was based on social changes and not necessarily on coercion through norms or laws.

## 4.2 Isomorphism identification

Regarding isomorphism in Brazil, there is no specific norm that demands Accountancy programs to include sustainability in their curricula. Furthermore, even though Law No. 9,795/1999 regulates that Environmental Education should be at all levels of the educational process, this is not clearly stated by the National Council of Education resolution, establishing the National Curriculum Guidelines for the undergraduate program in Accountancy. In this sense, teaching institutions may or may not include EE or ESD in their curricula, revealing an apparent dissonance between law and the resolution directed to the program. Hence, coercive isomorphism, which according to Dimaggio and Powell (1983) is characterized as formal pressure exerted on organizations, possibly deriving from governmental orders, does not apply to this study.

As for mimetic isomorphism, the interviewees were asked whether other teaching institutions served as inspiration:

IntA. If I'm not mistaken, this is the first course in the world. Actually, we were inspired by the market's needs.

IntB. Our inspiration came from what I just told you, both from the triple bottom line concept, and my participation in the IIRC.

IntE. Not that I recall. I remember we discussed the topic, of developing research, and it was a natural thing to do.

IntG. I do not know this process, but USP is certainly a reference in Brazil, about universities' experiences.

In this context, normative isomorphism is related to formal education based on cognition produced in university specialization and professional relationship networks for disseminating new models. According to Dimaggio and Powell (1983), one of the mechanisms that encourage isomorphism is the selection of personnel, which may occur through personnel recruiting, with high performance among restrict groups of institutions, such as high-level executives who work in the financial and/or legal departments. IntB and IntG discuss the process of job succession:

IntB. [...] well, I have to recruit and keep the talents the management model will help produce results, which was responsible for past success.

IntG. The profile of the accounting student at FEA is different from some other universities that train students to work in small accounting offices. Here, most of our students are hired by large companies.

Regarding this select pool of companies, IntD notes that it is part of IntB's universe, who is one of those responsible for including the topic in the AS program.

IntD. [...] B has a very strong leadership capacity, so he brought many people to this Integrated Reporting course, for instance[...] so he noticed it at the level of the market, where he is.

Hence, these aspects highlighted here show the normative type of isomorphism linked to professional specialization and the succession of positions within a company. Additionally, according to the excerpts reported here, the interviewees associate an accountant's knowledge regarding sustainability and skills to produce reports that address these issues to high-level executives within institutions with a higher aggregate value.

It shows that the students who access such knowledge are more likely to stand out in the job market. However, this type of educational behavior may result in an unequal hiring process among companies. The reason is that not all higher education institutions address the topic in their accountancy programs so that students do not have the same opportunities to occupy top positions in large corporations, given a deficiency in their background. Here we highlight a point in the theory of Dimaggio and Powell (2005, p. 129): “the organizational fields that comprise a professionally trained workforce will be primarily driven by status completion.”

### 4.3 Habituation, objectification, and sedimentation

Regarding the first stage in the institutionalization process, habituation, involving innovation, structure, and policies and procedures, is not present in the case under study. According to Tolbert and Zucker, habituation or pre-institutionalization is linked to uncertainties that permeate an economic activity and demand companies to seek competitive strategies. In this case, we address an educational institution that saw social changes, both environmental and market nature, and the need to include the topic in the program.

There is no high degree of uncertainty at this level, which was not identified in any of the interviewees' statements. Some issues will present the level of institutionalization based on objectification and sedimentation. One of the main points for this analysis is whether a group of people resists the new proposal. Regarding this aspect, the respondents report:

IntA. No, there was no resistance. [...]. No difficulties at all.

IntB. None, because it is not about sustainability only, whenever a professor proposes a new course, people always support the idea.

IntC. On the contrary, people end up seeing it as an alternative for you to do conduct new studies.

The interviewees' reports show there was no resistance against the teaching of sustainability. The fact that another course was implemented over time also reinforces it among other faculty members. In this sense, there are no opposing groups, which, according to Tolbert and Zucker, characterize the level of sedimentation in which defender groups provide support, and there is a positive relationship with the results achieved.

Regarding institutional support, note that the interviewees have different views, which is attributed to the fact that a teaching institution has certain autonomy regarding institutional hierarchical arrangements. Concerning positive results accruing from having included the topic in the program, the interviewees focused on how students can work with this subject in companies, though some also mentioned scientific production.

Regarding the structure, the interviewees were asked about the relationships established with other departments or other fields of knowledge.

IntA. Our research center [...] comprises approximately 50 people [...]. It is multidisciplinary.

IntB. It is very close, we have students from the biology, communication, and economics programs [...].

IntC. Very little, you don't have any, unfortunately, it is something we complain of, there is a physical issue that usually people mention within the university, an inter-institutional issue [...].

IntD. Our structure is very verticalized into departments, the departments don't talk much [...] it's sort of every man for himself.



Hence, opinions are quite divergent on the inter-institutional relationship and regarding other fields of knowledge. It seems that those involved with sustainability, even if indirectly, admit that there is a need for other fields of knowledge to get involved, while those not directly involved have a more skeptical involvement regarding this exchange of knowledge.

In this sense, it is possible to identify the topic's institutionalization phase. Table 4, based on the theory proposed by Tobert and Zucker (1999), shows the stages of institutionalization and the comparative dimensions, whereas, in this new version, we highlight the stages of the Accountancy program at FEA/USP.

Table 4

**Identification of the institutionalization's stages and comparative dimensions**

Dimension	Pre-institutional stage	Semi- institutional stage	Total institutional stage
<b>Processes</b>	Habituation	Objectification	Sedimentation
<b>Adopters' characteristics</b>	Homogeneous	<b>Heterogeneous</b>	<b>Heterogeneous</b>
<b>Impetus for diffusion</b>	Imitation	<b>Imitative/normative</b>	<b>Normative</b>
<b>Theorizing activity</b>	None	<b>High</b>	Low
<b>Variance in implementation</b>	High	Moderate	Low
<b>Structure failure rate</b>	High	Moderate	<b>Low</b>

Sources: Tobert and Zucker (1999, p. 201).

The table shows the stages (in bold) of the topic sustainability, that is, between the semi-institutionalized (objectification) and institutionalization stage (sedimentation). The characteristics of the adopters are heterogeneous, even those who do not use the topic as a research topic. One example is IntC and IntE, who already taught the Social Balance course and were invited to give speeches in the Integrated Report course, including IntD.

Based on what was observed during the study, the structural failure rate is low due to each department's autonomy in including courses or themes related to accounting content without any impediment.

The dimension concerning the variance in implementation does not apply to the case under study, considering it is related to the number of organizations that start a given structure and how it varies. There is no way to identify this variance at USP because a more comprehensive survey would be needed involving the remaining teaching institutions, which would not be feasible in a single case study.

In this context, the theory is applied to a certain point, considering that the characteristics of an academic organization differ at various levels from a business organization regarding profit-seeking, market permanence, strategic levels, and competition.

#### 4.4 Sustainability in Accounting Education

After analyzing the sustainability's level of institutionalization, it is possible to identify the views of the actors involved in sustainability teaching.

Gray and Collison (2002) note that the professors may not be able or not want to learn/teach the topic. The interviewees consider this issue when asked about the barriers to teaching sustainability:

IntD. It depends on the professor, I guess it depends on almost a personal view, whether the person believes in it, or thinks it exists or that it is important.

IntG. So, the greatest difficulty to teaching these subjects is not necessarily the existence of an opposing group. But it is the existence of professors qualified in something as multidisciplinary as the concept.

Other interviewees mentioned the difficulty of including the topic transversally with other disciplines. According to Rasche et al. (2013), sustainability should integrate key disciplines such as Finances. Chulián (2011) notes that the role of a professor-researcher positively contributed to the change of values in the future generation of accountants. However, as observed, this is not an easy task. First, professors would have to incorporate sustainability concepts within their field of knowledge and research, even within key and advanced courses such as Fiscal Accounting, Corporate, Costs, and Management.

Superficiality may lie in the fact of not delving into the subject, mainly due to a difficulty of the professors themselves to be able to dialogue with environmental and social issues within their disciplines and, on the other hand, according to Rasche et al. (2013), the inclusion of optional courses not reaching all students.

A discussion involving Law No. 9,795/1999 is necessary at this point. It shows that EE, as an integrated educational practice, should not be implemented in a specific course within the curriculum. Additionally, it should be included in the professors' training at all levels and in all the courses, whereas the professors should receive complementary training.

Gray and Collison (2002) also address issues involving the students. According to the authors, the students opt for the accounting program considering satisfaction, anticipated success, interest, and preference. Considering that students opt for studying these courses, they tend to relate this knowledge to personal opinions rather than the career's future.

However, one of the reasons sustainability was included in the program was because the market needed to absorb accountants with knowledge on the subject, considering that accountants are responsible for reporting business practices. According to information provided by the program's coordinator, corroborated by the documents, 513 students enrolled in optional courses involving Sustainability, Social Balance, Environment, and ESD, with 227 students taking the Integrated Reporting and Sustainability courses since 2013. It is worth noting that the Integrated Reporting guidelines began discussions with the IIRC in 2010, and it was implemented in 2013. Therefore, the institution is in line with market practices.

### 4.5 Sustainability Concept

To establish the nature of EE or ESD present in the program under study based on an analysis of the courses and reports, we sought to identify the concept adopted by the program and where it would be placed within the mapping proposed by Hoopwood et al. (2005) in which approaches are divided between *status quo* maintenance, reformist, or radical changes in society.

Even though the content of the courses indicates texts and videos with an evident *status quo* approach, such as the UN videos and others with economic characteristics, the interviewees report that they do not adopt only one concept to teach sustainability in the program.

The interviewees presented various views regarding the type of change promoted by the inclusion of sustainability in the program and its nature concerns *status quo* maintenance. Hence, to classify the Accountancy program at FEA/USP, Table 5 summarizes the theory identifying the *status quo* and reformist characteristics, considering that there is no evidence that the accounting program presents characteristics of a radical reform of society. The characteristics of the two trends are presented, and those marked in bold refer to the program's nature.

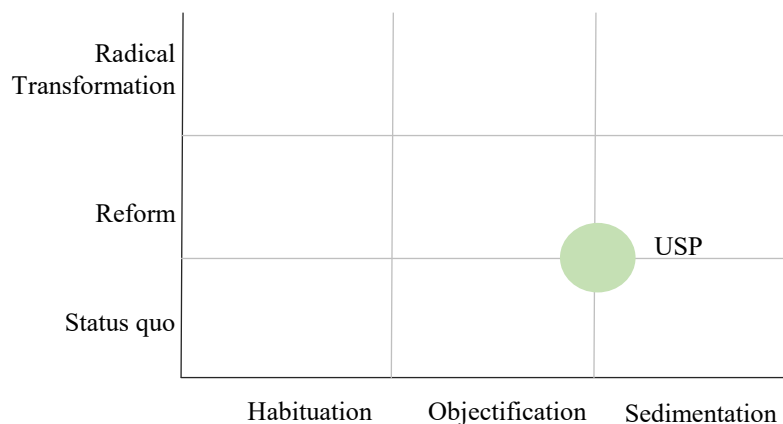
Table 5

**Definition of the nature of the program's sustainability concept**

Corrente Status Quo	Corrente Reformista
<b>Economic growth is the solution;</b> <b>Reduce the state's power;</b> <b>Technological development through information management.</b>	<b>Accept the problem</b> and criticism toward current business and government policies; <b>Changes may occur within the structures over time;</b> Market changes and government reform.

Source: adapted from Hoppwood et al. (2005)

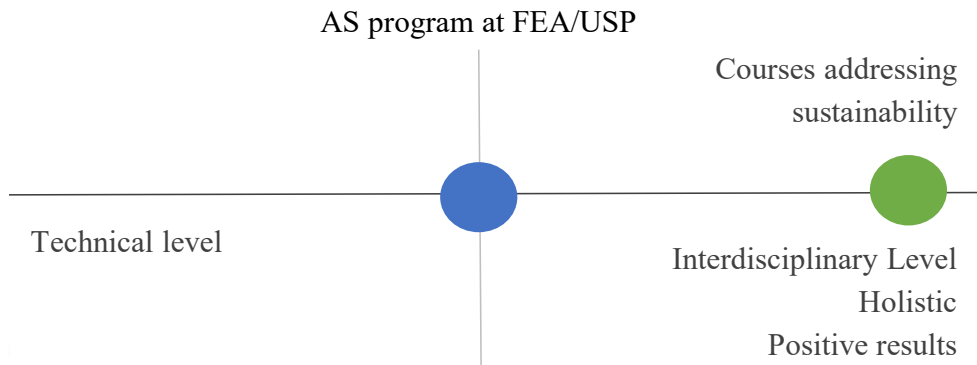
The characteristics highlighted in the table refer to what the interviewees' reports and an analysis of the courses revealed. It appears that the Accountancy program by itself is undeniably a *status quo* element, but an attempt to include discussions that remain marginalized within the program and the perception that these practices should change indicate an intention towards reform. In this sense, Figure 2 places the program in a quadrant divided between EE or ESD focused on *status quo*, reform, and radical transformation and, together, whether this is at the level of habituation, objectification, or sedimentation.



**Figure 2.** Map of the sustainability topic within the Accountancy program at FEA/USP regarding its level of institutionalization and the EE or EDS nature.

Source: developed by the authors.

As figure 2 shows, the level of sustainability institutionalization at the Accountancy program at FEA/USP is migrating towards sedimentation or institutionalization, whereas its nature is going from *status quo* towards reformist. Figure 3 presents the characteristic of courses that go from the technical to interdisciplinary level, holistic and positive results for society.



**Figure 3.** Level of sustainability teaching within the Accountancy program at FEA/USP.

Source: developed by the authors.

The program and the courses addressing sustainability had to be divided to develop figure 3. This division occurred because the interviewees diverged regarding the topic and on how it is inserted in the program. Because these are optional courses, they have characteristics that differ from the mandatory courses.

Because of its nature, the teaching of sustainability in the program tends to be holistic and interdisciplinary. On the other hand, as reported in the interviews, sustainability itself ends up isolated within the department, open only to the mandatory courses that integrate other programs, such as Law, Statistics, Mathematics, etc. From this perspective, the teaching of accounting within the program is at the technical and holistic/interdisciplinary level, while the teaching of sustainability is interconnected with other fields of knowledge. However, both present positive results given the course's relevance and quality: relevance of academic production and quality of the training provided to students who are hired by large companies.

#### 4.6 Discussion of results

The first aspect observed was that the Institutional theory was used to analyze the level of institutionalization of sustainability within the program. We identified that it is between semi-institutionalized (objectification) and institutionalization (sedimentation). Various factors explain this level of institutionalization, such as how long the courses addressing the topic are in the program, more than one course addresses the topic, relevant academic production, former students work with the topic, presence of champions (idea defenders), and lack of resistant on the part of the institution or other professors.

Therefore, the Accountancy program at FEA/USP was mapped regarding the type of EE or ESD offered to the students, between *status quo* maintenance and a reformist view of society. Another mapping was between the level of knowledge addressed within the institution, varying from technical knowledge to more holistic/interdisciplinary knowledge, with positive results. Finally, the study showed a need to separate the course from the discipline addressing sustainability.

The Accountancy program does not have a holistic or disciplinary approach beyond what is demanded by law. Due to the nature of the discipline addressing sustainability, a dialogue has to be established with other fields of knowledge. This was observed both on the profile of the students seeking the discipline, i.e., students from fields other than Accountancy, and the speakers who belong to the most diverse professions.

Normative isomorphism was identified, which is related to the education of workers, academic specialization, and job succession. It is an important aspect, considering that students who have access to sustainability concepts within the accounting profession have a knowledge differential.

This strategy is also presented in companies seeking to establish a transparent relationship with stakeholders by adopting sustainability reports. Hence, there is a need for a qualified workforce to develop and disclose these reports. Large corporations are the first to adhere to the new model; how will it apply to small and medium-sized companies?

Therefore, there is a structural problem considering that future accountants will work in these corporations. How will they support decision-making if they do not have proper knowledge concerning sustainability? Another aspect to consider is that if environmental and social disclosure is voluntary, companies will likely disclose positive information.

These issues need to be discussed, and teaching institutions need to reflect upon: to what extent the knowledge provided by colleges and universities is accounted for the type of result obtained in the corporate world? Or, can an accountant directly influence his/her work environment based on know-how obtained in a teaching institution?

Another problem identified is that faculty members need to participate for sustainability to be taught holistically (BRASIL, 1999). The most traditional fields of the accounting discipline do not identify with sustainability. According to Law No. 9.795/1999, sustainability should be addressed by all fields of knowledge, rather than be restricted to one course, but what was observed here is that the subject is addressed by just a portion of the faculty members.

In this sense, a course addressing sustainability in-depth, rather than only a few topics (within a generic course), would be an essential step among teaching institutions. Students would have the opportunity to access its concepts and decide whether to adopt them in their workplaces or not.

## 5. Final Considerations

This study's general objective was to understand the process of institutionalization of the sustainability topic in the Accountancy program of a higher education institution. Various factors beyond its sedimentation stage were identified, involving the role of accountants in the current social context, the difficulties in including a topic that is still considered marginal within the profession, and the type of teaching provided to accounting students.

The example of the Accountancy program at FEA/USP can be followed by other HEIs, to support the growth of the sustainability subject, which is currently a worldwide concern. Therefore, this study contributes to filling in the gap of academic studies addressing the topic and supporting coordinators and professors of Accountancy programs by broadening the discussions on sustainability and presenting a syllabus in the institutionalization stage, even though the topic is still incipient in the field.

Addressing sustainability means dealing with survival in all its aspects: the survival of the planet and humanity, reaching the companies and job opportunities. That said, this study contributes to society by evidencing a pre-institutionalized stage of the topic within a program, the institution of which is the largest in Latin America. Evidencing this stage means that the graduate students of this program are qualified to deal with a sustainable perspective in organizational business models, meeting international demand.

This study's limitations include the fact that this study presents an analysis based on the professors involved and documents. The students' perceptions regarding the topic could not be addressed. A questionnaire was sent to the students, but a low rate of adherence impeded any analysis.

Future studies are suggested to develop a model of institutionalization process and isomorphism directly focused on the academic environment, the nature of which is different from business organizations. Another suggestion is to conduct a quantitative survey at the national level to verify the teaching of sustainability within accounting programs and map the topic among teaching institutions in general at a national level.

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# Relationship between book reading and academic performance: an analysis addressing applied social sciences students

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## Abstract

**Objective:** To identify and compare the relationship between extracurricular reading and student performance among applied social sciences students.

**Method:** Microdata from 338,977 students from nine undergraduate programs taking the National Assessment of Student Achievement (Enade) in 2018 were collected. Performance in the Enade is measured by scores obtained in the tests addressing specific content and general knowledge. Data were analyzed using descriptive statistics, Chi-square test, and regression models.

**Results:** Undergraduate programs are associated with extracurricular reading. Additionally, there is a positive relationship between the number of books a student reads and academic performance. This relationship is valid for tests addressing specific content, general knowledge, and consequently for the general performance of students in the Enade 2018.

**Contributions:** Undergraduate students are encouraged to read content beyond that proposed by their programs as the results suggest that extracurricular reading is relevant for both general and specific training. Additionally, it can improve reading skills, text comprehension, and writing, which are essential for students to succeed in an undergraduate program.

**Keywords:** Book; Reading; Academic performance; Higher education; Applied social sciences.

## 1. Introduction

The academic performance of college students is considered essential for the quality of training and the development of a qualified and competitive job market. International organizations such as the Organization for Economic Co-operation and Development and the University Ranking by Academic Performance (2020) have adopted student performance to analyze the quality of higher education among countries and devise strategies and actions to promote economic development and decrease social inequality (Takala, Kallo, Kauko, & Rinne, 2018).

Studies have addressed various factors that may influence academic performance, such as variables related to the Higher Education Institutions (HEI), the faculty body, and students (Corbucci, 2007; Glewwe, Hanushek, Humpage, & Ravina, 2015; Miranda, Lemos, Oliveira, & Ferreira, 2015). Oliveira and Caggy (2013), for instance, verified that family origin and financial and physical conditions might play a relevant role in student performance.

Extracurricular activities also positively influence training and social behavior (Bartkus, Nemelka, Nemelka, & Gardner, 2012; Sauerwein, Theis, & Fischer, 2016). One of these activities is extracurricular reading: reading performed at will, pleasure, interest, hobby, or other motivations, which differs from reading basic and complementary bibliographic references required in academic courses (Nasu, 2018). Extracurricular reading required in learning a foreign language positively influences students' performance and skills, improving their cultural knowledge and interpretation of information (Kuimova & Ukhov, 2016).

Reading can benefit students by promoting competencies, such as planning, control, management, accounting, finances, communication, and listening (Cardoso, 2006). Regarding professional competencies, reading is linked to learning and utility improved as students read specific materials (Nascimento, Garcia, & Albuquerque Filho, 2019).

Even though previous studies have reported valuable findings regarding the factors that determine student performance, the investigation of the effect of extracurricular reading on students' performance in the field of applied social sciences is still incipient, especially in comparative studies. Based on this context, this study's objective was to identify and compare the relationship between extracurricular reading and academic performance among applied social sciences students.

Three factors justify this study. First, the topic addressed here is relevant for the academic and professional development of undergraduate students and has implications for the academic milieu. An analysis of the relationship between extracurricular reading and student performance can reinforce the need of educators, parents, and students to take measures and actions to encourage reading in diverse subjects. Books are more frequently investigated because they represent one of the most accessible and widely known sources.

Secondly, schools and universities can develop projects to promote extracurricular activities, among which reading, since it can complement student training. Therefore, investigating extracurricular reading can motivate educational institutions to devise plans (e.g., extension projects and community services) intended to improve the quality of teaching and the training of students.

Finally, a comparative analysis enables programs and coordinators to identify how prone students are to read compared to students from other undergraduate programs. This comparison can support the actions of coordinators and professors to encourage reading among students, using other programs as benchmarking.

Regarding the structure of this paper, section 2 presents the literature review that supports this study. Section 3 presents the methodological aspects, including a description of the population, procedures used to compose the sample, and details regarding the study's variables. Section 4 reports the results and analyses. Finally, section 5 comprises the conclusions, limitations, and suggestions for future studies.

## 2. Literature Review

### 2.1 The relevance of reading for students' training and learning

Reading is essential for personal and professional development, especially in the face of changes (Kirsch & Guthrie, 1984). It also promotes learning and social relationships in a process involving sensory ability, motivation, perception, thinking, and memory (Cantalice & Oliveira, 2009). Disinterest in reading is of concern because of its negative implications for society, resulting in a deficit in text comprehension and students' poor academic performance. College students also show disinterest in reading as they often only read content required by professors (Tourinho, 2011).

Reading involves a cognitive process of interpreting written speech (Mol & Bus, 2011). It enables readers to form new opinions regarding varied topics. Therefore, a motivated child who reads from an early age is more likely to become an inquisitive and critical adult. Otherwise, s/he will not form an opinion of diverse subjects for lack of literary background and experience (Arana & Klebis, 2015).

Oliveira and Santos (2005) mention Garrido (1988), who notes that the relevance of reading in quality education is evident, more even so when students conclude middle and high school without the ability to read and interpret texts. When these students enter higher education, they face limitations and deficiencies resulted from their reading behavior. Being a competent reader is essential for college students, and their success is related to their reading maturity (Oliveira & Santos, 2005). Reading is crucial for individuals seeking knowledge, as they acquire a more significant ability to reflect and question facts present in everyday life (Oliveira, Santos, & Primi, 2003).

Reading is crucial for college students to apprehend the content of disciplines and scientific studies. A competent reader seeks to critically understand information during academic training and professional practice (Nascimento et al., 2019). College students are expected to be able to read critically to discern written information and expose the authors' opinions in a way that is adequate to the reading context (Hussein, 1999).

Students are expected to present a satisfactory reading level to understand and analyze written information (Cantalice & Oliveira, 2009). However, studies show that college students present a low reading comprehension level, which can directly interfere with their academic performance (Araújo, Camargos, Camargos, & Dias, 2013; Oliveira & Santos, 2006, 2005). Difficulties are apparent at the beginning of undergraduate programs and reflect on academic performance (Silva & Santos, 2004).

The main characteristics of readers with a low reading comprehension level include failure to decode texts, poor vocabulary, difficulty integrating information, poor memorization, lack of a learning strategy, and lack of motivation to read (Santos, Suehiro, & Oliveira, 2004). These deficits are, at least partially, caused by having no practice in reading. Mokhtari, Reichard, and Gardner (2009) reported that time spent watching TV interferes with the time spent reading. Additionally, the participants reported that they dedicated most of their time to the Internet (e.g., e-mail, chat, social networks, etc.). Thus, it is reasonable to assume that students are currently spending much time in the virtual environment, considering access to the Internet is widespread, suggesting even less time is dedicated to reading. Lieurya, Lorantb, Trosseillec, Champaultc, and Vourc'hc (2014) found a positive relationship between reading and academic performance compared to video games.

Reading is the primary form through which we obtain information and is significantly related to academic performance (Nasu, 2018; Oliveira & Santos, 2006, 2005; Silva & Santos, 2004), as competent readers more easily access academic content (Oliveira & Santos, 2005). Reading deficiencies and problems in producing a text seems to be the most worrisome among professors in the early years students enter college (Sampaio & Santos, 2002). Studies show that poor reading comprehension and lack of reading among college students result in poor academic performance as undergraduate programs demand considerable intellectual work, depending mainly on text comprehension (Marini, 1986). Therefore, obtaining a better understanding of how reading is associated with student performance is essential.

## 2.2 Extracurricular reading among applied social sciences students

In general, extracurricular activities are considered vital for business students (Bartkus et al., 2012) as these activities promote more competent interpersonal skills (Rubin, Bommer, & Baldwin, 2002). Rynes, Trank, Lawson and Ilies (2003) verified that taking part in extracurricular activities is an efficient way to promote leadership and interpersonal skills among business students, and one of such activities is reading. Note, however, that even though reading is essential for students in general, we discuss its relevance for applied social sciences students in this study.

Extracurricular reading has the potential to improve learning in general. For instance, Silva and Santos (2004) assessed the reading comprehension of 782 students attending eight undergraduate programs (i.e., medicine, dentistry, business administration, pedagogy, letters, civil engineering, and mathematics). The results revealed that business students presented the third worse reading comprehension performance, followed by dentistry and civil engineering students. Nascimento et al. (2019) verified that students from the accounting sciences programs presented difficulties understanding the text provided. Reading books and other extracurricular material can help improve the multidisciplinary background of future accountants. Current metrics such as Environment, Social, and Governance (ESG) are not always addressed in accounting undergraduate programs. For this reason, reading about environmental issues, social diversity, and other extracurricular subjects can help accountants broaden their knowledge and support the development of business reports and financial statements together with the companies' management, for instance.

Tourinho (2011) argues that reading is essential for training critical individuals who will influence and change their contexts. Reading positively affects even one's mental health, as one study verified among college students (Levine, Cherrier, Holding & Koestner, 2020). Additionally, the findings reported by McGaha and Fitzpatrick (2010) show that the more students read, the greater their professional aspirations. It is only natural that students are more engaged with their undergraduate programs and have more ambitious professional aspirations the more books they read and the more frequently they go to libraries (McGaha & Fitzpatrick, 2010). Applied social sciences programs usually enable significant career growth, but if students do not take advantage, especially if they lack aspirations, they may stagnate professionally. In this sense, as defended by McGaha and Fitzpatrick (2010), extracurricular reading can inspire students and ultimately help them reach the highest ranks in their professions.

Regarding academic performance, students who do not read regularly are more likely to perform poorer than their counterparts (Cunha & Santos, 2006). Analyzing business, law, and psychology students, Oliveira and Santos (2006) found a positive relationship between reading comprehension and academic performance, including performance in disciplines such as business communication, introduction to administration, basic mathematics, scientific methodology, political sciences, general theory of state, civil law, economics and notions of economic law and others. Nasu (2018) also found evidence of a positive relationship between the number of books read and the performance of accounting students. However, we should note that excessive extracurricular reading might harm academic performance (Chen, 2007). Nonetheless, students should bear in mind that regular but not excessive extracurricular reading is essential for their success.

### 2.3 Related studies

This subsection is intended to describe relevant previous studies to understand the role of reading and its relationship with the academic performance of college students. These studies also ground the discussion of this study's results, showing the need for studies addressing the practice of extracurricular reading among students attending applied social sciences programs. The studies are described next.

Gallik (1999) investigated the relationship between recreational reading and academic performance among 151 students from a university in the United States. Data were collected through surveys. Thirteen responses were excluded, and a sample of 138 observations remained. The statistical tests indicated a positive correlation between recreational reading and academic performance (according to accumulated overall mean), supporting the study's hypothesis.

Oliveira and Santos (2005) analyzed the relationship between reading comprehension, academic performance, and learning. The sample was composed of 270 students from administration, law, and psychology programs attending day and evening classes at a private institution located in the interior of São Paulo. Questionnaires and the cloze test were applied to collect data. Results from the statistical tests revealed a positive relationship between the three variables.

Oliveira and Santos (2006) examined the relationship between reading comprehension and academic performance in 270 students from administration, law and psychology programs at a private university. The traditional version of the cloze test was applied to check the participants' reading comprehension. The statistical analyses indicate a positive relationship between reading comprehension and academic performance.

Chen (2007) accessed data from two national surveys conducted in Taiwan: one applied among 1<sup>st</sup>-year students and the other addressing 3<sup>rd</sup>-year students. A negative correlation was specifically found regarding the analysis of the relationship between extracurricular reading and academic performance. A potential explanation for this finding is that the students' extracurricular reading was excessive, even causing concern among their parents. Hence, reading non-academic content in excess may harm academic performance.

Addressing surveys conducted with 27,000 students attending primary school, Lieurya et al. (2014) investigated the effect of video games (e.g., sports, strategy, board games, etc.) and reading (e.g., magazines, newspapers, fantasy books, etc.) on cognitive and academic performance. The results showed that while video games are not significantly correlated with academic performance, reading has a positive relationship. Note, however, that there is a small effect. Nevertheless, reading different materials more strongly supports academic performance than video games.

Nasu (2018) examined extracurricular reading and its relationship with accounting students' performance and study time. Data were collected from Enade 2015, with a sample of 53,887 students. The results showed that extracurricular reading is positively associated with performance and time of study outside classes.

Alhammada and Ku (2019) conducted a qualitative study with 20 undergraduate students from an American university regarding e-books for academic learning. In general, the participants reported they preferred e-books to physical books. However, when preparing for a test, the students replaced a printed book for an e-book only if the latter offered similar content and additional resources.

Nascimento et al. (2019) verified whether reading contributed to the professional training of accounting students using the cloze test and the functions of reading scale. The sample was composed of 180 students from an HEI located in Fortaleza, CE, Brazil. The Cloze test indicated that students experienced difficulties in text comprehension, whereas the functions of reading scale indicated that the "learning" and "utility" functions were more frequently used. The conclusion is that there is an environment conducive for improving professional competencies, even if the functions "morality" and "stimulation" demand encouragement to overcome barriers to reading comprehension.

Levine et al. (2020) analyzed whether recreational reading benefits mental health and the motivation for this type of reading. Overall, 231 students from a Canadian university participated in the study. The results showed a positive relationship between recreational reading and mental health. Additionally, autonomous motivated students are more likely to read recreational books.

This literature review indicates that reading comprehension is a crucial factor for the academic performance of college students. This comprehension is improved as students practice reading curricular or extracurricular books. Therefore, based on the evidence presented by these studies, we expect to find a positive correlation between reading, even extracurricular reading, and student performance. Additionally, there is a gap concerning studies addressing extracurricular books related to the field of applied social sciences, whose programs – e.g., business administration, law, and accounting sciences –, are among the most competitive programs nationally. Thus, examining the role of extracurricular reading in the learning of students attending these programs is quite relevant.

### 3. Method

#### 3.1 Data, population and sample

Data were collected from the website of the National Institute for Educational Studies and Research Anísio Teixeira (INEP, 2019) and concern the Enade from 2018. The applied social sciences programs included in the Lattes curriculum website were used for the sample selection (Conselho Nacional de Desenvolvimento Científico e Tecnológico, 2019). Note, however, that Enade 2018 was not mandatory for all the programs on the list. For this reason, the number of programs analyzed in this study is restricted. Nevertheless, nine undergraduate programs were included: business administration (BUS), law (LAW), economics (ECO), accounting (ACCOUN), tourism (TOU), social service (SOC), public administration (PUB), social communication – journalism (JOUR), and social communication – advertising and propaganda (ADV).

Enade is designed to assess the quality of Brazilian undergraduate programs by analyzing the students' academic performance. The exam comprises general education questions (e.g., social responsibility), which are common to all the programs, and questions specific to each program. One question specific for the accounting program may demand knowledge from accounting theory, a content that is unlikely to be addressed in the specific questions directed to other programs. Therefore, the students' performance is calculated through the weighted average of the scores obtained in the tests addressing specific content (75%) and general knowledge (25%).

Students from these programs who took the Enade 2018 represent this study's population, 398,859 students. After identifying the population, data were processed. More specifically, observations were excluded in six stages due to varied reasons, namely: (1) absence (code 222); (2) improper participation (code 334); (3) absence due to dual degree programs (code 444); (4) result disregarded by the applicator (code 556); (5) participant returned a blank test (code 333); and (6) "not applicable" (N/A) in the academic performance variables (overall score, general knowledge score, and specific content score), even after the first rounds of the exclusion process.

Table 1

**Population, sample and exclusion stages: overall and per program**

Program	BUS	LAW	ECO	ACCOUN	TOU	SOC	PUB	JOUR	ADV	Total
Population	120,405	145,425	9,582	62,475	3,328	24,625	4,306	11,447	17,266	398,859
(1) Absence	(20,628)	(17,906)	(1,497)	(9,502)	(625)	(3,222)	(816)	(1,645)	(3,274)	(59,115)
(2) Improper participation	(35)	(38)	(2)	(9)		(8)			(3)	(95)
(3) Absence due to dual degree program	(126)	(95)	(8)	(107)	(3)	(8)	(9)	(6)	(7)	(369)
(4) Result disregarded by the applicator	(1)	(1)				(1)			0	(3)
(5) Blank test	(81)	(71)	(22)	(26)		(28)	(5)	(20)	(2)	(255)
(6) N/A in academic performance	(15)		(4)	(10)	(4)	(4)	(2)	(3)	(3)	(45)
(=) Sample	99,519	127,314	8,049	52,821	2,696	21,354	3,474	9,773	13,977	338,977
%(A)	82.7	87.5	84.0	84.5	81.0	86.7	80.7	85.4	81.0	85.0

Note. <sup>(A)</sup>Representativeness of the sample in relation to the study population.

The analysis of multivariate outliers was performed considering a p-value of 0.15 using blocked adaptive computationally efficient outlier nominators (Billor, Hadi, & Velleman, 2000; Weber, 2010). The results revealed no multivariate outliers.

### 3.2 Study variables

In line with the study's objective, data concerning academic performance were collected, specifically overall score (NTGE), score concerning specific component (NTCE), and score concerning general knowledge (NTFG) – and extracurricular reading, which refers to the number of books read in 2018, that is, books that were not included in the courses' bibliography (BOOK). The variable REFER was also considered. It concerns the students' perceptions regarding the relevance of bibliographic references provided in their programs. Both the proxy for extracurricular reading (BOOK) and relevance of references (REFER) were used by a previous study (Nasu, 2018). Table 2 presents a description of the study's variables.

Table 2

**Study's variables**

Acronym	Description	Measurement (B)
NTGE	Overall score obtained in the Enade 2018	0 to 100 points.
NTCE	Score obtained in the test addressing specific content in the Enade 2018	0 to 100 points.
NTFG	Score obtained in the test addressing general knowledge in the Enade 2018	0 to 100 points.
BOOK	"Not considering the books listed in your course bibliography, how many books did you read this year?" (Question 22 of the Student Questionnaire-Enade 2018)	<b>0 books</b> ; 1-2 books; 3-5 books; 6-8 books; 8+ books.
REFER	"Did the bibliographic references indicated by your professors contributed to your study and learning?" (Question 39 Student Questionnaire-Enade 2018)	1 (completely disagree) to 6 (completely agree) points.
PROG	Student's program	9 categories (BUS, LAW, ECO, ACCOUN, TOU, SOC, PUB, JOUR or ADV).
MODAL	Online or Brick-and-mortar learning	Online or Brick-and-mortar learning
REGION	Region where the program is located	5 categories (N, NE, S, SE or MW)(C).
SCHED	Classes schedule	4 categories (Full time, Morning, Afternoon, or Evening).
AGE	Student's age	Complete years
SEX	Student's sex	Man or Woman.
MARITAL	Student's marital status	5 categories (Single, Married, Divorced, Widowed or Other).
ETHNIC	Student's ethnicity	5 categories (Caucasian, Afro-descendent, Asian-descendent, Mixed race, Indigenous, and Not reported)(A).
INCOME	Student's family monthly income	0-3 times the minimum wage (MW), 4-6 times the minimum wage, or more than 6 times the minimum wage.
STDHOU	Hours of study outside classes	0 hours; 1-3 hours; 4-7 hours; 8-12 hours or more than 12 hours.

Note. <sup>(A)</sup>The students who did not report their ethnicity were excluded from the analyses that used this variable to avoid biases in interpreting the results.

<sup>(B)</sup>The category in bold in the qualitative variables represent the category of reference used in the regression model (next section)

<sup>(C)</sup>SE = Southeast; S = South; N = North; NE = Northeast; MW = Midwest.

In addition to academic performance and the variable of interest, control variables were collected to obtain a more accurate analysis. Control variables include program (PROG), whether it is online or brick-and-mortar learning (MODAL), the region where the program is located (REGION), program's schedule (SCHED), age (AGE), sex (SEX), marital status (MARITAL), ethnicity (ETHNIC), family monthly income (INCOME), and hours of study (STDHOU).



### 3.3 Data Analysis Techniques

After collecting and selecting the variables, descriptive statistics were performed for the quantitative and qualitative variables. A cross-table was developed for BOOK and PROG variables, and a Chi-square test was performed to verify associations. Finally, regression models were used to analyze the relationship between extracurricular reading and student performance to verify the effect of the explanatory variables on an explained variable (Fávero, 2015; Gordon, 2015), appropriate to meet this study's objective. Therefore, three regression models were developed, represented in Equations (1), (2), (3) as follow:

$$DES_i = \alpha_i + \beta_1 \cdot BOOK_i + \varepsilon_i \quad \text{Equation (1)}$$

$$DES_i = \alpha_i + \beta_1 \cdot BOOK_i + \beta_2 \cdot REFER_i + \beta_3 \cdot CONTROLS_i + \varepsilon_i \quad \text{Equation (2)}$$

$$NTFG_i = \alpha_i + \beta_1 \cdot BOOK_i + \beta_2 \cdot PROG_i + \beta_3 \cdot CONTROLS_i + \varepsilon_i \quad \text{Equation (3)}$$

The dependent variable (DES) is student performance, which can be NTGE, NTCE, or NTFG. Equation (1) is a multiple regression model, which considers only the dummies related to the BOOK variable. Therefore, the objective is to capture the effect of reading extracurricular books only, without other explanatory factors. Equation (2) verifies the existence of a relationship between reading extracurricular books and academic performance when the REFER variable and other controls (MODAL, REGION, SCHED, AGE, SEX, MARITAL, ETHNIC, INCOME and STDHOU) are included. As suggested by Fávero (2015), the qualitative variables are transformed into N-1 *dummies* (N=number of categories of the qualitative variable). The category of reference is in bold in Table 2. Finally, Equation (3) analyzes the impact of BOOK and PROG variables in NTFG, together with the control variables. Note that NTFG was used because general knowledge questions are asked to the students regardless of the program, differently from the NTCE (specific questions) and NTGE (in which 75% of the score concern specific content and 25% of the score concern general knowledge). The regression models were estimated using Ordinary Least Squares (OLS), with robust standard errors for heteroscedasticity. Additionally, the Variance Inflation Factor (VIF) was used to verify the models' multicollinearity.

OLS estimations with "traditional" (non-robust) standard errors were also performed and produced very similar results. However, for caution, only the results of regressions with robust standard errors are reported in the next section. Additionally, it is noteworthy that the variables concerning the parents' educational level were collected and included in the models. The main findings (related to the BOOK variable) were very similar to the reported.

One final point concerns endogeneity (more specifically, that of reverse correlation); that is, one could assume that students with higher cognitive abilities perform better, and in turn, would demand more reading, which would lead to the conclusion that academic performance affects reading. However, we believe that this reverse correlation is very unlikely in this study. The students take the Enade and complete the Student Questionnaire close to the end of the undergraduate program (graduating students). According to the schedule published on the *Diário Oficial da União* (INEP, 2018), the students could complete the questionnaire up to November 21<sup>st</sup>, 2018, and the Enade 2018 was applied on November 25<sup>th</sup>, 2018. For this reason, the students answered question 22 of the Student Questionnaire based on the books they read before the test. Consequently, reading is what influences student performance.

## 4. Results

Table 3 presents the descriptive statistics of the study's variables. Panel A portrays the quantitative variables and the mean overall score the applied social sciences students obtained in Enade 2018, 40.6 points, with a standard deviation (SD) of 14.3 points. The mean score obtained in the test addressing specific component was 46.1 points (SD=17.6 points), and in the general knowledge test was 38.7 points (SD=15.4 points). The students are expected to score better in the specific component, considering they specialize in the subjects that are specific to their program. The students were 28.8 years old on average (SD=7.9 years), so that they are relatively young, though some elderly individuals were identified (maximum=83.0 years). It is also surprising that there was one student aged 11 years (minimum). Regarding the REFER variable, the students reported that the bibliographic references provided in their programs were relevant for their learning (mean=5.0 points; SD=1.3 points).

Table 3

### Descriptive statistics of the study's variables

<b>Panel A: Quantitative variables</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Median</b>
NTGE	338,997	40.6	14.3	0.0	92.8	39.5
NTCE	338,997	46.1	17.6	0.0	98.6	45.4
NTFG	338,997	38.7	15.4	0.0	97.5	37.6
AGE	338,997	28.8	7.9	11.0	83.0	26.0
REFER	332,089	5.0	1,3	1.0	6.0	5.0
<b>Panel B: Qualitative variables (A)</b>	<b>AF</b>	<b>RF</b>		<b>AF</b>	<b>RF</b>	
<b>MODAL</b>						
Online	49,308	14.6	Brick-and-mortar	289,669	85.5	
<b>REGION</b>						
SE	147,549	43.5	S	76,695	22.6	
N	19,193	5.7	MW	30,247	8.9	
NE	65,293	19.3				
<b>SEX</b>						
Female	202,398	59.7	Male	136,579	40.3	
<b>SCHED</b>						
Full time	23,314	6.9	Afternoon	10,698	3.2	
Morning	57,379	16.9	Evening	247,586	73.0	
<b>MARITAL</b>						
Single	243,740	72.3	Widowed	972	0.3	
Married	70,273	20.9	Other	11,537	3.4	
Divorced	10,550	3.1				
<b>ETHNIC</b>						
Caucasian	180,641	54.5	Mixed	111,650	33.7	
Afro-descendant	30,159	9.1	Indigenous	972	0.3	
Asian-descendant	7,835	2.4				
<b>INCOME</b>						
0-3 times the minimum wage	156,451	46.4	+6 times the minimum wage	70,863	21.0	
4-6 times the minimum wage	109,758	32.6				
<b>BOOK</b>						
0 books	48,365	14.4	6-8 books	29,225	8.7	
1-2 books	122,378	36.3	+8 books	36,713	10.9	
3-5 books	100,391	29.8				
<b>STDHOU</b>						
0 hours	28,641	8.5	8-12 hours	30,968	9.2	
1-3 hours	161,405	47.9	12+ hours	24,730	7.3	
4-7 hours	91,328	27.1				

Note. SD=Standard deviation; AF = Absolute Frequency; RF = Relative Frequency (in %).

<sup>(A)</sup>The frequencies of the PROG variable are presented in Table 1 and are therefore not reported here.

Panel B shows the study's qualitative variables. Most of the students in the sample attend brick-and-mortar universities (85.5%), are from the southeast (43.5%), women (59.7%), attend evening courses (73.0%), are single (72.3%), Caucasian (54.5%), and belong to families that receive zero to three times the minimum wage (46.4%). Most students read from one to two books in 2018 (36.3%) and studied from one to three hours a week (47.9%).

Next, a cross table was developed with PROG and BOOK variables (Table 4). We first discuss the results in general and then per program (comparatively).

Table 4

**Crosstable of PROG and BOOK variables**

PROG/ BOOK	0 book		1-2 books		3-5 books		6-8 books		+8 books		Total	
	AF	RF	AF	RF	AF	RF	AF	RF	AF	RF	AF	RF
BUS	16,500	16.7	40,166	40.6	26,891	27.2	7,233	7.3	8,096	8.2	98,886	100.0
LAW	14,522	11.5	40,920	32.3	41,106	32.5	12,579	9.9	17,500	13.8	126,627	100.0
ECO	1,256	15.7	2,614	32.7	2,484	31.0	693	8.7	954	11.9	8,001	100.0
ACCOUN	10,317	19.6	21,247	40.4	13,298	25.3	3,505	6.7	4,233	8.0	52,600	100.0
TOU	386	14.5	965	36.2	840	31.5	241	9.0	233	8.7	2,665	100.0
SOC	1,870	8.8	7,440	35.1	7,175	33.9	2,260	10.7	2,438	11.5	21,183	100.0
PUB	510	14.8	1,300	37.6	981	28.4	263	7.6	403	11.7	3,457	100.0
JOUR	846	8.7	2,599	26.7	3,463	35.6	1,251	12.9	1,575	16.2	9,734	100.0
ADV	2,158	15.5	5,127	36.8	4,153	29.8	1,200	8.6	1,281	9.2	13,919	100.0
<b>Total</b>	<b>48,365</b>	<b>14.3</b>	<b>122,378</b>	<b>36.3</b>	<b>100,391</b>	<b>29.8</b>	<b>29,225</b>	<b>8.7</b>	<b>36,713</b>	<b>10.9</b>	<b>337,072</b>	<b>100.0</b>

Note. AF = Absolute frequency (number of students); RF = Relative frequency (%).  
 The RFs were based on the AF of the table's last column (Total).

Most students reported reading from one to two books in 2018 (N=122,378; 36.3%), and a considerable portion of the students reported from three to five books (N=100,391; 29.8%). Note that 48,365 students (14.3%) did not read a single book in 2018. This information is of concern because it reveals that students are not developing reading skills, writing, and text comprehension, which are crucial for them to succeed in undergraduate programs (Oliveira & Santos, 2005). Table 3 shows that most students attend evening classes, suggesting that either there are more programs available in this period or that students work, which is common among those nearly graduating from their programs. Therefore, a significant portion of the students might work during the day and study in the evening, restricting their time available to read.

Another potential explanation for not reading books is a lack of financial resources to buy books. Table 3 shows that most students belong to families receiving zero to three times the minimum wage, which is entirely used to meet their families' basic needs. In this situation, students are suggested to go to public libraries. Additionally, the students have difficulties allocating free time to reading because they prefer listening to music, spending time on the Internet, or connecting to social media (Mokhtari et al., 2009). There is evidence that reading is more beneficial to student performance than video games (Lieurya et al. (2014). For this reason, changing habits may be necessary for students to keep a regular reading practice. Finally, the number of students reporting from six to eight books (N = 29,225; 8.7%) or above eight books (N = 36,713; 10.9%) was smaller. This is also a concern, considering that not even 20% of the 337,072 students attending applied social sciences reported reading six or more books in 2018.

Analysis considering the undergraduate programs shows that most students from all the programs reported reading from one to two books, except the students from the LAW and JOUR programs, the majority of whom reported reading from three to five books (LAW=41,106 students; 32.5%; JOUR=3,463 students; 35.6%). The students in the BUS, ACCOUN, and TOU programs were the ones who the least reported reading more than eight books (BUS = 8,096 students; 8.2%; ACCOUN=4,233 students; 8.0%; TOU=233 students; 8.7%). Additionally, BUS, COM and PUB students were also among those who less frequently read from six to eight books (BUS=7,233 students; 7.3%; ACCOUN=3,505 students; 6.7%; PUB=263 students; 7.6%). These findings suggest that there is room for improving reading habits among business students.

It is noteworthy that the ACCOUN program presents the highest percentage of students reporting zero books (10,317 students; 19.6%); that is, the students in this program present the highest percentages in the low-frequency reading categories. These findings concerning extracurricular reading among accounting students possibly explain the low approval rates in the Accounting Exam required to obtain a license and the poor performance obtained in tests assessing the quality of higher education, such as Enade. Even though not related to academic programs, extracurricular material promotes writing and text comprehension, essential for professional practice and being approved in professional exams, mainly because these tests address language questions and demand reading texts.

Comparatively, the JOUR students, on the other hand, reported reading the most throughout 2018. The students in this program obtained the highest reading percentages, (12.9%) from six to eight books, and (16.2%) more than eight books, with the smallest percentage of students in the zero books category (8.7%) in comparison to the remaining programs in applied social sciences. Students in journalism programs are likely to practice reading, whether related to the academic program or not. Finally, a Chi-square test was performed to verify whether there was a significant association between PROG and BOOK. The results showed that these variables were significantly related ( $\chi^2=8,900,00$ ;  $p<0.01$ ). Hence, while some programs are associated with less frequent reading (e.g., ACCOUN), others are associated with more frequent reading (e.g., JOUR). Because the students in the ACCOUN program are less avid readers, extracurricular reading should be encouraged. Next, the relationship between reading books and academic performance was analyzed. Table 5 reports the results of Equations (1) and (2). Gordon (2015) indicates that VIFs between 4 and 10 are sometimes considered high, and according to Yan and Su (2013), VIFs above 10 may indicate multicollinearity problems. The mean VIFs obtained by the models in this study are below 2, indicating low multicollinearity.

Table 5

**Results of regression models (1) and (2)**

VAR. DEP. EQUAÇÃO <sup>(B)</sup>	NTFG		NTCE		NTGE	
	(1)	(2)	(1)	(2)	(1)	(2)
	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)
CONSTANT	44.763 (0.080)	49.707 (0.225)	37.802 (0.069)	41.042 (0.197)	39.555 (0.064)	43.221 (0.181)
BOOK (1-2 books)	0.161* (0.094)	0.572*** (0.099)	-0.047 (0.082)	-0.198 (0.086)	0.005 (0.076)	-0.006 (0.078)
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BOOK (6-8 books)	2.484*** (0.131)	1.968*** (0.134)	1.748*** (0.115)	0.614*** (0.118)	1.932*** (0.107)	0.953*** (0.108)
BOOK (+8 books)	4.403*** (0.125)	3.115*** (0.131)	3.291*** (0.109)	1.431*** (0.115)	3.569*** (0.102)	1.852*** (0.106)
REFER		-0.731*** (0.026)		-0.294*** (0.022)		-0.403*** (0.021)
OTHER CONTROLS <sup>(A)</sup>	No	Yes	No	Yes	No	Yes
N <sup>(C)</sup>	337,072	326,500	337,072	326,500	337,072	326,500
F/Prob > F	546,89/0,00	1,335.78/0,00	407,50/0,00	1,054.44/0.00	548,64/0.00	1,409,74/0,00
R <sup>2</sup>	0.0067	0.1042	0.0051	0.0835	0.0068	0.1093
Mean VIF	1.86	1.74	1.86	1.74	1.86	1.74

Note. DEP. VAR.=dependent variable. RSE=Robust standard errors between parentheses.

<sup>(A)</sup>For brevity and focus, the results concerning the control variables were omitted. Please see Appendix I to see the entire table.

<sup>(B)</sup>The regression models contain fewer observations than the complete sample due to missing values.

\*\*\*, \*\* and \* represent level of significance at 1%, 5%, and 10%, respectively.

The results from Equations (1) and (2) show that the BOOK variable is positively related to the performance variables (NTFG, NTCE, NTGE). Equation (1), in which NTFG is the dependent variable, shows that students who reported more than eight books (+8 books) scored 4.403 points higher in the general knowledge test than those who reported zero books (0 book –reference category). Likewise, students who read from six to eight books (6-8 books) scored 2.484 points higher in the general knowledge test than those who did not read a single book (0 books). Even students who read from one to two books (1-2 books) scored higher (coefficient=0.161;  $p < 0.10$ ) in the general knowledge test than students who did not read. The same interpretation is possible for the coefficients obtained in the regression models. Students who read more than eight books (+8 books) performed significantly better than those who did not read (0 books), suggesting that reading, even if extracurricular material, is relevant for better academic performance. This finding is consistent with Gallik (1999) and Nasu (2018), who found a positive relationship between extracurricular reading and academic performance.

For the NTCE and NTGE variables, reading from one to two books (1-2 books) was not statistically significant ( $p > 0.10$ ), suggesting that students who read from one to two extracurricular books do not perform better than those who read no books at all (0 books). The test addressing specific content asks questions addressing the content specific to each program; thus, extracurricular reading is only effective in improving the students' performance if it is more intense (reading three books or more). Because the score obtained in the specific component test (NTCE) composes 75% of the general score (NTGE), this effect extends to the students' overall performance. On the other hand, extracurricular reading effectively influences performance in NTFG.

This finding suggests that extracurricular reading improves the students' performance in tests that involve general knowledge. As students read content beyond the subjects specifically taught in their undergraduate programs, their general knowledge is improved, and their performance in tests addressing general content tends to improve. This is consistent with results presented by Silva and Santos (2004), in which reading comprehension was positively associated with academic performance among students from eight undergraduate programs. Extracurricular reading contributes to multidisciplinary training, and students acquire a more holistic perspective regarding their professional practice. **Kuimova and Ukhov (2016) argue that extracurricular reading benefits learning foreign languages, also improving empathy, independence, and social skills.**

A counter-intuitive result is related to the students' perceptions regarding academic support provided by the bibliographic references suggested by professors (REFER). Equation (2) in Table 5 reveals a negative relationship between REFER and the three performance variables (NTFG, NTCE, and NTGE). Therefore, even though the students believe that the references support learning (Table 3 – Panel A), this belief does not reflect their academic performance. For this reason, it is important to cross the subjective measures (REFER) with objective measures (NTFG, NTCE, and NTGE). Some potential explanations for the REFER variable are suggested. First, students with better performances tend to read and consult the programs' bibliographic references more frequently and be more critical. Second, bibliographic references may not reflect the content demanded by the Enade.

Even though Equations (1) and (2) present significant explanatory variables, their explanatory power ( $R^2$ ) is considered low. For instance, the  $R^2$  for Equation (1) was below 1%. The highest  $R^2$ , 10.93%, was obtained by Equation (2), in which the NTGE is the dependent variable. Even taking demographic and academic factors into account, there may be other factors not considered in this study that explain the performance variations verified in the tests addressing specific content and general knowledge in the Enade 2018. Future studies can explore this aspect more thoroughly.

After analyzing Equations (1) and (2), Table 6 shows the results from Equation (3). The mean VIF of 1.71 suggests low multicollinearity. Note that the coefficients tend to increase after the PROG variable is included and the number of books increases (1-2 books: 0.299; 3-5 books: 1.302; 6-8 books: 1.161; +8 books: 2.187), hence, confirming the logic between a positive relationship between extracurricular books and student performance.

Table 6

**Regression model results (3)**

NTFG	Coefficient	RSE	t	p
CONSTANT	48.342	0.237	204.370	0.000
BOOK (1-2 books)	0.299	0.098	3.060	0.002
BOOK (3-5 books)	1.302	0.103	12.670	0.000
BOOK (6-8 books)	1.161	0.133	8.700	0.000
BOOK (+8 books)	2.187	0.130	16.830	0.000
PROG (BUS)	1.528	0.088	17.300	0.000
PROG (LAW)	5.820	0.092	63.100	0.000
PROG (ECO)	7.222	0.205	35.200	0.000
PROG (TOU)	6.204	0.335	18.540	0.000
PROG (SOC)	2.717	0.137	19.780	0.000
PROG (PUB)	8.544	0.322	26.520	0.000
PROG (JOUR)	9.439	0.191	49.470	0.000
PROG (ADV)	2.841	0.168	16.940	0.000
REFER	-0.679	0.026	-26.610	0.000
OUTROS CONTROLES	Yes	Yes	Yes	Yes
N	337.072	F	1.598.69	
R2	0.0539	Prob F	0.00	

Note. RSE = Robust standard errors. Mean VIF=1.71.  
 Please see Appendix II to observe the complete table.

Regarding the undergraduate program, the students in all the programs, except for the SOC, performed better than the students in the accounting program (ACCOUN – reference category). As reported in Table 4, the accounting students read less frequently than the students in other programs. Therefore, an inferior performance is expected. Except for the SOC students, who scored 1.400 points below the accounting students, all the others scored significantly higher. Nascimento et al. (2019) verified that accounting sciences students faced difficulties understanding the texts, and Silva and Santos (2004) found that business students had the third-worst performance in reading comprehension among the eight programs analyzed. For this reason, we suggest that students from applied social sciences programs improve their reading skills.

Therefore, the regression models' results show a positive relationship between extracurricular reading and academic performance. This relationship remains even after including control variables. Even though reading has been shown to influence academic performance positively, excess extracurricular reading may be harmful (Chen, 2007). Further research is needed to investigate students' perception regarding the relevance of the bibliographic references suggested by professors on their learning process, considering that a negative relationship was found. Additionally, note that the models present a low explanatory power. The R<sup>2</sup> for Equation (3) was 5.39%. Therefore, future studies can consider other important variables to explain academic performance in addition to those addressed in this study, such as prior knowledge (Miranda et al., 2015).

## 5. Final Considerations

This study's objective was to analyze the relationship between extracurricular reading and the academic performance of applied social sciences students. Therefore, data from the 338,977 students from nine undergraduate programs who took the Enade 2018 were collected. Descriptive statistics, the Chi-square test and multiple regression models were performed to analyze data.

The descriptive statistics and Chi-square test results indicated that the programs are significantly associated with the number of books read. The students of specific programs (e.g., JOUR) were associated with a more significant number of books, while the students from other programs (e.g., ACCOUN) were associated with fewer books. It is noteworthy the number of books read by the ACCOUN students. In general, they read fewer books than the students in other programs. This result is of concern, even if the explanatory power ( $R^2$ ) is low. The regression models produced evidence of a positive relationship between extracurricular reading and student performance. Therefore, students who read more books are more likely to perform better. In this case, ACCOUN students may want to read more. Additionally, except for the SOC students, the students in all the other programs performed significantly better than the ACCOUN students in the test addressing general knowledge in the Enade 2018. Together, the results suggest that reading extracurricular books is relevant for students' general and specific training, as it promotes reading competencies, text comprehension, and writing skills.

This study's results have two implications. First, the results show that the students of some programs in the field of applied social sciences are less likely to read extracurricular books. These results can help the coordinators of programs take action and motivate students to read to support their academic training and professional and personal lives. Secondly, the results show that the students from applied social sciences programs obtained a lower mean score in the general knowledge test (38.7 out of 100.0). Therefore, reading content other than that taught in undergraduate programs is necessary to complement the academic training of college students and for them to improve general knowledge. Thus, this study's results can warn students who intend to improve their academic performance through reading and motivate them to change their study habits and read extracurricular books.

This study's main limitations include the fact that the proxy of extracurricular reading (BOOK) is restricted, as it does not include other reading sources such as newspapers, magazines, specialized magazines, or academic papers not related to the undergraduate program. Additionally, this proxy is measured according to categories, limiting the number of quantitative analyses. These limitations are related to how the question was developed and applied in the Enade, over which researchers have no control. Nevertheless, there was an effort to do the best analysis with this proxy. Another limitation refers to the BOOK variable as it only identifies how many books were read in the year the student took the Enade. Hence, longitudinal analyses are needed to investigate better extracurricular reading, particularly books, to verify its relationship with student performance over time.

Finally, in addition to the recommendations for future studies provided throughout the text, we suggest that factors determining the reading of extracurricular books among applied social science students are investigated. Levine et al. (2020) contributes to this aspect and also notes that literature is limited. These results may be valuable for the coordinators of undergraduate programs, professors, and parents intending to encourage reading among these individuals. Additionally, considering the results of the REFER variable, we suggest a detailed study on how curricular reading affects academic performance, ideally using objective curricular reading and performance measures. Results may support the decision-making of coordinators and professors regarding the need to update or revise the bibliographic references provided in the programs.



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## Appendix I

Complete table

### Regression models' results (1) and (2)

VAR. DEP.	NTFG		NTCE		NTGE	
EQUATION	(1)	(2)	(1)	(2)	(1)	(2)
	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)
CONSTANT	44.763 (0.080)	49.707 (0.225)	37.802 (0.069)	41.042 (0.197)	39.555 (0.064)	43.221 (0.181)
BOOK (1-2 books)	0.161* (0.094)	0.572*** (0.099)	-0.047 (0.082)	-0.198 (0.086)	0.005 (0.076)	-0.006 (0.078)
BOOK (3-5 books)	2.114*** (0.098)	1.978*** (0.104)	1.360*** (0.085)	0.637*** (0.090)	1.548*** (0.078)	0.972*** (0.083)
BOOK (6-8 books)	2.484*** (0.131)	1.968*** (0.134)	1.748*** (0.115)	0.614*** (0.118)	1.932*** (0.107)	0.953*** (0.108)
BOOK (+8 books)	4.403*** (0.125)	3.115*** (0.131)	3.291*** (0.109)	1.431*** (0.115)	3.569*** (0.102)	1.852*** (0.106)
REFER		-0.731*** (0.026)		-0.294*** (0.022)		-0.403*** (0.021)
MODAL		4.960*** (0.092)		5.206*** (0.079)		5.145*** (0.072)
REGION (N)		-0.909*** (0.134)		-2.472*** (0.115)		-2.081*** (0.106)
REGION (NE)		-0.174** (0.084)		-0.903** (0.074)		-0.721** (0.068)
REGION (S)		-0.328*** (0.080)		-0.696*** (0.070)		-0.606*** (0.065)
REGION (CO)		-1.593*** (0.109)		-2.121*** (0.095)		-1.999*** (0.087)
SCHED (Morning)		-2.123*** (0.141)		-2.139*** (0.128)		-2.136*** (0.117)
SCHED (Afternoon)		-2.680*** (0.210)		-1.742*** (0.194)		-1.977*** (0.177)
SCHED (Evening)		-2.624*** (0.125)		-4.957*** (0.114)		-5.279*** (0.104)
AGE		-0.180*** (0.004)		-0.166*** (0.004)		-0.169*** (0.003)
SEX		3.265*** (0.061)		1.140*** (0.054)		1.671*** (0.049)
MARITAL (Married)		-0.186** (0.082)		-0.078 (0.071)		-0.105 (0.065)
MARITAL (Divorced)		0.045 (0.174)		-0.333** (0.147)		-0.239* (0.135)
MARITAL (Widowed)		-1.601*** (0.511)		-0.634 (0.450)		-0.877** (0.411)

VAR. DEP. EQUATION	NTFG		NTCE		NTGE	
	(1)	(2)	(1)	(2)	(1)	(2)
	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)	Coefficient (RSE)
MARITAL (Other)		0.828*** (0.164)		0.500*** (0.140)		0.582*** (0.129)
ETHNIC (Afro)		-0.804*** (0.107)		-0.382*** (0.095)		-0.488*** (0.086)
ETHNIC (Asian)		-2.539*** (0.191)		-1.739*** (0.167)		-1.940*** (0.152)
ETHNIC (Mixed)		-1.301*** (0.068)		-0.975*** (0.060)		-1.056*** (0.055)
ETHNIC (Indigenous)		-3.552*** (0.164)		-2.050*** (0.480)		-2.425*** (0.444)
INCOME (3-6x MW)		2.621*** (0.067)		1.825*** (0.059)		2.024*** (0.054)
INCOME (6+ x MW)		7.360*** (0.084)		4.747*** (0.074)		5.400*** (0.069)
STDHOU (1-3Hs)		0.773*** (0.124)		1.021*** (0.107)		0.958*** (0.098)
STDHOU (4-7Hs)		2.917*** (0.132)		3.163*** (0.114)		3.101*** (0.105)
STDHOU (8-12Hs)		4.356*** (0.155)		4.616*** (0.136)		4.550*** (0.125)
STDHOU (12+Hs)		4.493*** (0.168)		5.493*** (0.148)		5.243*** (0.180)
N	337.072	326.500	337.072	326.500	337.072	326.500
F / prob > F	546.89 / 0.00	1335.78 / 0.00	407.50 / 0.00	1054.44 / 0.00	548.64 / 0.00	1409.74 / 0.00
R2	0.0067	0.1042	0.0051	0.0835	0.0068	0.1093
Mean VIF	1.86	1.74	1.86	1.74	1.86	1.74

Nota. DEP. VAR. =dependent variable. RSE = Robust standard errors are in parentheses. Mean VIF

<sup>(A)</sup> Standard errors (non-robust) were also estimated via OLS. The results were very similar to those presented in this table. Additionally, the variables concerning the parents' educational level were also collected and included in the models. The main results (related to the BOOK variables) were very similar.

<sup>(B)</sup>The regression models have less information than the complete sample due to missing values.

\*\*\*, \*\* e \* represent level of significance at 1%, 5%, and 10%, respectively.

## Appendix II

Complete table

### Regression models' results (3)

NTFG	Coefficient	RSE	t	p
CONSTANT	48.342	0.237	204.370	0.000
BOOK (1-2 books)	0.299	0.098	3.060	0.002
BOOK (3-5 books)	1.302	0.103	12.670	0.000
BOOK (6-8 books)	1.161	0.133	8.700	0.000
BOOK (+8 books)	2.187	0.130	16.830	0.000
PROG (BUS)	1.528	0.088	17.300	0.000
PROG (LAW)	5.820	0.092	63.100	0.000
PROG (ECO)	7.222	0.205	35.200	0.000
PROG (TOU)	6.204	0.335	18.540	0.000
PROG (SOC)	2.717	0.137	19.780	0.000
PROG (PUB)	8.544	0.322	26.520	0.000
PROG (JOUR)	9.439	0.191	49.470	0.000
PROG (ADV)	2.841	0.168	16.940	0.000
REFER	-0.679	0.026	-26.610	0.000
MODAL	2.885	0.099	29.230	0.000
REGION (N)	-1.055	0.133	-7.950	0.000
REGION (NE)	-0.201	0.083	-2.430	0.015
REGION (S)	-0.265	0.080	-3.330	0.001
REGION (CO)	-1.878	0.109	-17.260	0.000
SCHED (Morning)	-2.360	0.144	-16.360	0.000
SCHED (Afternoon)	-3.073	0.212	-14.510	0.000
SCHED (Evening)	-5.227	0.128	-40.830	0.000
AGE	-0.209	0.004	-47.100	0.000
SEX	3.271	0.062	53.090	0.000
MARITAL (Married)	0.045	0.081	0.550	0.583
MARITAL (Divorced)	0.024	0.173	0.140	0.888
MARITAL (Widowed)	-1.568	0.513	-3.060	0.002
MARITAL (Other)	0.870	0.162	5.360	0.000
ETHNIC (Afro)	-0.750	0.106	-7.080	0.000
ETHNIC (Asian)	-2.259	0.189	-11.920	0.000
ETHNIC (Mixed)	-1.136	0.068	-16.770	0.000
ETHNIC (Indigenous)	-3.473	0.555	-6.260	0.000
INCOME (3-6 x MW)	2.683	0.067	40.180	0.000
INCOME (6+ x MW)	7.090	0.084	84.880	0.000
STDHOU (1-3Hs)	0.821	0.123	6.690	0.000
STDHOU (4-7Hs)	2.802	0.131	21.470	0.000
STDHOU (8-12Hs)	4.101	0.154	26.700	0.000
STDHOU (12+Hs)	4.158	0.165	25.130	0.000
N	337.072	F	1.598.69	
R2	0.0539	Prob F	0.00	

Note. RSE = Robust standard errors. Mean VIF = 1.71.

# Managerial accounting tools and national culture: a study addressing small and medium Chinese entrepreneurs established in Brazil

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## Abstract

**Objective:** This paper's objective was to identify whether the frequency managerial accounting practices are implemented by Chinese small and medium entrepreneurs established in Brazil and the importance they assign to these practices is similar or different from Brazilian entrepreneurs. Additionally, the influence of national culture on Chinese entrepreneurs is verified through questions addressing national culture dimensions.

**Method:** A questionnaire was applied in 131 firms, 68 of which owned by Chinese entrepreneurs established in Brazil and 63 firms owned by Brazilian entrepreneurs.

**Results:** Brazilian entrepreneurs use more frequently and assign greater importance to managerial accounting tools. The test of hypotheses showed that the importance given to managerial accounting tools was significant in all four groups: budget, performance evaluation, decision-making information, and financial control and evaluation. Regarding the frequency of use, the test of hypotheses was significant for three groups: budget, decision-making information, and financial evaluation; no significant differences were found for performance evaluation.

**Contributions:** This study contributes to clarifying how the national culture of immigrant entrepreneurs, in the specific case of small Chinese entrepreneurs, is related to the use and importance given to managerial accounting tools. Chinese entrepreneurs working in an environment different from their national environment maintain their cultural traits. Hence, their original national culture may influence how managerial accounting tools are used.

**Keywords:** Management accounting; National culture; Immigration; Small and medium firms.

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## 1. Introduction

Management accounting research indicates a connection between national culture and management accounting practices (Malmi et al., 2020). Furthermore, Baskerville-Morley (2005) highlights that managerial researchers must understand that behavioral variables change according to the origin of those involved. In this context, one must be aware that different principles and values are held in different cultures. Hence, researchers can continue investigating and developing managerial accounting actions taking the cultural aspect into account (Chan & Cheung, 2012).

There are many situations to be explored in terms of cultural aspects within an organization. Harrison & Mckinnon (1999) considers that the way the culture of a country influences the behaviors of employees is quite complicated, considering that a group of managerial actions may not be applied in the same way in different cultures. So there is an understanding that culture plays a vital role in the dilemmas organizations face in all countries.

Traditionally, after developing multinational operations in many organizations, national culture was identified as a contextual element. The relationship between the design and use of managerial accounting tools and national culture represents an extension of contingency-based research of its organizational foundations to more sociological issues (Chenhall, 2006). The basic assumption is that different countries have specific cultural characteristics that predispose individuals in these cultures to respond differently to the managerial accounting system (Merchant, et al., 2011). Culture became essential to understand the design and use of managerial accounting practices in the last 30 years, as many companies started developing multinational operations. These companies face the problem of transferring their domestic managerial accounting practices abroad or redesign their systems to adapt to the cultural characteristics of the entities outside their jurisdictions. Therefore, comparing to studies addressing other contextual variables, research on national culture has been limited to the context of large multinational organizations (Jarsen, et al., 2009). Thus, few studies address small and medium-sized firms (PMEs), particularly considering immigration and relating its impact on management accounting practices to clarify how cultural characteristics and differences reflect on the importance and use of management accounting tools.

Therefore, even though many studies address managerial accounting and small and medium-sized firms (López & Hiebl, 2015), there is a gap concerning the connection between the impact of national culture on the use and importance assigned to management accounting tools. Therefore, studies addressing national culture aspects and their impact on small and medium-sized firms are relevant because they can support understanding of how managerial practices evolve in these organizations (Davila & Foster, 2007). In this sense, Mitchell and Reid (2000) note that even though studies addressing small firms are not in evidence, these have great potential to clarify how managerial accounting tools are developed in these companies. Therefore, considering the growing immigration of Asian individuals, especially Chinese, to various countries, including Brazil, this study's objective is to analyze whether the managerial accounting practices adopted by small and medium Chinese entrepreneurs established in Brazil and the importance assigned to these practices differ from the perspective of Brazilian entrepreneurs. Therefore, this study contributes to understanding the influence of these on the development of managerial accounting practices by Chinese businesspeople, who may adapt to the national culture to conduct their businesses, and also supports researchers to understand better the use of managerial accounting on the part of small and medium entrepreneurs and the importance they assign to these practices in the context of immigration.



Finally, as the literature has not consistently addressed the connection between national culture in the context of small and medium-sized firms to investigate differences in terms of managerial accounting practices, we suggest that many institutional conditions in our local environment and single survey sampling (Chinese established in Brazil) can contribute to theorization and future research addressing the use and importance of managerial accounting tools in various environments and jurisdictions. As noted by Scott (1995), it would be difficult, if not impossible, to discern the effects of institutions (set of beliefs and values) on social structures (e.g., national culture) and behaviors if all studies were conducted in the same or very similar contexts.

## 2. National Culture and Research Hypotheses

Studies addressing the association between managerial accounting practices and culture have more frequently focused on national culture (Malmi et al., 2020). It is argued that national culture is acquired and becomes deeply rooted during childhood, so that cultural values and preferences are relatively resistant to change (Jarsen, et al., 2009). Hence, culture can be described by inherent traits such as knowledge, beliefs, art, morals, laws, customs, and other abilities and habits acquired by people that belong to a given society (Chenhall, 2006). However, to meet the research community's methodological and scientific needs, culture is often conceptualized as a set of isolated characteristics. Hofstede (2001) developed the characteristics most frequently used, with six dimensions known as *power distance*, *uncertainty avoidance*, *individualism versus collectivism*, *masculinity versus femininity*, *long-term orientation*, and *indulgence versus restraint*.

The power distance index expresses the degree to which less powerful people within a group are conformed to inequality. The higher the degree, the higher their level of acceptance and no justification is required. Groups with a lower level of acceptance demand inequality to be justified and strive for power to be equivalently distributed (Hofstede, 2001). Hence, low power distance within companies may indicate a decentralizing profile in which people at all levels participate in decision-making. The opposite occurs when there is a high level of power distance, a profile that tends to centralize the decision-making process.

According to Hofstede (2001), the individualism *versus* collectivism dimension refers to people having a more significant concern with themselves and their families, which is characterized as individualism. However, when people can count on the other group members in exchange for unquestioning loyalty, it is characterized as collectivism.

Concerning the masculinity *versus* femininity dimension, a preference for achievements, feats, being assertive and having tangible results are characteristics considered to be masculine. However, a preference for cooperation, unpretentiousness, concern for the less fortunate, and wellbeing are considered feminine characteristics (Hofstede, 2001).

Regarding the uncertainty avoidance index, a high level of this dimension indicates a society with rigid codes of beliefs and behaviors, intolerance to less rigid principles and behaviors. In contrast, a more relaxed attitude in which practice is more important than rules denotes a low level of this dimension (Hofstede, 2001).

According to Hofstede (2001), a society presenting a low level of the long-term orientation *versus* short-term orientation index is characterized by a behavior focused on following protocols, encouraging the economy, and efforts are focused on education as a way to prepare individuals for the future. Low levels of this dimension indicate a preference for continuing customs and norms, whereas societal changes are seen with caution.

In the indulgence *versus* restriction dimension, indulgence is characterized by valuing basic gratification such as enjoying life and having fun, whereas restraint refers to heavy regulations to restrict basic gratification (Hofstede, 2001).

According to Chenhall (2006), virtually all studies addressing managerial accounting adopted these cultural dimensions and values from Hofstede's model to study the influence of national culture on managerial accounting practices. In general, the literature on managerial accounting examines associations between cultural dimensions and structural elements such as standardization, decentralization, and characteristics of the managerial control system such as formality of controls, dependence on financial measures of performance, and budgetary participation. In most cases, these studies provided mixed results regarding the effects of national culture on aspects linked to managerial accounting practices (Chenhal, 2006; Malmi et al., 2020). There are few areas in which consensus is identified. It happens because the studies examine different combinations of cultural dimensions and consider distinct aspects of the managerial accounting system.

Consequently, there is little overlap between studies that enable knowledge to be consolidated or make comparisons and generalizations. The following studies are examples of investigations that examined the relationship between culture and managerial accounting. O'Conner (1995) argued that the low level of power distance found among the headquarters of Western corporations would control the high power distance inherent in their local subsidiaries in Singapore, improving the subsidiaries' efficacy of the managerial control system. Using these arguments, the author found that the relationship between role ambiguity and superior-subordinate relationships (perceptions of competence and trustworthiness) and budgetary participation and performance evaluation was stronger in international subsidiaries than in the local entities in Singapore. Merchant et al. (1995) addressed Taiwanese and American companies and found that culture was not important to explain the use or effectiveness of the degree of subjectivity in the profit of the result centers in the performance evaluation process. However, they found that the use of long-term incentives was more important in Taiwanese firms.

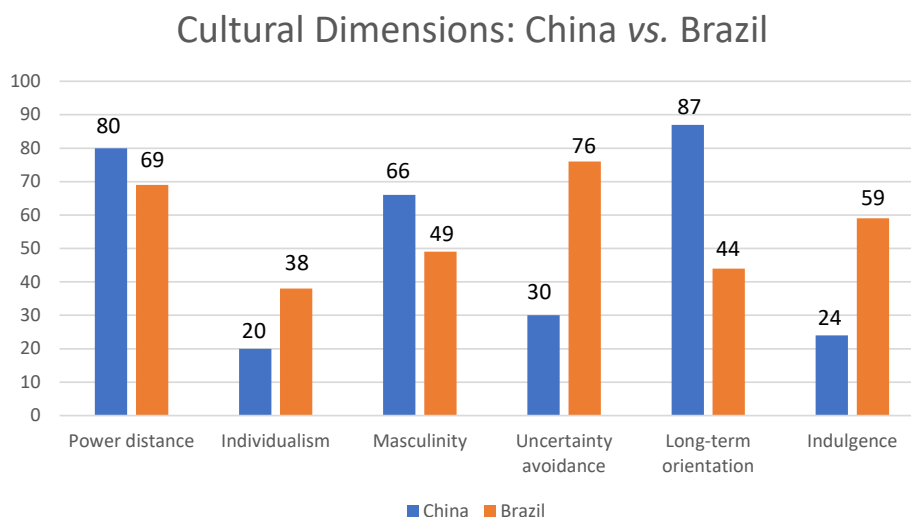
More recently, Merchant et al. (2011) sought to identify whether Chinese car dealerships' reward and incentive practices compared to those in the USA and the Netherlands. The study's results showed that Chinese firms are much more likely to provide incentives than Dutch companies and even more likely than American firms. However, Chinese bonus plans were more subjective rather than based on pre-established formulas and standards. Malmi et al. (2020) examined the influence of cultural regions (Anglo-Saxon, Germanic, and Nordic) on the interdependence between authority delegation and other managerial control practices. The results showed that interdependence between delegation and contractual incentive is restricted to Anglo-Saxon firms. Participation in strategic planning and actions, identified in the Nordic and Germanic regions, works as a complement to the delegation process, whereas delegation is also complemented by selecting managers in Nordic firms. In general, the study showed that cultural values and preferences significantly influence the interdependence of managerial control systems.

According to Kanagaretnam, Lim and Lobo (2013), various studies considered broader aspects of managerial accounting. The authors analyzed the influence of national culture, such as the use of accounting systems and information (Gray, 1988; Salter & Niswander 1995; Radebaugh, Gray & Black, 2006). Other studies (Nabar & Thai, 2007; Doupnik, 2008) addressed the relationship between national culture and performance management.

The relationship between culture and managerial accounting was also explored in Brazil (Tarifa & Lauro, 2018; Carmona et al., 2018; Heinzmann & Lavarda, 2011). However, Brazilian studies tend to focus on the more specific concept of organizational culture. Guerreiro, Frezatti and Casado (2006) highlight involuntary elements in the firms responsible for structuring management accounting. These elements are explained by being habits unconsciously formed by the national and organizational cultural dimensions. Tarifa & Lauro (2018) studied the effects of organizational culture on managerial accounting practices adopted by agribusiness cooperatives. The results report three cooperative groups with common characteristics between managerial accounting practices and organizational culture. In turn, Carmona et. al (2018) focused on the relationship between organizational culture, innovation, and performance in the context of Brazilian accounting offices. The authors identified that organizational culture influence innovation and positively affect the performance of accounting offices. Finally, Klein & Almeida (2017, p. 110) conclude, “cultural aspects cannot be neglected, because they influence acceptance and rejection of agents in adopting and using new practices, regardless of what these practices are.”

While previous studies revealed that the type and use of certain managerial accounting practices vary between nations, other studies report insignificant and inconsistent results or suggest that there is a convergence toward global best practices (Jansen et al., 2009). Thus, the literature is still incipient to improve understanding of whether and how culture influences specific managerial accounting practices (Jansen et al., 2009). These prescriptions and conflicting predictions suggest that the association between national culture and the importance and use of managerial accounting practices is essentially an empirical issue. Therefore, this study’s objective is to identify this potential association in the context of immigration in which small Chinese entrepreneurs settled and started operating in Brazil—comparing two groups of entrepreneurs working in the same business environment and having their national cultures as the differential can lead to relevant empirical data to clarify how national culture is associated with the use and importance of managerial accounting tools.

The national culture dimensions developed by Hofstede were adopted. His website enables comparisons between nations (as shown in Figure 1), and differences between China and Brazil were found in all six dimensions.



**Figure 1.** Cultural Dimensions: Comparison between China and Brazil

Source: adapted from Geert Hofstede’s webpage (Available at: <https://geert-hofstede.com/brazil.html> retrieved on May 2017).

Because this study is focused on the managerial accounting of small and medium-sized firms, long-term orientation *versus* short-term normative orientation and indulgence *versus* restriction were not used because they are irrelevant in studies addressing small and medium-sized firms. Additionally, the four remaining dimensions already provide elements to differentiate aspects of the national culture between the Chinese and Brazilian entrepreneurs. Previous studies (Harrison, 1993; O'Connor, 1995) treated the power distance, uncertainty avoidance, and individualism dimensions related to budgetary practices, performance evaluation, and measurement. Considering that there are significant differences in the four dimensions addressed in this study and the literature review on the relationship between national culture and managerial accounting practices, two hypotheses were established to analyze the influence of national culture in the immigration context and the use and importance given to managerial accounting by Brazilian and Chinese entrepreneurs established in Brazil. Hence two hypotheses are proposed:

*H1: There are differences between Chinese entrepreneurs working in Brazil and Brazilian entrepreneurs regarding the use of managerial accounting tools.*

*H2: There are differences between Chinese entrepreneurs working in Brazil and Brazilian entrepreneurs regarding the importance assigned to managerial accounting tools.*

### 3. Method

A survey was the investigation technique adopted in this study. Even though there are some associations of small Chinese entrepreneurs in Brazil, the total population is unknown. Therefore, this study adopted a convenience sample and used contact networks developed by this study's authors. To gain access to the respondents of both groups (Brazilian and Chinese entrepreneurs working in Brazil), the small and medium-sized firms were visited in person, while some firms in the group of Brazilian entrepreneurs were contacted by telephone. Because of the strategy previously described, 397 firms were contacted, and 131 companies established in Brazil agreed to participate.

Personal contact was established with entrepreneurs born in China. They received clarifications regarding the study and a printed questionnaire written in Mandarin. They were also asked to nominate other potential participants, and some nominated other entrepreneurs and contributed to the study. Chinese entrepreneurs located in São Paulo and Pernambuco, in the cities of São Paulo, Recife, and Caruaru were approached. The Chinese Chamber of Commerce located in Recife (PE) facilitated access to Chinese businesspeople and nominated some of them to participate in the study. A total of 274 Chinese firms were addressed, and 68 agreed to participate.

Most of the Brazilian participant firms are located in the state of São Paulo and Pernambuco. This group received a printed questionnaire, or a link was sent via e-mail with an electronic form developed on Google Form to be answered online. A total of 123 firms owned by Brazilian individuals were approached, and 63 agreed to complete the questionnaire.

The questionnaire was developed in two languages: Portuguese and Mandarin. All variables were measured with pre-established and validated scales. All variables originally written in English were translated into Portuguese and Mandarin and back-translated. Responses were measured on a 5-point Likert scale, except for questions that addressed the characteristics of the respondents and their firms.

The questionnaire was subdivided into three parts (labelled “A”, “B”, and “C”). The first page included a brief introduction explaining the question problem that motivated the study and ensuring the confidentiality of information. Additionally, e-mail was provided for the participants to clarify any potential doubts.

The questionnaire was composed as detailed in Table 1:

Table 1

**Composition of the questionnaire**

Part	Objective
A1 – A4	Identification of practices and the importance given to managerial accounting tools.
B1 – B2	Analysis of cultural aspects.
C	Identification of the respondents’ and organizations’ characteristics.

A thematic foundation was adopted to better understand the questions the authors used as references, as presented in Table 2.

Table 2

**Studies and references for the questionnaire**

Topic	Questions	References
Budget	Part A1	Abdel-Kader & Luther (2006)
Performance evaluation	Part A2	Abdel-Kader & Luther (2006)
Decision-making information	Part A3	Abdel-Kader & Luther (2006) and Armitage, Webb, & Glynn (2016)
Financial Control and Evaluation	Part A4	Davila & Foster (2007)
National Culture	Part B1 and B2	Yoo, Donthu, & Lenartowicz (2011) based on Hofstede (2001).

Part A1 to A4 addressed the practices and importance assigned to managerial accounting tools divided as budget (A1), performance evaluation (A2), decision-making information (A3), and financial control and evaluation (A4). The items used for the variables concerning the use and importance given to managerial accounting tools (i.e., budget, performance evaluation, decision-making information, and financial control and evaluation) are presented in Table 3. To identify these practices, the respondents were asked: “To what extent do you agree with the following statements about their importance and the frequency with which the company uses them? How important are they? (1. Not important; 2. Not very important; 3. Moderately important; 4. Important; 5. Very important). How often are they used? (1. Never; 2. Rarely; 3. Sometimes; 4. Often; 5. Very often).

Table 3  
**Use and importance of managerial accounting tools**

Practice	Items
Budget	<ol style="list-style-type: none"> <li>1. Budget for planning (projecting the company's revenues and costs in the short and medium terms).</li> <li>2. Use of budgeting for cost control (comparisons between actual cost and budgeted cost).</li> <li>3. Budget projected for different scenarios.</li> <li>4. Long-term budget plans (using a budget to design and implement long-term strategic actions)</li> </ol>
Performance evaluation	<ol style="list-style-type: none"> <li>1. Financial measure(s) (e.g., sales, profit margin).</li> <li>2. Non-financial measure(s) related to customers (e.g., customer satisfaction, number of returns).</li> <li>3. Non-financial measure(s) related to operations and innovation (e.g., the average time to service a customer, number of daily sales).</li> <li>4. Non-financial measure(s) related to employees (e.g., employee satisfaction, absenteeism).</li> <li>5. Added economic value (Comparing the company's profitability to the profitability of financial investment).</li> <li>6. Benchmarks (Comparing the company's performance to the performance of other companies).</li> </ol>
Decision-making information	<ol style="list-style-type: none"> <li>1. Cost-volume-profit for the main products (Analyzing how fluctuation in the cost and sales volume impacts the products and the company's profitability)</li> <li>2. Product profitability analysis (Identifying the company's most profitable products)</li> <li>3. Customer profitability analysis (Identifying the company's most profitable types of customers)</li> <li>4. Inventory control information.</li> <li>5. Analysis of capital expenditures (e.g., purchase of expensive equipment and long-term investments) through financial techniques (e.g., discounted cash flow, internal rate of return, payback time).</li> </ol>
Financial control and evaluation	<ol style="list-style-type: none"> <li>1. Cash flow projections.</li> <li>2. Sales projections.</li> <li>3. Operating budget (Used for income and expenses related to the company's operation).</li> <li>4. Analysis of costs by type of customer.</li> <li>5. Analysis of financial performance against a pre-established goal.</li> <li>6. Capital investment approval procedures (e.g., purchase of expensive equipment and long-term investments).</li> <li>7. Procedures for approving operating expenses.</li> </ol>

The questions involving national culture were placed on parts B1 and B2 and comprised the following dimensions: Part B1 addresses power distance and uncertainty avoidance while Part B2 addresses individualism *versus* collectivism and masculinity *versus* femininity. The items used for national culture (power distance, uncertainty avoidance, individualism *versus* collectivism and masculinity *versus* femininity) are presented in Table 4:

Table 4

**National Culture**

Dimension	Items
Power distance	1. People in higher positions should make most decisions without consulting people in lower positions. 2. People in higher positions should not ask the opinion of people in lower positions too frequently.. 3. People in lower positions should not disagree with decisions by people in higher positions. . 4. People in higher positions should not delegate important tasks to people in lower positions.
Uncertainty avoidance	1. It is important to have instructions spelled out in detail so that I always know what I'm expected to do. 2. It is important to closely follow instructions and procedures. 3. Rules and regulations are important because they inform me of what is expected of me. 4. Instructions for operations are important.
Individualism <i>versus</i> collectivism	1. Individuals should sacrifice self-interest for the group. 2. Group welfare is more important than individual rewards. 3. Individuals should only pursue their goals after considering the welfare of the group. 4. Individuals should stick with the group even through difficulties.
Masculinity <i>versus</i> femininity	1. It is more important for men to have a professional career than it is for women. 2 Men usually solve problems with logical analysis; women usually solve problems with intuition. 3. Solving difficult problems usually requires and active, forcible approach, which is typical of men. 4. There are some jobs that a man can always do better than a woman.

Part C included demographic questions to identify the profile of the companies, such as the 'age' of the firms, number of employees, whether they imported goods and the state where they were located. To identify the participants' profiles, questions addressed gender, age, country of birth (for the Chinese participants, how long they were in Brazil), education, and position in the company.

Afterwards, data were typed into an electronic spreadsheet to structure and organize the order of questions and their respective answers. After checking all raw data entries, data were treated using IBM SPSS Statistics for descriptive analysis and inferential analysis to validate hypothesis testing. Finally, Cronbach's alpha was performed to analyze the reliability of the variables. All the variables presented satisfactory Cronbach's alphas (between 0.75 and 0.89).

## 4. Results

### 4. 1 Descriptive analysis of the participants and companies

Analysis of part C initially identified the participants' country of origin. According to the inclusion criteria, participants should be Brazilian or Chinese. A total of 131 people participated and Table 5 describes their nationality.

Table 5

#### Participants' country of birth

	Frequency	Percentage
Brazil	63	48.1
China	68	51.9
Total	131	100.0

Of the 131 participants, 63 represent 48.10% of the participants born in Brazil, and the remaining 68 participants represent 51.90% of participants born in China. Table 6 presents an analysis of gender and a comparison of both groups.

Table 6

#### Participants' gender

Number	Brazil		China		
	%	Number	%		
Are you a woman or a man?	Men	39	61.9%	44	64.7%
	Women	24	38.1%	24	35.3%
	Total	63	100%	68	100%

A total of 61.90% of the Brazilian respondents were men, and 38.10% were women, whereas 64.70% of the Chinese participants were men and 35.30% were women, showing a predominance of men among both Brazilian and Chinese respondents.



Table 7 presents the average age of the Brazilian and Chinese respondents.

Table 7  
**Participants' average age**

		Age (complete years)
Brazil	Average	40.27
	N	63
	Desvio Padrão	11.51
China	Average	32.37
	N	67
	Standard deviation	11.76
Total	Average	36.20
	N	130
	Standard deviation	12.26

Table 7 shows that, on average, the Chinese participants were younger than the Brazilians. The Chinese group was 32.37 years old on average, that is, with a younger profile than the Brazilian group, which was 40.27 years old on average. Table 8 presents the participants' educational level.

Table 8  
**Respondents' educational level**

		Brazil	China
What is your educational level?	Did not answer	0.0%	1.5%
	Primary/Middle school	1.6%	4.4%
	High school	34.9%	58.8%
	College	39.7%	27.9%
	Specialization	20.6%	2.9%
	Master's/Ph.D.	1.6%	2.9%
	Other	1.6%	1.5%

The highest educational level among most of the Brazilian respondents was college, with 39.70%, whereas most of the Chinese respondents reported High school, with 58.8%. Table 9 presents the position the respondents occupied in the company.

Table 9  
**Participants' job position**

		Brazil	China
What is your position in the company?	Owner/Partner	47.6%	97.1%
	Director	12.7%	2.9%
	Manager	33.3%	0.0%
	Supervisor	3.2%	0.0%
	Secretary	1.6%	0.0%
	Accountant	1.6%	0.0%

Most Chinese participants were the firms' owners, with 97.10%, while the remaining were directors, whereas 47.60% of the Brazilian respondents were the owners, followed by managers, with 33.30%.

Regarding how long the Chinese participants lived in Brazil, the 68 participants reported 8.32 years on average.

Most companies are located in Pernambuco, with 78.60%, and São Paulo, with 17.60%. On-site surveys were concentrated in these two states. Table 10 compares the average number of employees and the average duration of the companies in both groups.

Table 10

**Number of employees and years since the foundation**

		Nº. of employees	Years since its foundation
Brazil	Average	11.8	14.6
	N	63	63
	Standard deviation	26.1	15.9
China	Average	7.6	5.8
	N	68	68
	Standard deviation	5.8	5.8
Total	Average	9.6	10.0
	N	131	131
	Standard deviation	18.6	12.6

The number of employees in Brazilian-owned firms was 11.84 on average and 7.6 among Chinese-owned firms. Regarding years since foundation, the firms of Brazilian owners were 14.6 years old on average, while Chinese firms were 5.8 years old.

## 4.2 National Culture Dimensions

Initially, the variables' means (T-test) were tested, involving the national culture of both groups (Brazilian and Chinese entrepreneurs) to identify potential statistically significant differences between the two groups and the national culture dimensions. The results are presented in Table 11.

Table 11

**National Culture**

National culture dimensions		N	Mean	Standard deviation	Level of significance
Power distance	Brazil	63	<b>2.405</b>	0.824	0.897
	China	68	2.125	0.867	
Risk avoidance index	Brazil	63	<b>3.976</b>	0.675	<b>0.000</b>
	China	68	3.316	1.144	
Individualism versus Collectivism	Brazil	63	<b>3.198</b>	2.707	<b>0.003</b>
	China	68	2.702	1.024	
Masculinity versus Femininity	Brazil	63	2.270	0.930	0.595
	China	68	<b>2.588</b>	0.969	

Regarding the national culture dimensions, the Brazilian participants presented a higher level of agreement than the Chinese in the questions involving power distance, uncertainty avoidance index, and individualism *versus* collectivism. On the other hand, the Chinese participants obtained a greater level of agreement regarding masculinity *versus* femininity.

The power distance index was not significant, with 0.897 not validating the means obtained in the questionnaire. The uncertainty avoidance index was significant in the T-test. The significance value was well below 0.05, validating the mean in which the uncertainty avoidance index was higher among the Brazilian respondents. The T-test was significant for the dimension concerning individualism *versus* collectivism, validating the mean in which Brazilians, more frequently than the Chinese, value the collective. Analyzing the dimension masculinity *versus* femininity, the T-test result was not significant, not validating the mean in which this index found a greater level of agreement among Chinese participants.

According to this study's data and analysis obtained from Hofstede's website (<https://www.hofstede-insights.com/country-comparison/brazil,china/>), Brazilians present a higher level of uncertainty avoidance, revealing a difference between these two cultures, in which Brazilians more frequently tend to follow laws and rules. In contrast, China is characterized by being a more flexible nation.

### 4.3 The Use and Importance granted to Managerial Accounting – Hypothesis Testing

The test of Hypothesis H<sub>1</sub> (*There are differences between Chinese entrepreneurs working in Brazil and Brazilian entrepreneurs regarding the use of managerial accounting tool*) was conducted in this study using regression analysis, in which the origin of the respondent (Chinese origin) was a dummy independent variable, controlling for the company's size according to the number of employees. Table 12 presents the results according to managerial accounting practices.

Table 12

#### Managerial accounting usage frequency

Managerial accounting practices		N	Mean	Standard deviation	Regression results
Budget usage frequency	Brazil	63	3.349	0.872	$\beta = -0.346$ $p = 0.069^\dagger$
	China	68	3.140	1.235	
Performance evaluation usage frequency	Brazil	63	3.225	0.942	$\beta = -0.248$ $p = 0.144$
	China	68	3.029	1.002	
Decision-making information usage frequency	Brazil	63	3.514	0.845	$\beta = -0.384$ $p = 0.026^*$
	China	68	3.018	1.274	
Financial Control and Evaluation usage frequency	Brazil	63	3.204	0.910	$\beta = -0.315$ $p = 0.072^\dagger$
	China	68	2.733	1.174	

<sup>†</sup> Significant at  $p < 0.10$ ; \* Significant at  $p < 0.05$

The Brazilian respondents obtained higher means in all the questions involving how frequently managerial accounting tools were used were higher than the means the Chinese entrepreneurs obtained, showing that Brazilian entrepreneurs use managerial accounting tools more frequently.

Regarding the questions addressing the use of budget, the Brazilian respondents obtained a higher mean than the Chinese for usage frequency, with marginally significant results ( $p < 0.10$ ). Therefore, the higher frequency in which Brazilians use a budget in their companies than Chinese was marginally validated. Regarding the questions addressing performance evaluation, in which the Brazilians also obtained a higher mean for usage frequency, no significant results were found, not validating the Brazilians' more frequent use of performance evaluation tools. Concerning questions addressing usage frequency of decision-making information, in which the Brazilian respondents also scored higher than the Chinese, significant results were found, validating that Brazilian more frequently than the Chinese use information to make decisions in their organizations. Analysis of the questions addressing financial control and evaluation, in which once more the Brazilian respondents scored higher in usage frequency than the Chinese, the results were marginally significant, validating that the Brazilians more frequently use financial control and evaluation tools.

The test of Hypothesis  $H_2$  (*There are differences between Chinese entrepreneurs working in Brazil and Brazilian entrepreneurs regarding the importance given to managerial accounting*) was conducted using regression analysis, in which the entrepreneur's country of origin was the dummy independent variable, controlling for the size of the organization according to the number of employees. Table 13 presents the results according to managerial accounting practices.

Table 13

**Importance of managerial accounting tools**

Managerial accounting practices		N	Mean	Standard deviation	Regression results
Importance of budget	Brazil	63	<b>4,111</b>	0,771	$\beta = -0,691$ $p < 0,01^{**}$
	China	68	3,456	1,259	
Importance of Performance Evaluation	Brazil	63	<b>3,910</b>	0,758	$\beta = -0,647$ $p < 0,01^{**}$
	China	68	3,275	1,070	
Importance of Decision-making information	Brazil	63	<b>4,070</b>	0,753	$\beta = -0,756$ $p < 0,01^{**}$
	China	68	3,274	1,129	
Importance of Financial Control and Evaluation	Brazil	63	<b>3,837</b>	0,786	$\beta = -0,680$ $p < 0,01^{**}$
	China	68	3,061	1,073	

\*\* Significant at  $p < 0.01$

The means obtained by the Brazilian respondents in all the questions concerning the importance given to managerial accounting tools were higher than those obtained by the Chinese, showing that Brazilian entrepreneurs assign greater importance to managerial accounting tools.

Regarding issues addressing the importance of a budget, the Brazilian respondents obtained a mean equal to 4.111, higher than the Chinese, who obtained a mean equal of 3.456. The results were significant and validate that Brazilian entrepreneurs give more importance to a budget than the Chinese. Regarding the questions addressing performance evaluation, in which the Brazilian respondents also scored higher than the Chinese, the results were significant and validate that Brazilians, more frequently than the Chinese, value performance evaluation tools. Furthermore, the questions concerning the importance of information for decision-making, in which the Brazilian respondents also scored higher than the Chinese, the results were significant and validated that the Brazilian respondents value information to make decisions in their organizations. Finally, analysis of the questions addressing the importance given to financial control and evaluation, in which the Brazilian obtained higher means, the results were significant and validate that the Brazilians, more frequently than the Chinese, value financial control and evaluation tools.

## 5. Conclusions and Discussion

This study's general objective was to identify whether the frequency in which Chinese entrepreneurs use managerial accounting tools and the importance they assign to these tools are similar or different from Brazilian entrepreneurs and whether national culture influence Chinese entrepreneurs by using questions addressing national culture dimensions.

To obtain the questionnaires' results, the demographic questions were analyzed to identify the companies' and participants' profiles along with the questions addressing managerial accounting practices that revealed the importance and usage frequency of these practices and questions addressing national culture dimensions.

Regarding the participants' profiles, 68 respondents were from China, and 63 were born in Brazil. Most participants in both groups were men; the Chinese participants were 36 years old on average, that is, they were younger than the Brazilian participants; the respondents born in Brazil reported a higher educational level; and regarding their positions in the firms, most participants in both groups were entrepreneurs.

Regarding the companies' profiles, most of the companies were located in Pernambuco and São Paulo; the average number of employees was 11.84 among the Brazilian entrepreneurs and 7.5 among the Chinese; the companies owned by Brazilian were 14.58 years old whereas the ones owned by the Chinese were 5.82 years old on average. Regarding whether the companies imported goods, 75% of the Chinese imported goods compared to approximately 20% of the Brazilians.

Analysis of the national culture dimensions revealed greater agreement among the Brazilian respondents on power distance, uncertainty avoidance, and individualism *versus* collectivism, whereas the Chinese obtained a greater agreement on masculinity *versus* femininity. Uncertainty avoidance and individualism *versus* collectivism were statistically significant, validating differences between the two groups regarding these two dimensions.

Regarding the results of questions involving the importance given to managerial accounting tools, the Brazilian respondents more frequently than the Chinese valued managerial accounting represented in the four groups of tools analyzed: budget, performance evaluation, decision-making information, and financial control and evaluation. As a result, the Brazilians obtained higher means, and the test of hypothesis for the importance given to these tools was also significant for the four groups of questions analyzed.

Regarding the analyses involving managerial accounting practices, the Brazilian respondents also reported more frequent use of the tools addressed in the four groups of questions. The hypothesis test was significant for three groups: budget, decision-making information, and financial control and evaluation. No statistical significance was found for the group of questions addressing performance evaluation.

The fact that the Brazilian respondents presented a high level of uncertainty avoidance is an element that suggests they need more controls and assign greater importance to managerial accounting tools. On the other hand, the Chinese present a lower level of uncertainty avoidance and, for this reason, are more flexible. Hence, it may explain why the Chinese entrepreneurs do not assign the same level of importance and do not use these tools as frequently as the Brazilians.

One of this study's limitations is that we do not have the exact information of the entire population of companies owned by people born in China and established in Brazil. Chinese entrepreneurs are expanding their businesses in Brazil, and we verified that, in the initial stages, these small and medium-sized companies do not immediately formalize and constitute the National Register of Legal Entities (CNPJ), which makes it difficult to validate this population. This issue concerning informal businesses raises the question of whether it reflects on the study's results. Hence, this issue may be addressed in future studies, which can investigate the effect of informal businesses established by migrants and how they relate to the use and importance of managerial accounting tools.

Another limitation concerns the questionnaire's scope. The instrument used in this study did not include traditionally contingency variables related to managerial accounting tools, such as the type of strategy adopted and a measure of the competitive environment. Therefore, these variables could not be used to control the effect of the entrepreneurs' country of origin (Brazilian or Chinese) on the use and importance given to managerial accounting tools. Hence, we suggest that future studies include these measures to strengthen their analyses.

This study adopted a quantitative approach, comparing two groups of entrepreneurs established in Brazil. A suggestion for future studies is that a third group be included: Chinese entrepreneurs working in their country of origin, comparing the three groups of entrepreneurs and the influence of national culture on the managerial accounting practices of these firms.

Finally, this study contributes to clarifying how the national culture of immigrant entrepreneurs, in the specific case of small Chinese entrepreneurs, is related to the use and importance assigned to managerial accounting tools. We found that Chinese entrepreneurs working in a national environment different from their own keep their cultural traits. Hence, their original national culture can influence how managerial accounting tools are used. However, we believe that this line of research, particularly addressing small firms, is still incipient. Therefore, future studies have a great potential to contribute to the discussion concerning the relationship between national culture and managerial accounting practices.

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# Antecedents and consequents of the process of obtaining and renewing the Social Assistance Beneficent Certification (Cebas)

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## Abstract

**Objective:** Identify the antecedents and consequents of the process for obtaining and renewing the Social Assistance Beneficent Certification (Cebas) based on the Organizational Legitimacy theory.

**Method:** Qualitative-quantitative study addressing primary data (questionnaire and semi-structured interviews held with professionals involved in the certification process) and secondary data (documents available on the ministries' websites) analyzed with Template Analysis and descriptive statistics.

**Results:** Evidence indicates five antecedents (accounting disclosure, training, and professionalization of Third Sector Organizations (TSOs) and accountants, external audit, legal uncertainty, and other situations) and four consequents (tax immunity, TSOs' credibility, fundraising, and cultural change). Evidence also shows controllable and uncontrollable vulnerabilities in the antecedents, with which the social actors involved in the process have to face and may compromise this certification's pragmatic and moral legitimacy. Tax immunity remains one of the main consequents of this process. Some TSOs do not value this certification to obtain other benefits such as improved credibility and, consequently, improved fundraising, failing to strengthen its moral legitimacy.

**Contributions:** The accounting field focused on sustainability in the formulation of public policies to strengthen the management of TSOs. This study draws attention to lost opportunities to increase the number of donors at the individual and organizational levels and exposes the shortsighted view of this certification. This study also contributes to the literature addressing certifications by proposing a conceptual model to be tested in future quantitative studies.

**Keywords:** Cebas Certificate; Third Sector; ITG 2002. Credibility. Fundraising.

## 1. Introduction

In its broadest sense, the third sector is characterized by a desire to promote social change and act where the public and private sectors cannot reach (Barragato, 2019; Gidron, 2010; Khieng, 2014). In Brazil, there are 820,000 civil society organizations (Ipea, 2018) comprising: religious (25%), sports (7%), educational (5%), cultural (3%), social assistance (3%), health (1%), and employer associations, among others (56%).

According to Fonif (2018), 11,868 TSOS – 1.4% of all entities working in the fields of health, education, and social assistance – are certified. Cebas is a certificate granted by the Union to ‘nonprofit private legal entities, legitimated as a beneficent social assistance entity’ (Brasil, 1988). Certified entities enjoy tax immunity and have priority when signing agreements with public agencies at all levels, dealing with less bureaucracy.

Apparently, the attainment of this certification still revolves around a determinant factor and a consequent factor – complying with the requirements of the General Technical Interpretation (ITG) 2002 (CFC, 2012) and enjoying tax immunity (Beuren & Tamanini, 2009; Lima & Pereira, 2004). However, the third sector involves many stakeholders (Costa & Pesci, 2016; Grizzle & Sloan, 2016; Williams & Taylor, 2013), much competition for resources (Gordon, Knock, & Neely, 2009; Krasteva & Yildirim, 2016), pressure for performance, and greater accountability (Boateng, Akamavi, & Ndoro, 2016; Grieco, Michelini, & Iasevoli, 2015), in addition to information asymmetry between TSOs and donors (Gordon et al., 2009; Ortmann & Svítková, 2007; Weisbrod & Dominguez, 1986).

For this reason, it is important to discuss the relations involving the Cebas from a holistic perspective, broadening the debate regarding its determinants and effects. Given the previous discussion, this study’s objective was to identify the antecedents and consequents of obtaining and renewing the Social Assistance Beneficent Certification (Cebas) according to the professionals’ perceptions involved with this certification. Thus, this discussion was grounded on the Organizational Legitimacy theory (DiMaggio & Powell, 1983; Suchman, 1995), a theoretical framework that explains why organizations become similar due to the force of law, imitation, and professionalization standards considered correct (DiMaggio & Powell, 1983). This theory also discusses perceptions of whether the organizations’ activities are adequate to the cultural context, based on direct exchanges between organizations and their public of interest, considerations regarding the benefits of organizational activities, and organizations’ credibility, predictability, stability, and coherence (Suchman, 1995).

The few Brazilian studies addressing this subject use restricted samples, circumscribed to specific contexts, focusing on accounting management, one of the primary antecedents of this certification (Beuren & Tamanini, 2009; Fagundes, Silva, & Silva, 2014; Lima & Pereira, 2004; Ramos & Klann, 2019; Santos, Ohayon, & Pimenta, 2017). No studies were found addressing the consequents of this certification. According to Yörük (2016, p. 196), the ‘impact of experts’ analyses or third parties’ ratings of the services and products provided by TSOs is relatively unknown.’ There are few studies in the international literature (Adena, Alizade, Bohner, Harkedon et al., 2009; Ortmann & Svítková, 2007; Svítková, 2013; Yörük, 2016) investigating the effect of third parties rating charity donations.

Considering that Cebas is a national public policy intended to promote social inclusion in the fields of education, health, and social assistance, this study contributes to the accounting literature in terms of sustainability concerning the formulation of public policies as it presents a holistic conceptual model based on antecedent events and the effects of this certification, considering the perception of the social actors involved in this process. By discussing this certification from a more holistic perspective, not yet considered in the Brazilian literature, this study promotes a debate regarding the need to mitigate the vulnerabilities of this certification to strengthen its pragmatic and moral legitimacy. It also contributes to social actors involved in this process, as it identifies some steps and qualifications, in particular, for accountants.

## 2. Theoretical Framework

### 2.1 The Role of Certifications in European and African Countries, and in the United States

Certificates are 'a procedure whereby an independent third party issues a written assurance that a product, process, or service meets specific requirements' (Auld, Gulbrandsen, & McDermott, 2008, p. 188). Certificates have been used to ensure management and governance standards in social (Adena et al., 2019; Brown et al., 2017; Gordon et al., 2009; Svítková, 2013; Yörük, 2016) and environmental areas (Atasoy, 2020; Cavero-Rubio & Amorós-Martínez, 2020; Mohan, 2020; Wen & Lee, 2020).

Certificates in the environmental field, such as the Forest Stewardship Council (FSC) implemented in the rural area of Tanzania (Africa), have been used to ensure responsible forest management. Evidence shows that families living in the vicinity of private forest plantations certified by the FSC perceive improved social services and infrastructure, compared to uncertified state-owned plantations (Degnet, van der Werf, Ingram, & Wesseler, 2018).

Green building certifications, such as the Leadership in Energy and Environmental Design, which rates buildings' energy efficiency and sustainability, have also been used. Atasoy (2020) shows that higher energy prices encourage organizations to review their ranking positions in the U.S. construction industry.

Cavero-Rubio & Amorós-Martínez (2020) report that Spanish hotels with an ISO 14001 certificate and Eco-Management and Audit Scheme (EMAS) obtained more benefits than uncertified hotels during the 2008 crisis. They were more capable of overcoming the crisis and keeping their financial performance, while the financial performance of uncertified hotels worsened during the crisis.

Ssebunya, Morawetz, Schader, Stolze and Schmid (2019) report that there was no increase in net income due to the Fairtrade certification issued for long-standing coffee farmer groups in Uganda (Africa). However, the income of certified farmers is 20% higher compared to non-certified ones. Regarding new Arabica coffee producers, income has increased due to certification, while no differences were found between certified and non-certified long-time producers.

European countries such as Switzerland, Norway, Sweden, France, Germany, and the Netherlands already have a tradition with certification systems in the social field, as does the United States (Gordon et al., 2009; Ortmann & Svítková, 2007). Therefore, the systems rating TSOs in these countries mitigate information asymmetry between donors and charities concerning the effective and efficient use of resources, quality of services, and provision of financial information (Gordon et al., 2009; Ortmann & Svítková, 2007; Weisbrod & Dominguez, 1986). Thus, the role of rating agencies is determinant among social actors by providing analyses of accounting data such as the financial health, transparency, and accountability of charity organizations (Gordon et al., 2009).

Some studies report the effects of ratings on donations to TSOs. Brown et al., 2017 experimented in the United States with donors concerning ten TSOs and verified that third parties' ratings affect the choice of a charitable institution, and at least to some extent, influence the amount donated. Additionally, local TSOs are not preferred by donors.

Yörük (2016) reports that the Charity Navigator rating, which reports the quality of charity institutions, has a minor impact on donations. However, donations are higher (by approximately 20%) for relatively small and unknown charity institutions, provided they are ranked high. The study was conducted with a sample of 5,400 organizations from 2007 to 2010. However, Gordon et al. (2009) addressed the same agency and a sample of 525 organizations between 2005 and 2006 and found that the higher the rank, the larger the donations.

The experiment conducted by Adena et al. (2019) among college students in Berlin shows evidence that deserves attention. First, the certification of TSOs positively influences the level of donations. Secondly, the amount donated by current donors does not increase due to the information that a given TSO has a certification compared to potential donors. Thirdly, the costs of certification do not influence donations. Moreover, a certification increases the level of TSOs' credibility, which in turn influences donations. Hence, these authors consider that a certification provided by independent agencies may positively influence TSOs, ensuring that certified entities maintain management and governance standards.

Ortmann & Svítková (2007) and Svítková (2013) consider a certification to be plausible in transitioning countries such as those in Eastern Europe, which are moving from a planned economy to a market economy and whose TSOs face distrust on the part of donors, and consequently, receive fewer donations. A theoretical essay shows the benefits of a certifying agency in minimizing the negative impacts of information asymmetry, helping donors to distinguish between well and poorly managed TSOs. Another contribution would be more TSOs with professionalized and strong management, influenced by a decrease in TSOs with management and governance problems.

## 2.2 The Role of Certifications in the field of Social Assistance in Brazil

Cebas is an action that constitutes a national public policy to access social assistance, health, and primary and higher education, promoting social inclusion in Brazil. According to the *Conselho de Monitoramento e Avaliação de Políticas Públicas da Controladoria-Geral da União* [Council for Monitoring and Assessing Public Policies of the Federal Comptroller General] (2019, p. 10):

The Social Assistance Beneficent Certification (CEBAS) is a national public policy granted to nonprofit private legal entities recognized as beneficent social assistance entities, provided they meet law requirements to provide assistance services, and in return, are released from social security contributions, established by § 7th of art. 195 of the Federal Constitution.

Thus, TSOs have a relevant role in promoting social inclusion, as they integrate the ecosystem that includes volunteering, philanthropy, and associations (Gidron, 2010), concerned with providing social value to society. Social inclusion is part of the United Nations 2030 Agenda for sustainable development, especially regarding improving the quality of education, health, and well-being, reducing inequalities, and promoting decent work and economic growth (ONU, 2015), which concern sustainability's social dimension.

By providing services in the fields of education, health and social assistance, TSOs receive government incentives such as tax immunity and exemption. However, there is a difference between tax immunity and tax exemption. Tax immunity is provided in the Brazilian Constitution (Brasil, 1988), while tax exemption is granted through an infra-constitutional law. Tax credit exists but is excluded by legal benefit. Thus, there is no taxable event in the case of tax immunity (Bomtempo & Valadão, 2017).

According to the Brazilian Constitution, 'charitable social assistance entities that comply with the requirements established by law are exempt from social security contributions' (Brasil, 1988). The jurisprudence of the Supreme Federal Court (STF) does not consider exemption as described in the constitutional text (STF, 1996). However, the Direct Action of Unconstitutionality No. 2,028 (Brasil, 2000) was presented to the STF, questioning which law should be observed to ensure these rights. Given this impasse, in this study, we adopted the same criteria certifying ministries adopt.

Impasses aside, obtaining and maintaining Cebas means that TSOs may continue to enjoy immunity and are not obligated to pay social security contributions, namely: the employer's share of INSS, Contribution for Social Security Financing (Cofins), Social Contribution on Net Profits (CSLL), and the Social Integration Program (PIS) on payroll, in addition to receiving government subsidies and transfers (Brasil, 1988). In 2017, philanthropic institutions obtained almost R\$12 billion of social security immunity, generating R\$88 billion in counterpart; R\$ 7.39 in return for every R\$1.00 of immunity received. The amount of tax benefit corresponds to 20% of the total social security immunities and exemptions (Fonif, 2018) granted to all Brazilian economic sectors (Table 1).

Table 1

**Immunities granted to TSOs in Brazil**

	<b>Education</b>	<b>Health</b>	<b>Social Assistance</b>	<b>Total</b>
Social security immunity	4.02	6.83	1.08	11.93
Total counterpart	18.74	56.43	12.93	88.11
Counterpart return for each R\$1.00	4.66	8.26	12.02	7.39

\* R\$ billion

TSOs must meet various requirements to obtain Cebas: be regularly constituted as a nonprofit, private legal entity; be recognized as a charitable social assistance entity to provide services in the fields of education, health, and social assistance; comply with the principle of universality; being in operation for at least 12 months; and present accounting and financial statements according to the ITG 2002 (CFC, 2012), among others.

Regarding the procedures with the ministries, TSOs submit a request for concession or renewal to the ministry that concerns its principal activity, providing all the documents required, according to Law No. 12,101/2009 (Brasil, 2009). The Ministry of Citizenship certifies entities in the field of social assistance, the main requirement being providing service free of charge. The Ministry of Health grants certifications to entities that provide health services, with at least 60% of their services provided through the Unified Health System (SUS). The Ministry of Education (MEC) certifies institutions that waive 100% of tuition for one of every five paying students in primary/middle education and higher education for students who meet the requirements of the University for All Program (Prouni) (Brasil, 2009).

After the ministries receive the documents, the process is analyzed following the protocols' chronological order. An analyst checks compliance with legal requirements, such as activity reports and financial statements. TSOs may be asked to provide any missing documents. After which, a final opinion is issued. If approved, TSOs can benefit from the certification for a period from three to five years, depending on their income. If certification is denied, the organization may file an appeal within 30 days.

Few Brazilian studies address this topic. Lima & Pereira (2004) conducted a qualitative study to analyze the verification and disclosure of the results concerning certified higher education TSOs and found evidence that accounting practices were not in agreement with the recommended by the Federal Council of Accounting (CFC). Therefore, they proposed a model to verify and disclose results to support decision-making and the management of higher education institutions certified with Cebas. Beuren and Tamanini (2009) conducted a qualitative study with 14 Santa Catarina Association of Educational Foundations (Acafe) institutions. They verified that most higher education institutions were unable to renew Cebas due to their inability to prove the application of a minimum of 20% in charitable actions. Fagundes, Silva and Silva (2014) addressed the normative-contextual panorama of various certifications and verified that TSOs face several variables and processes over their attempt to obtain certification due to contextual complexities, among which, inefficiencies, arbitrariness, legal insecurity, and corruption, distancing TSOs from the Union. This qualitative study compares Public Interest Civil Society Organizations (OSCIP), Federal Public Utility (UPF), extinct in 2014, and Cebas, based on an analysis of legislation. Santos, Ohayon and Pimenta (2017) conducted a quantitative study to examine the level of voluntary disclosure, via the website, of financial and non-financial information of TSOs in Rio de Janeiro and verified that 61 certified TSOs presented low levels of disclosure and even avoided disclosure on their websites.

Therefore, unlike what studies conducted in other countries show, in Brazil, TSOs certification is neither conducted by independent agencies nor is there an orderly rating system such as the one provided by Charity Navigator in the United States, ranging from one to five stars. Instead, in Brazil, the Federal Government is in charge of classifying the TSOs entitled to tax immunity.

## 2.2 Organizational Legitimacy

The discussion regarding the role of certifications in Brazil and other countries reveals that organizations want their activities to be perceived as desirable, adequate, and appropriate within any cultural context (Suchman, 1995, p. 586). According to DiMaggio and Powell (1983), based on Aldrich (1979), this phenomenon concerns a search to legitimize their actions, as they compete for resources, clients, political power, institutional legitimacy, and social and economic adequacy.

Suchman (1995, p. 574) considers organizational legitimacy to be 'a generalized perception or assumption (a reaction of observers to the organization as they see it) that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions. Thus, it reflects a congruence between the behaviors of the legitimated entity and the shared (or assumedly shared) beliefs of some social group.'

DiMaggio and Powell (1983) consider three mechanisms of isomorphic change in institutional, organizational legitimacy. Coercive forces involve formal and informal external pressures and persuasion from other stakeholders, such as law enforcement (Forestry Code, hiring people with disabilities, affirmative actions in public universities). Therefore, there is a relationship of dependence between organizations and society's cultural expectations.

Mimetic forces respond to uncertainty, pressing organizations to imitate practices adopted by other organizations, not necessarily with proven effectiveness (Balanced ScoreCard, Integrate Management System). In turn, normative forces pressure to achieve professionalization standards considered adequate by the professional community (certifications, accounting standards), resulting from professional relationship networks originated from formal education (universities), business management and training consultancies, and associations, and through hiring successful professionals in other organizations (DiMaggio & Powell, 1983).

Suchman (1995) understands that organizations seek legitimacy aiming at the continuity (stability) of their businesses and credibility (perception that an organization is coherent, predictable, and reliable) with a given audience, for instance, stakeholders. The organizations also aim for active support (a prolonged intervention from their audience) and passive support (condescension from their audiences as organizations desire to do business in peace without the intervention of their audiences). Hence, the author proposes three types of organizational legitimacy consonant with his concept previously discussed – pragmatic, moral, and cognitive.

*Pragmatic legitimacy* focuses on the interests of the most immediate stakeholders and direct exchanges (exchange legitimacy) between an organization and its public and political, economic, or social interdependencies. This audience benefits from having their interests heeded (influence legitimacy) when contributing to policies or when the organization adopts its audience practices. This audience may also be willing to legitimize those organizations considered honest, reliable, and ethical (legitimate disposition). Strategies to gain such legitimacy involve complying with demands, meeting the needs of the various social actors, building a solid reputation, and doing publicity. To maintain this legitimacy, one has to perceive changes and anticipate challenges, taking care of internal operations to prevent mistakes. To regain it, organizations may deny the problem to gain some time or create surveillance mechanisms such as ombudsman and customer service (Suchman, 1995).

*Moral legitimacy* stems from a positive normative assessment on the part of a TSO's target audience. It concerns a judgment of the benefits of the organization's activities aimed at societal well-being (*legitimacy of consequences*). It may also result from adopting socially accepted techniques and procedures (*procedural legitimacy*) or assessing that the organization has socially constructed structures that allow them to act appropriately (*structural legitimacy*). Finally, it may be based on the charismatic personality of its leaders (*personal legitimacy*). The strategies adopted to gain legitimacy involve concrete and meritorious results while conforming to altruistic ideals. To keep such legitimacy, organizations have to monitor ethics and protect property. To regain it, organizations may apologize and justify their behavior or even act to dissociate themselves from harmful influences, for example, hiring new managers (Suchman, 1995).

*Cognitive legitimacy* stems from 'accepting the organization as necessary or inevitable based on some taken-for-granted cultural account.' Hence, it stems from cultural models that encompass plausibility, predictability, inevitability, and permanence, contributing to the clarity and understanding of its businesses (Suchman, 1995, p. 582). Strategies to gain such legitimacy involve conforming to established standards, imitating them, professionalizing operations, seeking certifications, or standardizing new models/standards. To maintain such legitimacy, organizations should monitor their audience's expectations and explain themselves if legitimacy needs to be regained (Suchman, 1995).

Certifications such as the Forest Stewardship Council (FSC) legitimate businesses in the forestry system by attesting supply chains and strengthening sustainability and biodiversity (Schepers, 2010). However, according to the study conducted by Niedzialkowski and Shkaruba (2018) in Poland, such legitimacy may be at risk due to disagreements between forest actors and non-governmental organizations demanding government intervention. Schepers (2010) has already pointed out the challenges imposed to the pragmatic and moral legitimacy of this certification: a lack of alternative schemes, market access, plantations, the cost of certification, and illegal logging.

### 3. Method

A qualitative-quantitative study was conducted to perform a holistic analysis of the antecedents and consequents of Cebas. The qualitative interpretative method enabled understanding the perception of the workers involved with this certification, clarifying this organizational phenomenon (Merriam, 1998), and the quantitative study showed the level of adherence to the ITG 2002 requirements (CFC, 2012).

The study's population comprises the TSOs that submitted a request to obtain Cebas in the Ministries of Education, Health, or Citizenship. Primary data were collected through a questionnaire and semi-structured interviews and secondary data were collected for the files available in the ministries' websites such as the *Certificação das Entidades Beneficentes de Assistência Social em Saúde, Educação e Assistência Social* [Certification System of Social Assistance Beneficent Entities of Health, Education and Social Assistance], booklets explaining the process made available on the ministries' websites and in related laws.

#### 3.1 Quantitative Data

Because of the Access to Information Law, the certifying ministries did not provide data alleging information is protected by financial secrecy. Thus, a database was created using the National Register of Legal Entities (CNPJ), and electronic addresses available in the public records of the IRS website of certified organizations, and 542 TSOs were cataloged.

A questionnaire was developed with 39 questions adapted to the third sector based on Santos, Ponte and Mapurunga (2014) and Ramos and Klann (2019). Responses to questions were binary (yes/no) and categorical. This questionnaire was made available on Google Forms and distributed via email to the 542 TSOs. A total of 39 valid responses (7%) were obtained.

A total of 37% of the TSOs obtained Cebas, 16% were denied the certification, the process of 21% was still under analysis, and 26% reported that even though the certification applies to their institutions, they never requested it. Regarding the TSOs legal nature, 86% were associations and 14% religious entities. Regarding their activity, 64% were in the educational field, 29% in social assistance, and 7% in the health field. Regarding the TSOs' size, 71% reported annual revenues above R\$4.8 million, i.e., large organizations (Brasil, 2009). Considering the number of employees, 50% were large (more than 100 employees), 29% were medium-sized (up to 99 employees), and 21% were small organizations (up to 19 employees).

#### 3.2 Qualitative data

Semi-structured interviews were conducted with 17 workers from TSOs and a prosecutor working in the inspection of TSOs, covering seven units of the federation (Table 2). The interviewees worked with 1,084 TSOs, more than 95% of which are Cebas certified. Regarding the interviewees' profiles, 41% have an accounting degree, 29% law degree, 17% in social services, and 13% have degrees from other academic fields. Hence, it was a panel composed of experts from various fields, with different roles and responsibilities, working in organizations of different sizes located in different Brazilian regions. Their perceptions regarding the Cebas enabled us to identify experiences and meanings from a multi-professional and more holistic perspective of this phenomenon.



Data analysis was performed using the Template Analysis technique proposed by King (2004). This technique enables the creation of unlimited and adjustable hierarchies of themes. In this study, the themes refer to the meanings and experiences of the social actors involved with the phenomenon of obtaining Cebas. This topic is applied in exploratory studies when there is little knowledge regarding the phenomenon under study – which is the case regarding the Brazilian context –, and the objective is to promote a more holistic discussion focused on the antecedents and consequents of this certification. The themes emerging from data and the literature were coded (labels/categories).

Table 2

**List of interviewees**

#	State	Age	Sex	Academic Degree	Job position	No. of TSOS represented
#1	PA	47	Female	Accountant	Accounting manager	17
#2	CE	42	Male	Accountant	Audit partner	18
#3	DF	44	Female	Economist	Administrative coordinator	1
#4	PA	35	Female	Social Service	Social	1
#5	MG	41	Female	Systems Analyst	IT coordinator	4
#6	SP	48	Male	Attorney and Accountant	President	400
#7	PA	32	Male	Accountant	Accountant	1
#8	RS	74	Male	Accountant	CEO	276
#9	DF	43	Female	Attorney	Attorney	50
#10	ES	35	Male	Social Worker	Superintend	1
#11	SP	49	Male	Accountant and Civil Engineer	Managing partner	120
#12	DF	57	Male	Lawyer	Justice attorney	0
#13	SP	49	Male	Attorney	Partner holder	7
#14	DF	43	Male	Attorney	Partner holder	50
#15	PA	51	Female	Business administrator	Financial coordinator	6
#16	PA	43	Male	Accountant	Accountant	15
#17	CE	44	Female	Social Worker	Parmer - Consultant	8
#18	ES	30	Female	Accountant	Manager	109

Hence, as shown in Figure 1, two first-level codes were created based on the study's objectives: antecedents of obtaining and renewing Cebas and the effects of obtaining and renewing this certification. Five second-level codes and 12 third-level codes emerged from 46 excerpts of the interviews for the antecedents of obtaining and renewing Cebas. For the effects of obtaining and renewing Cebas, four second-level codes and eight third-level codes emerged from 23 excerpts.

1 <sup>st</sup> level codes	2 <sup>nd</sup> level codes	3 <sup>rd</sup> level codes	
1. Antecedents of obtaining or renewing CEBAS certification	1.1 Accounting disclosure	1.1.1 Difficulty collecting accounting information	
		1.1.2 Failure to meet the minimum accounting and ITG 2002 requirements	
		1.1.3 Divergence between reports and activities performed	
	1.2 Training and professionalization of those involved	1.2.1 Lack of professionalization of managers and lack of training of those involved with CEBAS certification in TSOs	
	1.3 Relevance of external (independent) audit in TSOs	1.3.1 The role of external audit	
		1.3.2 Benefits of external audit	
		1.3.3 Criteria for hiring external audit services	
	1.4 Legal insecurity	1.4.1 Legal changes	
	1.5 Other situations	1.5.1 Slow process	
		1.5.2 The ministries do not receive the process	
		1.5.3 Accounting information and documents are destroyed	
		1.5.4 Mistaken decision-making	
	2. Effects of obtaining or renewing CEBAS certification	2.1 Tax immunity	2.1.1 Tax benefits
		2.2 TSOs' greater credibility	2.2.1 Differentiated treatment on the part of the government
			2.2.2 Partnerships are established with public and private parties
2.2.3 The institution's image is improved			
2.2.4 International donors feel safer			
2.3 Impact on fundraising		2.3.1 CEBAS benefits and influence	
		2.3.2 CEBAS little influence	
2.4 Cultural change		2.4.1 Changes in the accountants' role	

**Figure 1.** Template Analysis Summary

## 4. Data Analysis

### 4.1 Antecedents of Cebas

*Tax disclosure.* In the case of TSOs, it concerns compliance with accounting standards and requirements provided by ITG 2002 (CFC, 2012). In this study, 39 TSOs met approximately 81% of these requirements, as shown in Table 3. There are six reasons for not complying with the law: difficulty collecting accounting information, incorrect records of TSOs actions/ activities, divergences between reports and activities, not meeting the ITG 2002 minimum requirements (CFC, 2012) and basic accounting requirements, and not complying with CFC standards.

*Difficulty collecting accounting information* involves accounting issues, cross-checking institutions' data with social data, and failure in preparing financial statements (interviewee #02). It also has to do with the process formatting because of accounting data, especially cross-checking accounting information with the social service data. Interviewee #05 believes that it is a very complex process, especially in organizations with branches that need to send data to headquarters. Additionally, according to interviewee #16, there is a lack of accounting history, and statutes disagree with the law. Interviewee #08 states that 'the most difficult part is to adapt the accounting system to comply with specific laws. The accounting statements focus on social laws rather than on fiscal laws.'

*Failure to meet the ITG 2002 minimum requirements (CFC, 2012) and minimum accounting requirements* results in the incorrect recording of the TSOs' actions/activities such as bookkeeping. Interviewees #14 and #17 consider that there is considerable weakness in the institutions' bookkeeping. The accountants of some institutions register accounting information on a cash basis. Others do not group per activity. Interview #14, for instance, has already participated in events in which representatives of the Ministries of Education and Citizenship reported that approximately 60% of the certifications denied are motivated by accounting errors.

On the other hand, many institutions comply with all the procedures required by Law No. 12,101/2009 (Brasil, 2009) but do not comply with the Federal Council of Accounting standards, creating weaknesses in the Brazilian IRS and ministries. Hence, an entity may provide social services, but it cannot enjoy the tax benefit due to an accounting-related problem (interviewee #06). Furthermore, according to interviewee #11, 'a given cost vital for the project is not correctly identified, and as a consequence, its information is not adequately addressed in the statements'.

It also involves the calculation of results on a cash basis, absence of statements with explanatory notes, financial statements are not segregated (interviewee #17). There is also improper use of terminology from the commercial business area, not used by third sector institutions, such as "profits" and "losses", showing a lack of knowledge of specific standards.

Table 3

**Descriptive analysis**

		<b>n = 39</b>	<b>Mean</b>	<b>DP</b>
Balance Sheet	1. In the BS structure, does the entity present the subdivision of the groups of assets and liabilities into current and non-current?		0.974	0.160
	2. In the BS, does the entity record the surplus or deficit amount for the year on its own account?		0.974	0.160
	3. Does the institution prepare the Balance Sheet (BS)?		0.949	0.223
	4. Does the organization record resources from agreements in the proper asset and liability accounts?		0.949	0.223
	5. Is the organization's Equity group evident in the BS?		0.846	0.366
		<b>Mean</b>	<b>0.938</b>	<b>0.227</b>
Annual Income Statement	6. Does the organization use the accrual basis for recording accounting facts?		0.974	0.160
	7. Does the institution prepare the annual income statement?		0.923	0.270
	8. Does the statement present the result (surplus or deficit) for the period?		0.846	0.366
	9. Are revenues sorted by revenue-generating programs/activities?		0.846	0.366
	10. Are costs and expenses presented by programs/activities?		0.821	0.389
	11. Are revenues subdivided into restricted and unrestricted revenues?		0.795	0.409
	12. In which account group are the donations received recorded?		0.641	0.486
	13. Are voluntary services recorded?		0.513	0.506
		<b>Mean</b>	<b>0.795</b>	<b>0.369</b>
Other financial statements	14. Does the institution prepare the Cash Flow Statement?		0.923	0.270
	15. Does the institution prepare the Statement of Changes in Equity?		0.872	0.339
	16. What is the method used to prepare the Cash Flow Statement?		0.359	0.486
		<b>Mean</b>	<b>0.718</b>	<b>0.365</b>
Other financial statements	17. Does the institution prepare Explanatory Notes?		0.949	0.223
	18. Does it present the entity's operational context, including the social and economic nature and social objectives?		0.897	0.307
	19. Does it present the criteria for calculating revenue and expenditure, especially regarding gratuity, donations, subsidy, contribution and application of resources?		0.872	0.339
	20. Does it disclose the accounting standard that is used to determine accounting practices?		0.846	0.366
	21. Are the criteria and procedures for recording depreciation, amortization, and depletion of property, plant and equipment disclosed, observing mandatory recognition based on estimated useful life?		0.846	0.366
	22. Is the statement of compliance with the standards, interpretations and technical communications of the Federal Accounting Council included in the explanatory notes?		0.821	0.389
	23. Are tax waivers related to the activity shown in the financial statements as if it were the due obligation?		0.769	0.427
	24. Is information related to gratuities granted and voluntary services disclosed by type of activity in the Explanatory Notes?		0.769	0.427
	25. Does it present a summary of accounting policies?		0.744	0.442
	26. Does the entity disclose in the summary of accounting policies relevant measurement basis and other accounting policies?		0.744	0.442
	27. Are the services provided with the entity's resources presented separated from the remaining services provided?		0.744	0.442
	28. Does it have supporting information for statement items according to the order and with rubrics that are presented?		0.718	0.456
	29. Does it show the subsidies received by the entity, the application of resources and responsibilities arising from these subsidies?		0.718	0.456
	30. Are all gratuities separately presented, highlighting those that should be used when reporting to government agencies?		0.692	0.468
	31. Does it show the subsidies received by the entity, application of resources and responsibilities arising from these subsidies?		0.615	0.493
		<b>Mean</b>	<b>0.783</b>	<b>0.403</b>
		<b>Overall Mean</b>	<b>0.805</b>	<b>0.362</b>

Notes: Question 13: according to a symbolic or real market value (1). We do not record voluntary services (0); Question 12: Operating revenues (1); Non-operating revenues (0); Question 16: Direct (1); Indirect (0).

Source: developed by the authors based on Santos, Ponte and Mapurunga (2014) and Ramos and Klann (2019).

*Divergence between reports and activities performed* concerns the institutions' disorganization that impacts the collection of the necessary information to prepare the reports (interview #09). For instance, the problems among TSOs in education involve an irregular selection of students for tuition waiving (interviewee #14). TSOs in the health field present irregularities concerning the Unified Health System (SUS); that is, they do not achieve the necessary percentage (interviewees #09 and #14). The main problem among TSOs providing social assistance is the preponderance of activities (#14). According to interviewee #12, TSOs have difficulties reporting what they do, that is, to provide proof of their activities and results, reflecting on the report of accounts. So that reports are not clear enough for the controlling agency to verify whether the institution fulfilled its objectives. As reported by interviewee #04, these difficulties lead to divergences between the balance sheet and the social service data sent to the ministries.

*Training and professionalization of TSOs and accountants.* Interview #08 considers that lack of professionalization of the management and training of those in TSOs involved with Cebas is one reason institutions are denied the certification. TSOs lack accounting management. For instance, according to interviewee #02, hospitals often have excellent medical staff and state-of-the-art equipment, but the accounting team is not as competent; i.e., there is a distance between the accounting and social service sectors within TSOs. Interviewee #17 also reports that the TSOs' technical team hinders accounting reports. Because of information errors, there are many inconsistencies, which are only verified when information is cross-checked.

*Focus is restricted to social management rather than administrative management.* In essence, all TSOs are of public social interest, but as the focus is not on management, administrative processes go unnoticed. For instance, many institutions miss deadlines to renew their boards because they are not attentive to formal issues but social services (interviewee #11). *Accountants' lack of knowledge and insufficient qualification.* Accountants report a lack of knowledge regarding the legislation concerning the third sector and, for this reason, fail to provide mandatory financial statements, such as explanatory notes. Interview #13 reported that accountants are sometimes very competent in preparing financial statements of businesses in general but are not familiar with the ITG 2002 standards (CFC, 2012). Most of the time, they observe general accounting standards by fail to comply with the Cebas standards. For example, according to interview #01, the professional who assisted an entity with predominantly religious activities rather than social assistance services was not only unaware of the Cebas process but also failed to meet the legal deadline.

Interview #17 summarizes this perception that managers lack qualification as well as those involved with the Cebas process: 'There is little professionalism and much affection for the institution.' In response to the questionnaire regarding the question of who was responsible for the financial statements, 79% of the respondents reported they hired accounting services, 14% worked with self-employed accountants, and 7% used the institution's accountant; 85% of the professionals hired were specialized in the third sector. Thus, the TSOs hire professionals who have little knowledge regarding the third sector.

*External (independent) audit in TSOs.* The audit role is not to review or oversight financial statements. Auditing is a form to confirm the institution's integrity and compliance (interviewee #06), giving transparency to the process (interviewee #18), and preventively checking the institutions' reports (interviewee #02); TSOs usually only hire an independent audit to comply with a legal requirement. Interviewee #14 considers that TSOs resist hiring an auditing company when it is not mandatory.

According to interviewee #06, TSOs often seek to find cheaper auditing services to lower the cost of cash flow. Some institutions seek auditing companies that decrease testing and delivery time, which often compromises service quality. TSOs that split the audit cycle into two stages have a much better and higher level of compliance. The benefit of external audit is that it preventively monitors TSOs, crossing data and ensuring the statements' control and reliability. Interviewees #03 and #16 consider that auditing is the last level of the conference at TSOs, improving accountability and internal processes.

Criteria to hire external audit services include reputation and expertise in the third sector (interview #15), market referrals, budgetary reasons (interviewee #03), and consultation with other institutions and regulating bodies (interview #07). Interviewee #12 considers that small entities are not able to hire auditing companies. Sometimes, they do not even have the resources to pay an accountant. Interview #10 reported that he does not hire an auditing company for budgetary reasons, but it is in the organization's plans. A total of 33% of those who answered the questionnaire alleged the same reasons for not hiring an auditing company. None of those hiring independent auditors (67%) seeks large international auditing companies or organizations located in the same city of the institution. Only 58% of the companies hired work with the third sector only. Additionally, 67% tend to hire the same company for more than three years, suggesting they aggregate value to the Cebas process.

*Legal insecurity.* There is an action of unconstitutionality against Law No. 12,101/2009 (Brasil, 2009), which would change the obligation to maintain Cebas. Interviewee #10 considers 'there is a certification war' and that this certification should not exist because other laws, such as Art. 14 from the National Tax Code guarantee the same benefits. Interviewee #14 reported four legal changes in the last 25 years, with intense battles in the courts, including higher courts, involving the unconstitutionality of laws.

A Direct Action of Unconstitutionality (Adin) No. 2.028 was filed on July 13<sup>th</sup>, 1999, to discuss tax immunity among philanthropic organizations. This action encompasses contradictions and doubts in the judgments, especially regarding the Extraordinary Appeal 566622, according to which "the requirements for enjoying immunity shall be provided in complementary law." During the process of the Adin mentioned above, Law No. 12,101/2009 (Brasil, 2009) was issued, which revoked the articles that motivated the unconstitutionality and kept some of the conditions provided for in previous laws concerning requirements to obtain the certification, and established other criteria regulating relevant provisions of the Federal Constitution (Brasil, 1988).

*Other situations* involve slowness in the process of granting the Cebas certification, the ministries not receiving the process, destroyed TSOs' information, and not complying with the ordinances' requirements and accounting criteria. More than one area of expertise delays the process because it involves more than one ministry and demands identifying the main activity according to expenses (interviewee #02). Additionally, TSOs from the educational sector have to comply with other social activities (interviewee #03). Interviewee #05 reported that the system used to include data in the report of accounts is intransigent, which creates difficulties in the process.

According to interviewee #5, internal processes of ministries with operational weaknesses have hindered the certification processes. He reported that one of the renderings of accounts was rejected under the allegation that documents were not sent to the Ministry of Education, even though there was a Post Office protocol proving that the documentation had been sent. Additionally, the TSOs make wrong decisions. Interviewee #08 reported that one institution destroyed accounting information and documents after the fiscal year and ended the year's activities, which prevented the independent auditor from issuing an opinion report. Some TSOs decide to follow the certification process even though they know they do not meet legal requirements (interviewees #02 and #13). They insist on the process in the hopes that the staff in the ministries may occur in some error.

## 4.2 The effects of the Cebas

*Tax immunity.* All the interviewees consider that tax immunity is the leading motivation to obtain and renew Cebas. They adopt terms such as: economy (#06), tax immunity (#06, #08, #11, #12), tax benefits (#04, #15, #17), tax waivers (#05), maintain exemption and declaratory act (#09), tax exemption (#10, #13, #18), tax prerogative (#14), and guarantee employer social security account benefits (#16).

According to interviewee #16, having to pay the employer's social security share is a cumbersome burden for institutions, which usually have a huge payroll to provide the social services the Government is unable to provide. Interview #05 noted that tax immunity enabled 'us to ensure quality education for needy children who would otherwise not have access to these services.'

Interview #18 reported that being released from paying the employer's social security share, which is almost 25% of the payroll, together with other exemptions, such as PIS, represents financial savings. 'This certification is really good for institutions to approve projects because you can decrease budget costs.' Interviewee #06 reported that tax immunity 'is not a manager's choice; if it is the best for an entity and s/he is administering an entity of public interest, s/he must apply for the Cebas process to save resources.'

*TSOs' credibility.* Certified organizations enjoy a *differentiated treatment* on the part of the government because they comply with ITG 2002 (CFC, 2012), which gives security to public managers. According to interviewee #06: 'Whoever has Cebas stands out as an entity with the best management practices.' Interviewee #02 states that establishing a partnership with the government and private companies facilitates partnership with the SUS and projects with the Municipal Council for Children and Adolescents (CMDAC).

Interviewee #08 notes that another benefit concerns the improved image of TSOs. Once an entity obtains Cebas certification, it becomes a certificate that it complies with its social role. That is, the certification is a positive social factor. Interviewee #04 reports it lends credibility to the institution as it shows society that the institution complies with the ITG 2002 requirements (CFC, 2012). It shows that the government ratifies that the TSOs provide social assistance, health, and education (interviewee #09).

*Fundraising.* The impact of the certification on fundraising has two dichotomous situations: *benefits and positive influences* and *little influence*. It facilitates fundraising in Brazil and abroad (interviewees #01, #06, #09, #13, #16). International organizations favor institutions certified with Cebas. Good practices are a good differential in fundraising, both in Brazil and internationally. According to interviewee #13, because the certification demands a service plan, transparency, models of reports with comparison criteria, and accounting statements based on IFRS, it influences transparency, making international donors more comfortable to donate resources to these TSOs. Interviewee #06 says that 'the most important fundraising action is not having to spend because of immunity'.

Internationally, Cebas is a reference for fundraising from Canadian funds in the European Union and the United Kingdom. Numerous entities apply for fundraising, but international entities are attentive to differentials and the international social investor, observing those with the best management conditions and efficiency/effectiveness (interviewee #06). In this context, interviewee #01 reported that not having the certification approved for the company she works for resulted in not receiving funds from abroad and a significant increase in costs due to taxes on the payroll.

On the other hand, interviewee #11 notes that Cebas does not provide competitive advantages depending on the institution. He notes: 'We already had institutions that did not apply for the certification on purpose. There was a case in which an institution struggled to obtain exemption of ICMS, but it was not worth it because its clients could not take advantage of the tax credit, which resulted in it losing market competitiveness.'

Some interviewees consider that the certification does not influence fundraising because the TSOs have other sources of income. According to interviewee #15, Cebas does not interfere in fundraising because school fees support the institution. Interviewee #03 considers it occurs because the entity has agreements with public and private institutions that do not demand the certification. Interview #07, in turn, reported that his institution works with environmental activities and projects with a low payroll cost. According to interviewee #12, the institutions analyze the cost-benefit of obtaining and renewing the Cebas certification. Many of these entities have the information that the benefits of tax immunity are not representative (interviewee #12), or opted for establishing the TSO as OSCIP (#18). Others prefer greater freedom to work (#11), being free from this certification's requirements, acknowledging that other laws ensure the benefits of this certification (#10).

*Cultural change.* In addition to the antecedents and effects of the Cebas certification, keeping it is a cultural challenge. According to interviewee #06, the managers of TSOs do not often pay attention to the importance of this certification, especially to its effects. This interviewee considers that the accounting profession is the primary driver of this culture change. The accountants' role is not restricted to providing services *per se*, only recording and enabling proper disclosure. Interviewee #02 considers that the role of accountants has changed over time, with a greater focus on the consultative role on how to maintain this certification, getting closer to TSOs to guide them, not being restricted to proper disclosure (#06). For instance, working with the social service to analyze income tax considering per capita household income (interviewee #02).

Figure 2 presents a summary of this discussion.

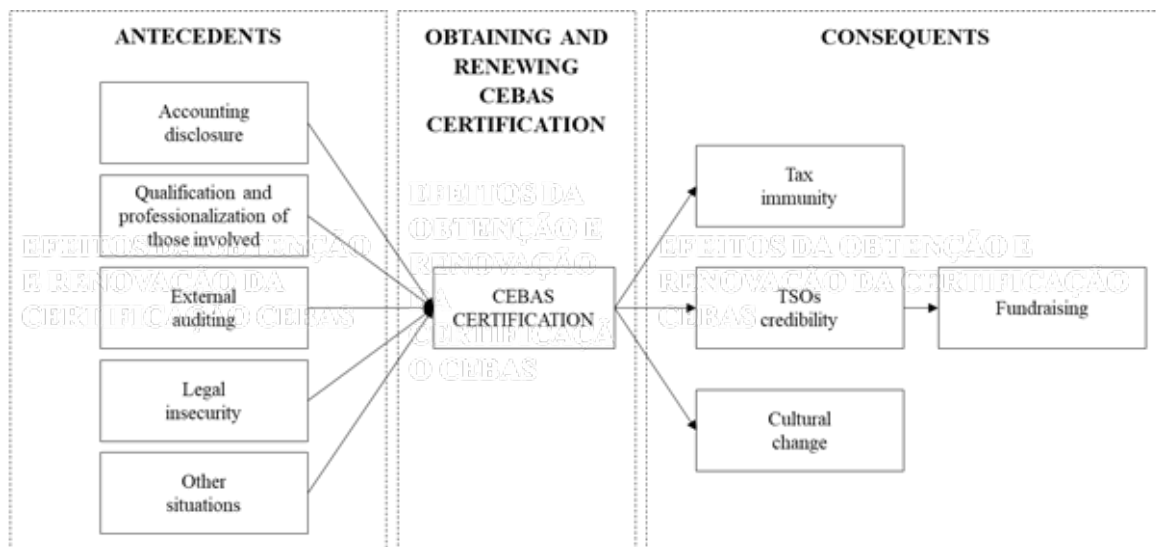


Figure 2. Antecedents and consequents of obtaining and renewing the Cebas certification



## 5. Discussion of Results

From a pragmatic and moral perspective, Cebas mainly legitimates the TSOs' tax immunity. The pragmatic legitimacy perspective mainly concerns the legitimacy of exchange because the TSOs' immediate public interests are served regarding tax benefits. In turn, it provides moral legitimacy to this certification, considering this audience makes a positive normative assessment. According to the typology provided by Suchman (1995), it mainly results from the adoption of socially accepted techniques and procedures (procedural legitimacy).

However, there is some controllable and uncontrollable vulnerability concerning the antecedents of this certification, which may compromise both pragmatic and moral legitimacies. The controllable vulnerability that may impose risks to the pragmatic legitimacy concerns fiscal disclosure, hiring an external auditing company, and training social actors. In Brazil, accounting services applied to the third sector follow the ITG 2002 standards (CFC, 2012), establishing the technical procedures and criteria for the TSOs' financial records and statements. The Brazilian Accounting Standards for micro and small businesses and all the standards not covered by the ITG 2002 still applied (CFC, 2012). Hence, the accounting standards applied to the TSOs are somewhat different from those applied to other organizations.

Silva, Da Silva, Penido Drumond, & De Assis Valadares (2017) verified that mistakes found in accounting statements are associated with the use of general, rather than specific accounting requirements demanded by the ITG 2002 (CFC, 2012). Ramos and Klan (2019) reported a low level of quality of accounting information among TSOs regardless of the Cebas certification. Therefore, their reports have low relevance for stakeholders, particularly supervisory entities, and are not used as accountability instruments for greater transparency to use or keep tax immunity and raise financial resources.

In other words, the quality of fiscal information is a vulnerability to be mitigated by the social actors involved in this process. It compromises the pragmatic legitimacy of Cebas certifications, considering that some TSOs have difficulties complying with ITG 2002 standards (CFC, 2012), which, according to this study's findings, is the leading reason for having the application denied. Hence, investments are needed to train TSOs' managers and accounting professionals regarding the certification process and the specific technical standards applied to the third sector, such as the ITG 2002 (CFC, 2012).

The certification's pragmatic legitimacy may also be compromised by a lack of external auditing, mainly because of the cost of this service. In this study, evidence shows a need to reinforce the role of external auditing, despite TSOs' budgetary restrictions. In addition to ensuring this certification is reliable, external auditing may also work as a learning tool and provide feedback to all the social actors involved in the process. Harris, Tate, & Zimmerman (2019) show the relevance of this process to ensure and improve TSOs' credibility in the United States. Reheul, Van Caneghem, Van den Bogaerd, & Verbruggen, 2017 verified that auditors experienced with the third sector are less likely to make mistakes in audit reports.

In many institutions, the decision to audit financial statements is voluntary, considering the advantages of auditing despite its costs. Hence, managers may use external auditing as a control mechanism to mitigate risks. Most small and medium-sized organizations do not have the financial resources to hire independent auditing services (Carrera & Trombetta, 2018). A small portion of nonprofit organizations does not hire audits due to financial difficulties (Burks, 2015). According to Garven, Beck and Parsons (2018), audited TSOs present higher-quality reports. The fact that they are nonprofit entities does not protect them from agency conflicts. The authors also show that auditors with contracts longer than three years may have their independence compromised, which may also affect the quality of reports.

Uncontrollable vulnerabilities involving legal insecurity and other situations, especially regarding internal processes of the Ministries of Health, Educational, and Social Assistance, weaken the certification's pragmatic and moral legitimacy. Legal insecurity concerning laws related to this certification is a fact, and TSOs are supposed to implement compliance procedures and organize the management of the certification process, reviewing all the procedures and cross-checking all information between sectors. Fagundes, Silva and Silva (2014) have noted that in addition to inefficiencies, arbitrariness, and corruption, legal insecurity distances TSOs from the Union due to the certifications' contextual complexities, including Cebas.

Regarding the effects of this certification, tax immunity remains one of the main reasons for institutions to apply for and renew Cebas. Thus, tax immunity is the most frequently expected outcome and contributes the most to its moral legitimacy. However, evidence also shows that some organizations do not see the relevance of this certification for other benefits, such as increased credibility and improved fundraising. Certifications in the United States and Europe (Yörük, 2016; Gordon, Knock, & Neely, 2009; Ortmann & Svítková, 2007) improve the fundraising process. TSOs supported by specialized advisory services use certifications as a credibility criterion, improving fundraising, not being restricted to tax immunity only (Adena et al., 2019).

In Brazil, TSOs may explore Cebas not only to obtain tax benefits but also to raise funds in Brazil and internationally. This practice is seldom adopted in Brazil, especially among small entities and those in which resources are guaranteed, such as regular education institutions that receive school fees. This fact shows a need for cultural change among TSOs' managers and accountants to use this certification to improve credibility and fundraising. Carroll & Stater (2009) show that having a diverse source of revenue among nonprofit organizations ensures greater financial stability.

The use of the certification entails more excellent administrative controls among TSOs, ensuring them greater credibility and transparency with society. It also shows the ability of accountants to use financial statements in decision-making. Cost management is used in decision-making to assess the benefits of the certification compared to the costs of its maintenance. Hence, accounting is part of the TSOs' decision-making process, as Lima and Pereira (2004) had previously noted, i.e., accountants can support decision-making and the management of organizations.

By exploring Cebas to raise funds nationally and internationally, TSOs strengthen this certification's moral and pragmatic legitimacy. According to Suchman (1995), one reason to seek legitimacy is the TSOs' continuity of business and credibility and a certainty that they are coherent and reliable organizations. In this case, moral legitimacy is more frequently reinforced than pragmatic legitimacy, as there are more benefits for TSOs.

Finally, evidence shows that TSOs are experiencing an isomorphic institutional change. Isomorphism refers to a response to the restrictive forces of the TSOs' external environment, forcing them to become similar to their counterparts/competitors (DiMaggio & Powell, 1983). In this case, through the mechanism of mimicry; that is, TSOs adjust to a new situation and adapt in the face of symbolic uncertainty by following other entities considered a model for being successful in obtaining and maintaining the CEbas certification.

## 6. Final Considerations

This study contributes with a holistic conceptual model, which can be tested in future quantitative studies, based on antecedent events of the public policy associated with Cebas and its effects, not previously discussed by the Brazilian literature. It also contributes to deepening understanding of controllable and uncontrollable vulnerability over the process and showing that this certification may be little relevant or valuable for fundraising, considering that TSOs' managers are only concerned with tax immunity.

This study alerts for the loss of opportunities of increasing the number of donors at the individual and organizational levels, exposing a shortsighted view of this certification. It also highlights the need to mitigate such vulnerability to strengthen this certification's pragmatic and moral legitimacy and the management of TSOs. In addition to using tax immunity in their tax planning, they can also ground their financial management on increased resources provided by national and international donors. Hence, according to the American Institute of Certified Public Accountants (AICPA, 2021), it is about applying accounting skills focused on sustainability to the 'company's strategy, assessing risks and opportunities, and providing measurement, accounting, and performance management skills to ensure sustainability is incorporated to the company's daily operations.'

Therefore, this study's theoretical contribution includes expanding the literature addressing certifications by discussing the impact of financial statements in obtaining Cebas. This study can also contribute to practitioners both in the public and third sectors, as it identifies the main steps in the technical reports analyzed in processes granting and renewing this certification. Therefore, it contributes to creating compliance mechanisms that can aid TSOs in preventing and correcting future reports. Additionally, another practical contribution is triggering training actions of the Federal Council of Accounting, directed to accounting professionals.

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# Reflections on critical research in the Brazilian accounting field: an autobiographic note

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## Abstract

**Objective:** This paper aims to present a reflection on critical research in the Brazilian accounting field based on an autobiographic narrative of the processes that contributed to the development of my habitus as a critical researcher.

**Method:** Based on the theoretical concepts of habitus and scientific field, I develop an autobiographic narrative of my academic trajectory, during which I have sought to develop a critical research agenda in the Brazilian accounting field.

**Results:** I argue that epistemological rejection to objectivism and axiological commitment with some notion of social justice are the characteristics that define critical research. Furthermore, I point out surveillance mechanisms that, in my opinion, contribute to maintaining the hegemony of the mainstream in the Brazilian accounting field: a tacit agreement through which interpretive and critical approaches are restricted to peripheral subjects in the field; a discourse that associates the use of quantitative methods to the competence of researchers and qualitative methods to the incompetence of researchers; and the possibility of converting symbolic capital, accumulated in the form of prestige in the academic field, into economic capital, obtained through consulting activities. I also discuss some weaknesses I identify in the incipient community of critical researchers, such as unwillingness to confront the mainstream, low receptivity to criticism toward itself, and no previous contact with the theoretical framework commonly adopted in critical research.

**Contributions:** In addition to discussing the assumptions that characterize critical research in the accounting field, this paper contributes to a greater understanding of the functioning of the community of critical researchers in the Brazilian accounting field and lists the challenges this community faces to establish its relevance in the Brazilian academic milieu. Methodologically, this paper advances in the adoption of autobiographies in Brazilian accounting research.

**Keywords:** Autobiography. Accounting research. Critical research. Academic trajectory.

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## 1. Introduction

Even though incipient in Brazilian accounting research, critical and interpretive approaches have gained attention in events and periodicals in recent years, and the community of researchers adopting these approaches began to consolidate. Since the beginning of my trajectory in the academic accounting milieu in the 2010s, I have sought to develop critical research agenda. In this paper, I present an autobiographic report reflecting upon the processes that forged my *habitus* as a critical researcher and discuss the assumptions of critical research, contributing to an understanding of how the community of critical researchers in the Brazilian accounting function, and listing the challenges this community faces to establish its relevance in the Brazilian academic milieu.

Andrew, Cooper, and Gendron (2021) state that the adoption of a critical research approach enables researchers to challenge the assumptions of the accounting practice, becoming directly involved with issues such as equality, justice, and democracy and exploring the impact of accounting practices on people, organizations, and institutions. Additionally, the authors argue that critical research in the accounting field also contributes to enriching the discipline through the significant connections critical researchers frequently establish between universities and the external community and through their various theoretical perspectives that promote deeper learning among students, instigating them to reflect, criticize, and challenge already established ideas.

Autobiographic narratives are an essential means to understand and interpret the construction of identities (Haynes, 2006). They facilitate access to primary data sources, have a more attractive style than traditional academic redaction, and encourage self-reflection among researchers and readers (Malsch & Tessier, 2015). Most of the period encompassed by this narrative refers to the time I was a graduate student. Among the various possibilities, the experiences of an accounting graduate student were already relevant as the object of study to understand how research processes are conducted and theory is constructed (Chua, 1986b), along with the influence of different institutional contexts concerning the nature and content of accounting theorization (Panozzo, 1997), the construction of individual identities and an epistemic community of critical research (Kaidonis, 2009), the reproduction of social hierarchy in the academic milieu (Fogarty, 2011), the female presence in the Brazilian academic accounting field (Casa Nova, 2012), and the construction of women's teaching identities (Nganga, 2019).

In section 2, I present the concepts of *habitus* and scientific field, such as formulated by Pierre Bourdieu, which will serve as the theoretical framework for the reflection shown in the later sections. In Section 3, I report the beginning of my academic trajectory and how I first came into touch with critical research in the accounting field. In Section 4, I discuss the assumption of critical research and list the main challenges to consolidating critical research in the Brazilian accounting field. In Section 5, I reflect upon my practice as a critical researcher, and Section 6 is dedicated to my final considerations.



## 2. *Habitus* and Scientific Field

The concepts of field and *habitus* are part of the theoretical framework proposed by the French sociologist Pierre Bourdieu to investigate social practices. In Bourdieu's view, a field

may be described as a network, or a configuration, of objective relations between positions. These positions are objectively defined, in their existence and in the determinations they impose upon occupants, agents or institutions, by their present and potential situation (*situs*) in the structure of the distribution of species of power (or capital) whose possession commands access to the specific profits that are at stake in the field, as well as by their objective relation to other positions (domination, subordination, homology, etc.) (Bourdieu & Wacquant, 1992, p. 97).

The concept of *habitus*, in turn, describes the different systems of disposition an agent acquires by internalizing economic and social conditions that his/her position in a field imposes and which during his/her trajectory in this field find more or less favorable opportunities to update (Bourdieu & Wacquant, 1992). Being a product of history, *habitus*

Ensures the active presence of past experiences, which, deposited in each organism in the form of systems of perceptions, thoughts, and actions, tend, more surely than all formal rules and explicit standards, to ensure conformity of practices and its constancy through time (BOURDIEU, 1980, p. 91, our translation)

Hence, *habitus* is a way to theorize social actions as products of a practical sense that is socially constituted. Opposed to notions of rational agency, this practical sense "is not so much a state of mind as a state of the body, a state of being" (Thompson, 1991, p. 13). Therefore, it provides an explication regarding how the structure, from which *habitus*, is a product, governs practices through the imposition of limits and restrictions to common sense behaviors considered to be reasonable. In this sense, by adopting the term *habitus*, instead of **habit**, Bourdieu seeks to emphasize its generative, rather than merely reproductive nature. According to the author, *habitus* is

a product of conditioning that tends to reproduce the objective logic of conditioning but making it transform; it is a kind of transforming machine that leads us to "reproduce" the social conditions of our production, but in a relatively unpredictable way, in such a way that one cannot move simply and mechanically from knowledge of the conditions of production to knowledge of the products (Bourdieu, 2003, p. 140, our translation).

*Habitus* inculcated in the agent by the objective conditions of the position s/he occupies in a given field generates aspirations and practices that are objectively compatible with these conditions, excluding the most unlikely practices – whether totally unexamined, making them unthinkable; or at the cost of a double negation that inclines them to make necessity a virtue, refusing what is refused to them and loving the inevitable (Bourdieu, 1977).

When analyzing the French academic field of the late 1960s, Bourdieu (1984) points out a prevalent opposition between two types of capital: university power, based on the accumulation of hierarchical positions in the university bureaucracy, and scientific prestige, arising from successful investments in research activities. Regarding the scientific field, Bourdieu (1991) identifies two components of disputed capital: **strict scientific authority**, which is based on peer recognition for the competence in finding legitimate solutions for problems also considered legitimate in the field in question, and **social authority in science matter**, which is partially independent of strict scientific authority, being delegated by some institution.

In disputes for scientific legitimacy, agents in a dominant position in the field tend to adopt conservation strategies that aim to perpetuate the established scientific order, seeking to control teaching institutions, which through the inculcation of generative systems of perception, appreciation, and action, reproduce the current scientific *habitus*, thus guiding the choice of objects of investigation, the solution of scientific problems and the assessment of these solutions (Bourdieu, 1976). Such socialization processes are a condition for being admitted to the scientific field, which

like entry into the game, it presupposes a *metamorphosis* of the newcomer, or better yet, a sort of *metanoia* marked in particular by a bracketing of beliefs and of ordinary modes of thought and language, which is the correlate of a tacit adherence to the stakes and the rules of the game (Bourdieu, 1991, p. 8).

Once admitted to the scientific field, newcomers who aspire to dominant positions may adopt **succession strategies** intended to ensure gains that are promised to those who follow the established ideal of scientific excellence, taking part in the cycle of exchange of recognition by which scientific authority is transmitted through generations, or may adopt **subversion strategies**, which enable accumulating scientific authority without granting a counterpart to agents who occupy dominant positions in the field, denying them recognition. Subversion strategies demand more significant investment in scientific preparation, with a greater risk of failure, depriving those who adopt them from accessing gains in the scientific field in the short term. For this reason, they tend to be adopted by individuals with a greater subversive disposition toward the current social order (Bourdieu, 1976).

However, the distinction between conservation and subversion strategies tends to decrease as the scientific field has greater autonomy since acquiring the necessary preparation to promote ruptures depends on an engagement with the field itself. The ability to encourage ruptures tends to become a source of prestige itself, and a search for the truth comes to prevail over the affirmation of the truth of each individual's interests. Bourdieu (1976) states that social sciences face more significant obstacles to autonomy because the objective of social sciences is a legitimate representation of the social world, which is also an object of dispute in the political sphere. Hence, instead of scientific fields, social sciences are prone to become fields that produce scholarly discourses, characterized by a false rupture strategy that uses academic jargon to reaffirm common sense.

### 3. My Encounter with Critical Accounting Research

My trajectory in the accounting field started by chance. After finishing high school, I decided to attend a vocational program, and among the options available in the school nearest to my home, I chose the accounting program. Since the beginning, though I found it a bit laborious, I considered it an easy discipline. I could already see at the time that accounting was a vital tool to understand how the capitalist system worked. Years later, reading Bryer (2006), Chiapello (2007), and Oguri (2005), among others, I realized that there were grounds for my initial impressions.

After the vocational program, I entered an Accounting Sciences undergraduate program. Even though my interest in the accounting field remained, its markedly instrumental nature of teaching bothered me; there was much emphasis on *how* to do it but little emphasis on the *why*. Contrary to the programs in business administration and economics, in which we studied Taylor, Fayol, Weber, Marx, Keynes, Friedman, etc., our references in the accounting program included Laws No. 6.404/1976 and No. 4.320/1964, Income Tax Regulation, CVM instructions, and CFC resolutions. However, reading Hendriksen and Van Breda (2007), I realized that, even though we did not discuss them, there were theoretical foundations for the accounting techniques we learned. Hence, to deepen the study of these foundations, I began nourishing a desire to pursue the academic career – a desire that only grew during the brief time I spent in an auditing firm after I graduated as I felt involved in a constant role-play among clients, employers, bosses, and colleagues, without the freedom to openly express my views.

The beginning of the Master's program was a gratifying period. Moving to another state, adapting to a maddening pace of reading and classes given by “big figures” in the field everything contributed to a feeling of wonder that accompanied me for a long time. Still, it did not take me too long to realize that, while there was great depth, there was no diverse thinking in the program I attended to. To compound my frustration, I realized that the instrumental nature of the accounting teaching, something that always bothered me, was also present in the remnants of what I came to call ‘IOB-ism’. As noted by Martins (2012),

From the beginning of the graduate program up to 1988, there were no specific accounting scientific journals in Brazil, and accounting manuscripts were published by generic periodicals [...]. Among these, the most important periodicals at the time (as mentioned by many interviewees) in which many authors published, especially in the field of financial accounting, was the *Boletim IOB*, which was entirely aimed at professionals. [...]

There was not a concern with having a scientific journal, what was considered important for the profession at a given time and would impact professional life was published. (p. 198).

As a consequence of the *habitus* wrought by *IOB-ism*, I realized that there was no room in the program to challenge the claims of knowledge in the accounting profession. On the contrary, an intention to “promote accounting” prevailed, translated in a constant reaffirmation of discourse originating from the professional field, especially from standard setters. I started my Master's in 2011, right after the *de jure* convergence to International Financial Reporting Standards (IFRS) in Brazil had been concluded. My expectation when entering the program was to find an opportunity to reflect upon this process and discuss its pros and cons. However, I came across a context in which I often felt taking part of a cult of “IASB's Witnesses”, such was the dogmatism with which IFRS was promoted.

Later, when I came into contact with the Bourdieusian framework, I concluded that the main problem of the program I attended – and which, due to its central role in building the academic accounting field in Brazil, affected the field as a whole –, was lack of autonomy from the professional area. The agents in more prominent positions live a “double life”, reconciling their academic careers with professional performance as consultants, reviewers, directors, board of directors, supervisory boards, audit committees, standard setters, regulators, etc. Thus, these agents have a *habitus* of “accounting salespeople”, which is reflected in their academic production, making the Brazilian accounting academic field a field that produces scholarly discourses, as defined by Bourdieu (1976).

Even though at the time of my Master's I had not yet elaborated this theoretical interpretation, my practical sense led me to maintain discretion, without boasting too much about what I was doing when I decided to investigate, in my dissertation, an issue that aroused my curiosity since my initial contact with accounting: could it be beneficial not only to capital but also to workers? And it was from the identification of references on this topic in Accounting, Organizations, and Society (AOS) and on Critical Perspectives on Accounting (CPA) that I came into contact with critical accounting research. I recall Burchell et al. (1980) and Ogden and Bougen (1985) as the first references that blew my mind, showing me that accounting could be interpreted as a potential cause of problems rather than a solution. Young (2006), who analyzes the historical construction of the figure of users of financial statements as a way to justify accounting standard-setting, and therefore, explicitly challenges one of the main claims of knowledge in the profession, serves, up to this day, as the parameter I use to define what I intend to do as a researcher.

Interestingly, when I started exposing the ideas I came into contact with, the censorship I came across was more frequently aroused among my colleagues than professors. While many colleagues warned me that it was all “too radical” and I “would never publish something like that”, my professors never restricted what I was doing during the Master's program. My impression was that they did not understand what I was proposing very well but did not bother much either. Based on my memoirs alone, it is not easy to speculate the reasons behind my colleagues' attitudes. My main conjecture is that they perceived the indications that I would adopt disruptive strategies to threaten them as they were also entering the academic career and adopted succession strategies. Hence, they were eager to preserve the pre-established order. Perhaps, among the professors who already occupied dominant positions in the field, I was seen merely as an exotic individual.

Nonetheless, at the end of my Master's, and mainly at the beginning of the doctoral program, I noticed a change in the program's *zeitgeist* – or perhaps, I only acquired a greater awareness of the symbolic disputes that took place therein. My interpretation is that there was a historical division of tasks between “market” and “academic” professors: the first had built the department's reputation and dedicated most of their time capitalizing on this reputation through their work in the professional field. The second group worked in the university's day-to-day life and was occasionally rewarded for this task through scholarships and financial support provided to the department. At one point, the “academic professors” seem to have rebelled and assumed the program's reins, seeking to drive it toward research. For this reason, there was a time of greater openness to thematic and epistemological diversity. However, the “market professors” considered that, by making room for diverse themes and approaches, this rebellion neglected the mainstream accounting research and put the “reputation factory” the program represented at risk. Thus, the market professors gathered their forces and regained control over the department.

Note that I was merely a distant witness of this process; thus, it is not convenient to take my interpretation with high regard – it only serves to contextualize my experience as a graduate student. I was fortunate to come across critical research at a time of greater plurality and could take courses in critical and interpretive theory in accounting and discourse analysis, which were offered in the program by visiting professors. Nowadays, however, I believe it is even more difficult taking this path, as the mainstream seems to exercise closer surveillance, although not necessarily explicit, as other researchers' reports show (cf. Ganz et al., 2019; Lima & Casa Nova, 2020). Paradoxically, this greater difficulty is perhaps a symptom of the growth of interpretive and critical approaches, which may already be perceived as a threat by those in a dominant position in the field.

### 3.1 Mainstream Surveillance Mechanisms

For Bourdieu (1976), a scientific field is structured by competition for scientific authority – symbolic capital gained through peer recognition. As these peers compete for the same symbolic capital, such authority is only acknowledged through proper scrutiny, making the search for truth prevail over each individual's assertion of truth. Therefore, epistemological surveillance has a vital role in establishing a scientific field, differentiating it from other areas of symbolic production.

In my opinion, however, the low autonomy of the Brazilian accounting scientific field from the professional area makes the surveillance exerted by the mainstream occur through mechanisms other than epistemological surveillance. It happens through a tacit agreement through which interpretive and critical approaches are restricted to peripheral subjects in the field, such as education and research, gender and race, history, occasionally socio-environmental accounting, or topics other than “accounting subjects”. On the other hand, challenging knowledge claims of the accounting profession – and, therefore, the profession's commercial agenda, with which many professors maintain close ties –, is still seen as too serious a heresy. Hence, criticisms to the IFRS, International Public Sector Accounting Standards (IPSAS), Integrated Reporting, Balanced Scorecard (BSC), to the Economic Management Model (Gecon), Activity Based Costing (ABC), or any accounting technology are practically banned.

I admit that identifying specific topics as peripheral may reinforce the narrow definition that the mainstream promotes of “what accounting is”, and that broadening the discipline's scope, giving voice to traditionally marginalized issues and groups, by itself is an important objective for critical research to pursue. However, by pointing the peripheral condition of these topics, I do not intend to make any judgment of value, but rather, to make a truth claim about the structure of the Brazilian accounting scientific field, which can be empirically corroborated by the small number of these themes published in the area. Even in these themes that are usually addressed by the incipient interpretive and critical literature addressing accounting in Brazil, it seems to me that care is taken so as not to directly confront the accounting profession. As a rule, accounting appears only as background for investigations into education, gender, race, history, etc., and could be easily replaced by any other related discipline. In summary, my impression is that this literature still carries the spirit of promoting accounting that characterizes *iobism*, lacking a subversive disposition toward the professional field.

Another way through which the mainstream protects itself against criticism is through a competence discourse: I have already heard more than one saying that criticism of “academic” professors toward “market” professors stems from their incompetence, as they would not be able to enter the market –, as if all academics aspire to transform the university in a mere business counter, putting their knowledge at the service of corporations. Additionally, mastering quantitative methods is portrayed as something that requires complex skills, whereas choosing qualitative methods would show inability and/or indolence. To criticize the prevalence of qualitative methods, I once heard a professor mentioning that the problem in the management accounting field was that only “little girl research” was done.

However, it seems that the most effective means through which the mainstream keeps its hegemony in the academic accounting field in Brazil is through the possibility of converting symbolic capital into economic capital that “market” professors offer. At least in the graduate program I attended, students increasingly see it as a *trainee* program. They enter the program seeking to follow these professors’ footsteps and become consultants, referees, directors, board members, tax advisers, standard setters, regulators, etc. Furthermore, I realize that graduate programs became somewhat banalized as Master’s programs in the accounting field have been increasingly searched by public employees, middle-level executives, managers, and partners of auditing firms, all looking for educational credentials that differentiate them professionally, but without necessarily intending to pursue an academic career. On the other hand, an expanded offer of graduate programs seems to meet the repressed demand of professors from public Higher Education Institutions (HEI), reducing the average age – and background – of doctoral students. Considering all these factors, I realize that most graduate students are unwilling to question but rather reaffirm the claims of knowledge in the accounting profession. The minority that escapes this pattern has to deal with explicit censorship in congresses, consortia, and pre-defense meetings, in which discouraging critical approaches are not uncommon.

To circumvent mainstream surveillance, when I entered my PhD, I gave up researching accounting regulation, my main topic of interest, and presented a project in education, which I felt was a more open alternative research approach. However, after getting involved in various conflicts throughout the program, at one point, I realized that one more conflict would make no difference. Hence, while my colleagues wore t-shirts printed “I love IFRS”, I decided to write a critical dissertation about the process through which IFRS was adopted in Brazil. After many setbacks, I was fortunate to find an advisor who supported my project and gave me the freedom to write my dissertation with the independence of thought my critical research demanded. In any case, the “counter-revolution” I witnessed throughout my doctoral program, added to personal issues I faced at the time, led to a feeling of not belonging to the Brazilian accounting academic field, a feeling I still carry to this day. The best experiences I had during this period were in the courses I attended in other programs offered by the university, which contributed to broaden my lack of interest in the Brazilian accounting literature, a lack of interest that only grows with each new congress and new journal issue publishing more papers addressing the impact of anything on the share price of publicly trading companies listed on B3, excluding those in the financial sector. Looking back, I consider it a mistake to have remained in the program, which during my Master’s had already given me all the good it had to offer. I spent most of the doctoral program wanting not to be there and did not give up because the Capes scholarship was my only source of income.

#### 4. After all, what is “Critical” Research?

According to Parker and Thomas (2011), “in the last half century, virtually every discipline within the social sciences in the ‘English-speaking world’ has developed a critical wing which claims that the centre of the discipline is conservative and that radical changes to the canon are required.” (p. 420). Hence, it should be noted that critical research arises from symbolic disputes in the academic field and that the self-attributed term “critical” is, by itself, a tool used in these disputes, implicitly bringing with it the claim that the center or mainstream produces “uncritical research” – something that is perhaps inconsistent with the very concept of “research”.

Additionally, the usual definition of critical research as a counterpoint to the mainstream may suggest a misleading notion of unity; defining it for what it is not may mask the diversity of approaches critical research comprises, which not rarely end up being contradictory. According to Morales and Sponem (2017), “critical accounting is a contested terrain, marked more by splits and disagreements than by consensus and harmony.” (p. 150). Hence, the controversies between the different theoretical traditions covered by critical research can be just as or fiercer than in the mainstream, as international accounting research shows, such as Marxist critiques to postmodernism (*cf.* Arnold, 1998; Cooper, 1997) and the debate between Marxists and Foucaultians, which reached, at a certain point, a considerable degree of animosity (*cf.* ARMSTRONG, 1994; GREY, 1994; HOSKIN, 1994; NEIMARK, 1990, 1994).

Hence, what distinguishes critical research from other research approaches? Many authors have already set themselves the arduous task of defining what critical research is, and the readers will undoubtedly benefit greatly from Burrell and Morgan (1979), Chua (1986a), Crotty (1998), Fournier and Grey (2000), Prasad (2005), and Gendron (2018), among others. Throughout the development of my identity as a researcher thus far, I understand that one of the elements that characterize critical research is the epistemological rejection of objectivism, that is, the typical positivist assumption that the mind can gain direct access through perception to reality as it is (Japiassú & Marcondes, 2001). Instead, critical research is based on constructivism, that is, on the premise that the process of knowledge is not a “data” immediately perceived by empirical experience, but a construct derived from the dialectical relationship between the knowing subject and the known object (Japiassú & Marcondes, 2001).

Nonetheless, I believe that the epistemological dimension is not enough to characterize critical research, considering that interpretivism also shares constructivist assumptions. However, critical research differs from interpretivism in the axiological dimension, as it rejects neutrality as a guiding value of scientific work in favor of the commitment with some notion of social justice, seeking to promote changes that promote it. According to Prasad (2005),

The critical traditions are simultaneously committed to both critique and change. One without the other is not considered very meaningful. The critical traditions thus break quite definitively with the stances of scientific detachment and semineutrality adopted by many other intellectual traditions (p. 109)

Still, because they share similar epistemological bases, distinguishing between interpretivism and critical research may be difficult in practical terms, and the boundaries between both approaches are often blurred (Gendron, 2018). Therefore, even though I confess certain discomfort at the possibility of being associated with a fundamentally contemplative stance of interpretive research, I consider that bringing together critical and interpretive studies under a single umbrella has pragmatic merit, mainly due to the incipience of both approaches in Brazilian accounting research.

On the other hand, the frequent description of both approaches as “qualitative studies” seems quite troublesome. First, because it may suggest that critical research necessarily implies qualitative methods, and even though I agree that the epistemological assumptions of critical research favor these methods, quantitative methods may also provide a relevant contribution to critical research, as discussed by Everett et al. (2015) and evidenced by Shaoul (1997, 2005). Secondly, because it may suggest that qualitative studies are necessarily interpretive or critical, ignoring what Prasad (2005) describes as *qualitative positivism*, that is, the adoption of non-quantitative methods to collect data, such as interviews and observations, under conventional positivist assumptions concerning the nature of social reality and knowledge production. In this sense, Crotty (1998) states that

It is possible for a quantitative piece of work to be offered in non-positivist form. On the other hand, there is plenty of scope for qualitative research to be understood positivistically or situated in an overall positivist setting, and, therefore, for even self-professed qualitative researchers to be quite positivist in orientation and purpose. When investigators talk, as they often do, of exploring meanings by way of qualitative methods and then ‘confirming’ or ‘validating’ their findings by a quantitative study, they are privileging the latter in a thoroughgoing positivist manner. What turns their study into a positivist piece of work is not the use of quantitative methods but the attribution of objectivity, validity and generalisability to quantitative findings. (p. 41)

Fournier and Grey (2000) observe that the mainstream rarely defends and argues for positivism, simply assuming it without any explicit epistemological or ontological reflections, restricting methodology discussions to statistical methods and technical issues. Therefore, even though some authors use the term “qualitative research” to refer to interpretive and critical research (e.g., Denzin & Lincoln, 2011; Prasad, 2005), I found that this elision of meanings promotes a superficial understanding, typical of the mainstream, using only methods chosen as a criterion for distinguishing between different research approaches and bypassing the epistemological assumptions that underlie such choices. Furthermore, in pragmatic terms, I fear that a loose demarcation of boundaries opens up room for the influence of qualitative positivism mentioned by Prasad (2005), especially in the processes of assessing manuscripts, giving rise to demands for “triangulation”, “protocol”, and “bias reduction” or any other form the premise of objectivity takes, which would make it even more challenging to consolidate an interpretive and critical accounting research community in Brazil.



However, even in the face of obstacles found in the academic field of Brazilian accounting, one can see the emergence of a community of researchers who claim to be critical. However, to effectively deserve the epithet of “critical”, I understand this incipient community needs to overcome some internal weaknesses. The one that bothers me the most is an apparent unwillingness to confront the mainstream. While in the English-language literature, questioning the mainstream is one of the pillars of critical research in accounting (e.g., Baker & Bettner, 1997; Fogarty, 2011; Lee, 1999; Reiter & Williams, 2002; Tinker et al., 1982), in Brazil I usually find this type of debate is banned. Questioning is rejected *a priori*, under the argument that “there are only two types of research: the good and the bad”, as if criticism itself denoted an attempt to curb divergent thinking. The curious thing is that this argument is usually used by the community of critical researchers itself, which shows a conciliatory disposition. My impression is that adherence to the tacit agreement to which I referred in section 3, through which interpretive and critical approaches are restricted to peripheral topics in the field, is primarily voluntary, showing a search for a comfort zone that minimizes risks inherent to the adoption of contestation strategies in the scientific field. In summary, instead of adopting strategies to subvert the rules that legitimize scientific authority, it seems that many critical Brazilian researchers seek to follow succession strategies, aiming to obtain recognition from agents in dominant positions in the accounting field, or at least, reaching “pacific coexistence”, something like: “you do not question what we do, and we do not question what you do!”

However, this ban on questioning is not restricted to the mainstream. Paradoxically, I believe that criticism is not even welcomed in the few critical instances in our academic community. Contrary to the context of disciplines with established critical traditions, which are marked by internal controversies (e.g., Alcadipani, 2005; Faria, 2005; Misoczky & Amantino-de-Andrade, 2005a, 2005b), it seems that the incipient critical communities in Brazil are characterized by a lack of intellectual tension, in which mutual support, praise, and encouragement prevail. In contrast, criticism is treated as the result of epistemological incomprehension. Here, it seems to predominate that maxim “once bitten, twice shy” considering that a recurrent way through which the mainstream maintains its hegemony in the academic field is by using positivist quality criteria to assess interpretive and critical studies (Baker & Bettner, 1997; Chua, 1996), which is often associated with the competence discourse. Therefore, when there is finally an opportunity for interpretive and critical research, researchers used to environments dominated by the mainstream seem to keep on adopting a defensive stance because they are used to having their competence questioned whenever they do not adapt to positivist precepts. However, the fact that interpretive and critical studies do not meet positivist quality criteria does not mean they should not meet any quality criteria. According to Prasad (2005),

The absence of theoretical grounding, the lack of a theoretically driven focus, the failure to develop careful and well-structured methodologies, and an unawareness of the fundamental assumptions underpinning one’s fieldwork are more likely to result in a piece of work that is closer to a shabby and pedestrian form of journalism. Such studies can do little more than report and categorize the results of interviewing and observation. They are likely to produce “literal translations” [...] of empirical situations that are relatively simplistic and unsurprising descriptions of social processes. (p. 5-6).

Another difficulty to be overcome for the consolidation of this critical research community is that, opposed to positivism's typical emphasis on methods, critical research focuses on theory and requires deepening into frameworks that often sound unintelligible to the uninitiated – you cannot simply employ agency theory to every single research problem. However, due to the typically instrumental nature of accounting teaching, I realize that most graduates in accounting sciences had little contact with the theoretical references commonly adopted in critical research. Thus, the decision to follow a critical line of research in accounting usually requires graduate students to make an extra effort, in addition to the already heavy workload, especially in programs heavy with mandatory courses, in which topics related to critical research are seldom addressed. In this sense, it is interesting to note that many of the researchers leading the community of interpretive and critical research in the Brazilian accounting field graduated in other areas, such as it happened in the United Kingdom during the 1980s (Gendron & Baker, 2001).

Finally, social impact is an objective that needs to be on the radar of any community intending to focus on critical research. The possibilities of social intervention in critical accounting research in English-language literature have already been discussed by Sikka, Willmott and Puxty (1995), Neu, Cooper and Everett (2001), Cooper (2002), Cooper and Coulson (2014), among others. Given the incipience of the Brazilian community, I believe it is not feasible to hope that critical accounting research will have a significant social impact in the near future; however, we need to work to make it happen. In my view, we need to promote engagement in public debate: considering the agility with which certain adepts of the mainstream perform the role of ideologists and technocrats at the service of financial capital, we need to enable ourselves to, at the very least, offer them a counterpoint. Another critical arena we need to dispute is education itself, making our research reach the classroom and offer the students something beyond the simplistic view of “useful information to support decision making”, showing them that accounting is a social practice imbricated in our society's various power relations.

## 5. What is it like to be “critical”?

As reported in Section 3, when I started exposing the ideas I had contact with through international critical literature, I came across my colleagues' censorship, warning me that I would never be able to publish anything similar in Brazil. Additionally, I often heard some colleagues, who showed interest in critical research, say they would be “free” when they graduated from the doctoral program and would publish whatever they wanted. For these people, “where am I going to publish?” was a concern that justified their reluctance to engage in critical research. After graduating, they still do not want – or could not— publish critical studies in the accounting field.

Gendron (2008) argues that when tools to measure performance and rank periodicals draw collective attention to the researchers' number of publications and the periodicals' factor of impact as measures of value, they contribute to consolidating a superficial trend and conformity to the modern academic environment, making the publication of heterodox papers a risky activity. In this sense, Moizer (2009) claims that the process of publishing in social sciences evolved to a game of authors, referees, editors, and bureaucrats, in which a simplistic criterion, i.e., quality researchers publish in quality periodicals, is adopted. Thus, the original purpose of publishing to advance the knowledge of a discipline seems to be lost amid this game. Malsch and Tessier (2015), in turn, even though they recognize that journal rankings represent a threat to the diversity of accounting studies, report that they engaged politically and questioned the ranking practices adopted in the institution to which they were affiliated, showing that it is possible to actively resist the conformity and intellectual conservatism trends these practices promote.

For my part, when faced with calls from my colleagues at the time of the Master's program to comply, I sought to engage with the "publish or perish" culture as a way to contest it. I made an effort to show the mistake of these pieces of advice and censorship –, after all, as highlighted by Bourdieu (1976), promoting ruptures in a scientific field requires engagement with the field itself and its specific logic. I believe that my educational trajectory, during which I always had top performance, forged a *habitus* characterized by self-confidence – occasionally excessive – in my ability to prove that my colleagues were wrong and I was right. In this sense, Gendron (2018) states "being critical implies the endorsement and even embodiment of an epistemological position to go against the crowd" (p. 2). The fact is that I have been relatively successful in my publishing efforts since then. The main reason for this is practice because, since the first time I came across critical research, I started writing papers and submitting them to congresses and periodicals, rather than waiting for my "doctoral degree" to start publishing.

To overcome the mainstream resistance during the submission of my manuscripts, my primary strategy was to invest heavily in theoretical foundation: almost all my papers have more references than what I considered to be necessary to substantiate them properly. Another successful strategy was writing in English; in my experience, this virtually ensured my papers would be approved in conferences, and no matter how "radical" the content was, assessments were always positive. I believe that both strategies enabled me to show proficiency, overcoming the restrictions imposed by the mainstream, alleging a lack of competence. On the other hand, in journal reviews, I sometimes needed to fight with a referee. In the papers with which I went through conflicts, I adopted the analysis of discourse. In the review process, I used the discourse analysis itself to "evaluate the evaluator" and deconstruct his/her arguments. However, adopting this strategy requires much care, and it does not always work. I have had papers summarily rejected in the desk review, and one paper rejected after five rounds of review. Still, I did not give up publishing them.

I have also learned to more carefully choose a suitable journal. For instance, the paper that was rejected after five rounds had been submitted to a periodical, which despite its allegedly multi-paradigm scope has never published a single critical paper in two decades. During the entire review process, one referee insisted that I adopted a more "neutral" tone up to the point that I felt the manuscript would be uncharacterized and refused to make any further changes. Next, I submitted the last version of the manuscript to a periodical in the field of organizational studies, and virtually all criticism concerned a lack of the elements contained in the original version. In the second round, I submitted a practically identical version I had initially submitted to the previous periodical, and the paper was approved. Hence, I have learned that I do not need to restrict my manuscripts to the academic accounting field. Organizational studies in the field of business administration, for instance, are consolidated in Brazil for decades, and sometimes it is easier to convince the referees in this field that accounting can be an interesting topic than overcoming the resistance of referees in the accounting field toward critical research. My recent attempts to direct my work to periodicals in the field of organizational studies have resulted in more rewarding review processes, and I feel that these are effectively contributing to my development as a researcher.

During my PhD classes, I began openly confronting mainstream assumptions, developing a challenging *persona* that reflected my growing dissatisfaction with the program at the time, and by extension, with the Brazilian accounting academic field. Looking back, I believe that it added little to my training and ended up converting into apathy and indifference in the last courses I took in the program. When qualifying and defending my dissertation, I resorted to the help of a few sympathizers in the program's power structure to ensure no mainstream supporters would be included in my dissertation defense committee, avoiding creating more inconveniences beyond those I had already dealt with throughout my trajectory – and I suspect that this only worked because there was a general awareness that if I had to fight for my dissertation, I would. In congresses, I believe that I was able to adapt this contesting *persona* in a slightly more productive way; my strategy was to demarcate space in lectures and the sessions that I attended, asking questions to move the interlocutor out of his/her comfort zone. Adopting this attitude, I went on the offensive to face the mainstream and never had to deal with explicit censorship to the criticism I proposed. However, over time I also got tired of this need to always be in combat, which added to my complete lack of interest in the mainstream. For now, I simply stopped attending accounting conferences in Brazil.

## 6. Final Considerations

Haynes (2006) points out that the dominant autobiographical narrative model in popular culture is characterized by a linear, chronological, progressive, cumulative, and individualistic account of a life trajectory with a problematic beginning, during which obstacles are overcome, and the true self is updated or revealed. However, evading this script a little, the narrative presented in this paper ends in a melancholic tone. While it is true that I overcame the barriers such as “you will never be able to publish something like that,” with which I was faced at the beginning of my graduate studies, it is also true that this journey brought me more disappointments than satisfaction. While many researchers are dissuaded from engaging with critical research through the mainstream surveillance mechanisms, I ended up developing a sense of not belonging, which has led me to avoid engaging with the academic accounting field in Brazil as a whole.

Thus, although through different means, I also face a process of marginalization common among newcomers who adopt subversion strategies in the scientific field – currently, what I am most proud of in my academic trajectory is not having been co-opted by the mainstream. In line with Bourdieu (1977), I believe that I ended up making a virtue out of necessity considering that my objective conditions of life before entering the graduate program made me never aspire to become an ideologue of rentism and financial speculation – and I would hate it if that had happened. Therefore, the report presented here shows that the process through which I became a critical researcher was motivated by incompatibility between my previous *habitus* and the conditions I encountered in the Brazilian academic accounting field. From what I know of other critical researchers' trajectories, I believe that this is an aspect we have in common. Therefore, this paper is not intended to encourage new researchers to engage in critical research. I think that willingness to engage in critical research precedes entrance into the academic field. Instead, I hope that my report serves to warn of the obstacles that this path may present to anyone willing to take it.

The emergence of a Brazilian community of critical researchers, even if incipient, can contribute to fewer researchers getting lost along this path. However, as I have explained throughout this manuscript, my impression thus far is that this community has sought to establish itself within the boundaries negotiated with the mainstream so that it lacks a greater impetus to promote ruptures within the scientific field and in its relationship with the professional accounting field. However, as I understand that lack of autonomy concerning the professional area is the main characteristic of the Brazilian accounting academic field, it seems naïve to expect that challenging the profession's commercial interests will be accepted in the environments controlled by the mainstream. Instead, I consider that there is a risk of this emergent community of critical researchers to only contribute to reinforce the mainstream legitimacy, conferring a false appearance of diversity of events, periodicals, graduate programs, and other spaces, the primary role of which is to increase the symbolic capital of those who aim to convert it into economic capital. Therefore, to effectively consolidate a critical community that lives up to this name, I think that the best way is to mirror ourselves in related disciplines, such as business administration and economics, or even in the example of accounting in English-speaking contexts, promoting a more radical rupture with the mainstream and constituting autonomous spaces for the production and dissemination of knowledge.

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# The effects of behavioral factors on the task performance of forensic accounting experts

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## Abstract

**Objective:** To analyze the effects of decision-making styles, cognitive flexibility, and personality traits on the task performance of forensic accounting experts.

**Method:** A survey was conducted with forensic accounting experts, and a final sample of 259 valid responses was obtained. The partial least squares structural equation modeling was used to analyze data.

**Results:** The behavioral factors cognitive flexibility, and personality traits were positively related to task performance, whereas decision-making styles were negatively related.

**Contributions:** These results indicate that the scope of analysis needs to be expanded beyond the positivist perspective; that is, one cannot assume that individuals improve performance solely on rational work commands. These results also open up opportunities for investigations and encourage new approaches and constructs to explain behaviors related to individuals' task performance.

**Keywords:** Decision-making styles; Cognitive flexibility; Personality traits; Forensic accounting experts.

## 1. Introduction

The rationality of the decision-making process is addressed in the literature from two main perspectives. The first investigates rationality (Melo & Fucidji, 2016) based on expected utility (Neumann & Morgenstern, 1947; Malkiel & Fama, 1970; Santos & Barros, 2011). The second, based on bounded rationality (Simon, 1955), considers a debate of behavioral factors. Although these coexist, on the one hand, there is an economic view focused on formal means, instruments, and processes that individuals use to make optimal decisions. On the other hand, the psychological perspective analyzes human decisions considering mind and behavioral influence, focusing on motivation, cognition, attitudes, actions, and communication (Birnberg, Luft & Shields, 2006).

Therefore, the decision-making process, more than selecting and evaluating alternatives from an economic perspective, represents how individuals collect information to make decisions and analyze a given problem and make judgments to make a choice (Perez, Valero, Cesar & Medeiros Júnior, 2017). This more comprehensive view is the object of study of cognitive psychology, which is concerned with investigating individuals' perceptions regarding the external world, where external reality is constructed based on an inner view through representations (Neufeld, Brust & Stein, 2011). Psychology also deals with the decision-making process from a sub-area that addresses personality traits though, which are relatively stable characteristics that may affect one's perception of risk among tasks (Lauriola & Levin, 2001).

Even though psychology has achieved a satisfactory level of knowledge of both approaches, there are gaps concerning the decision-making process, for instance, changing personality traits by will (Hudson & Fraley, 2015), changing personality throughout life (Chopik & Kitayama, 2017), and issues related to cognitive limitations (Cagnin, 2009). Therefore, we assume that task performance can be analyzed from a holistic perspective, in which cognitive abilities and personality traits interact and influence choices (Macêdo, 2016).

Decision-making styles refer to differences among people regarding information processing used to solve problems and make decisions in different contexts (Thunholm, 2004), and from the perspective of individuals' responses to the context and how these are interpreted (Scott & Bruce, 1995). This variable helps understanding individual differences influencing decision-making (Benbasat & Dexter, 1982) and is used to analyze the effect of cognitive styles on the allocation of resources (Chenhall & Morris, 1991), to solve complex business problems using accounting information (Cheng, Lockett & Schulz, 2003) and as a determinant factor of organizations' accounting choices (Ge, Matsumoto & Zhang, 2011).

Given the ability of individuals to rationalize and process information, this study also explores the cognitive flexibility factor. According to Martin and Rubin (1995), cognitive flexibility refers to individual cognitive flexibility, which, in any situation where alternatives are available, individuals are willing to be flexible and adapt supported on self-efficacy in being flexible.

Regarding personality traits, people with a low level of emotional stability (neuroticism) are more susceptible to negative emotions and inhibited cognitive resources, and generally project their inner emotions into their work (George & Zhou, 2007). On the other hand, the conscientiousness trait affects task performance through motivational mechanisms, such as setting high goals (Barrick & Mount, 1993; Monzani, Ripoll & Peiró, 2015).

Cubel, Nuevo-Chiquero, Sanchez-Pages and Fernandez (2016) analyzed the five broad personality traits (openness to experience, conscientiousness, extraversion, neuroticism, and agreeableness) and found that neurotic individuals presented worse productive performance and that more conscious individuals performed better. From this perspective, task performance is considered the outcome of behaviors reflected on actions (Bendassolli, 2012). It is inserted on a collective process of construction of meanings (Weick, 1995), therefore, goes beyond function and depends on constant interactions with peers and stakeholders in uncertain environments.

In accounting research, in addition to the mainstream being focused on the functionalist view of phenomena, there is a certain asymmetry of findings between behavioral decision-making approaches, sometimes implemented in cognitive studies (Lucena, Fernandes & Silva, 2011; Butler & Ghosh, 2015, Oblak, Licen & Slapnicar, 2018), sometimes in studies addressing personality (Monzani, Ripoll & Peiró, 2015). This aspect prompts further research, including studies with a more holistic approach to decision-making behavior and its practical effect and the use of instruments to capture different effects. Bromwich and Scapens (2016) note that researchers wanting to verify a more significant impact on practice need to be aware of what occurs in the practical world, and based on that, work toward problem-solving.

In this sense, decision-making styles, cognitive flexibility, and personality traits are a set of interesting aspects to investigate task performance among accounting experts, as these influence information processing in the development of skills and knowledge (Riding, 1997). Hence, this study's objective is to analyze the effects of decision-making styles, cognitive flexibility, and personality traits on the task performance of forensic accounting experts.

Analyzing decision-making styles from the perspective of task performance provides the means to allocate accountants in functions adapted to their cognitive characteristics to improve task performance (Fuller & Kaplan, 2004). Faced with the challenges imposed on the work of accounting experts, Lonescu (2012) explains that cognitive flexibility is a critical feature that helps individuals perform complex tasks, multitask, seek innovative solutions, and adapt to changing demands. In this sense, the decisions of professional accounting experts are the product of choices about how to develop planned routines at a job (Marras, 2011). According to Mahama and Cheng (2013), cognitive psychology can explain task performance because it reflects individual perceptions.

This study contributes to the literature by considering a holistic approach to analyzing the effects of decision-making styles, cognitive flexibility, and personality traits on the task performance of forensic accounting experts. From this perspective, Santos, Sisto, and Martins (2003) emphasize differences in how individuals usually think and perceive situations and different learning strategies and relate data from the context and draw conclusions. Additionally, it advances on studies in forensic accounting, which focuses on issues concerning the compliance of expert work.

Considering that forensic work is developed in two inseparable dimensions, the technical and human dimensions, analyzing behavioral factors can favor the practice, as the work of accounting experts is developed in an environment in which these professionals interact with procedural parts, technical assistants, and judiciary representatives. Consequently, accounting experts' task decisions are made after considering the matters that involve these individuals and interests. Thus, we assume that behavioral variables complement rationality and influence decision-making (Kahneman, 2012).

In the dimension of accounting experts' task performance, this study's results indicate the need for regulatory bodies to create standards that consider the critical aspects of experts' decision-making. These standards can encourage universities to improve the syllabus of accounting forensic discipline, considering there is a high level of misinformation regarding the challenges and opportunities of the accounting expert job market (França & Barbosa, 2015). Finally, they encourage professionals to seek new training possibilities, not restricted to technical-instrumental performance (Hoog, 2008). Hence, in the direction proposed by Murro and Beuren (2016) regarding accounting expertise networks, eminently theoretical pragmatic and technical knowledge in this field is expanded.

## 2. Literature Review and Hypotheses

There is a constant need for human beings to make decisions amidst risk or uncertainty to minimize undesirable outcomes and promote positive results (Hastie, 2001). The economic theory relies on rational decisions to achieve the best results, which assumes that formal methods are the most efficacious to decrease biases and achieve goals (Lima Filho, Bruni, Sampaio, Cordeiro Filho & Carvalho Jr., 2010). Bernstein (1997) considers rationality essential to make decisions under uncertainty because rational behavior makes people more objective toward information without optimistic or pessimistic influences.

However, contrary to what is proposed by rational choice theories originated from economic sciences, decision-makers do not fully control rationality (Plous, 1993). In these circumstances, cognitive styles reflect individual differences in an individual's cognitive organization, which work as a mediating element between skills and personality (Messick, 1984). Santos, Sisto and Martins (2003) consider that cognitive styles help explain the boundaries between cognition and personality. Rationality does not compensate for fragmented knowledge regarding the conditions surrounding one's actions and perceptions regarding phenomena and the laws that enable predicting the future consequences of actions based on the knowledge of current circumstances (Pereira, Löbller & Simonetto, 2010).

Psychology is supported on the idea that individuals develop their view of the world; hence what an individual thinks and feels can result from a different perception given the situations s/he is faced with (Santos, Sisto & Martins, 2003), so that the amount of information, the work's complex environment (Luft, Shields, & Thomas, 2016), and personal characteristics influence decision-making styles (Frankovsky, Birknerova & Zbihlejova, 2016).

Regarding decision-making styles, Scott and Bruce (1995) developed the instrument General Decision-Making Style Inventory (GDMS), which Löbller, Reis, Nishi and Tagliapietra (2019) validated for the Brazilian context. This instrument is intended to capture each of the five decision-making styles (dependent, avoidant, rational, intuitive, and spontaneous). The instrument's Brazilian version presented satisfactory and adequate psychometric measures.

In turn, according to Motowildo, Borman and Schmit (2013), task performance is related to productive activities in which raw material is transformed into products or services that meet and maintain the technical core. Therefore, this variable is directly related to the organization's technical issues, whether through the performance of technical processes or the maintenance of technical requirements.

Hence, in the specific scope of task performance of forensic accounting experts, the first research hypothesis is proposed:

**H<sub>1</sub>:** Decision-making styles positively influence the task performance of forensic accounting experts.

In addition to decision-making styles, Pereira, Silva and Tavares Jr (2017) explain that in an environment influenced by emotions, lack of proper knowledge of situations, and limited rationality, accounting decisions are influenced by stakeholders' pressure. This context is not different from the job of an expert facing conflicts of interest of third parties, methodological debates, and deadline pressure, having to make choices and judgments (Mendonça Neto, Cardoso, Oyadomari & Silva, 2009).

In diligences *in loco* and other socialization processes, accounting experts interact with other individuals and debate their interests and feelings. In these circumstances, behavior goes through social cognition; that is, individuals become aware of alternatives. The level of recognition differentiates people more cognitively flexible and willing to make adjustments from those who see only one behavioral response (Martin & Rubin, 1995). The adaptive dimension of the cognitive flexibility theory may explain it; that is, an individual may make changes to respond to the demands imposed by changes in problems or situations (Guerra, Candeias & Prieto, 2014). Hence, the way individuals interpret the environment and change their mental model to guide behavior is influenced by cognitive styles (Mueller & Shepherd, 2016).

This interaction that modifies and is modified by the environment is associated with cognitive components called executive functions and is related to an individual's ability to engage in goal-oriented behavior through voluntary, independent, autonomous, self-organized, and goal-oriented actions (Capovilla, Assef & Cozza, 2007). In addition, these functions are linked to planning, monitoring, and cognitive flexibility, whereas cognitive flexibility influences goal-oriented behavior (Capovilla et al., 2007); thus, it may affect task performance.

Initially studied by Spiro, Vispoel, Schmitz, Samarapungavan and Boerger (1987), cognitive flexibility is related to advanced levels of knowledge acquisition, which enables acting more effectively in a novel or complex situation. Martínez and Brussoni (2018) analyzed expert decision-makers and concluded that cognitive flexibility, that is, the ability to combine cognitive processing with the type of problem in question, enables decision-makers to perform better because they change decision-making habits for a deeper prior analysis of the context.

In this context, cognitive flexibility can be represented by attention flexibility, a process that involves individual skills to focus, allocate and refine stimuli; by representational flexibility, related to the ability to analyze, synthesize and retrieve information; and response flexibility, linked to the ability to create strategies, plans, and programs, in short, ability to make decisions and execute (Guerra, 2013).

Considering the particular context of task performance of forensic accounting experts, the second research hypothesis is proposed:

**H<sub>2</sub>:** Cognitive flexibility positively influences the task performance of forensic accounting experts

If this hypothesis is confirmed, it will reinforce the idea that the technical competence of forensic accounting experts is influenced by cognitive-behavioral factors, which suggest that professional performance depends on personal characteristics that differentiate individuals and their skills.

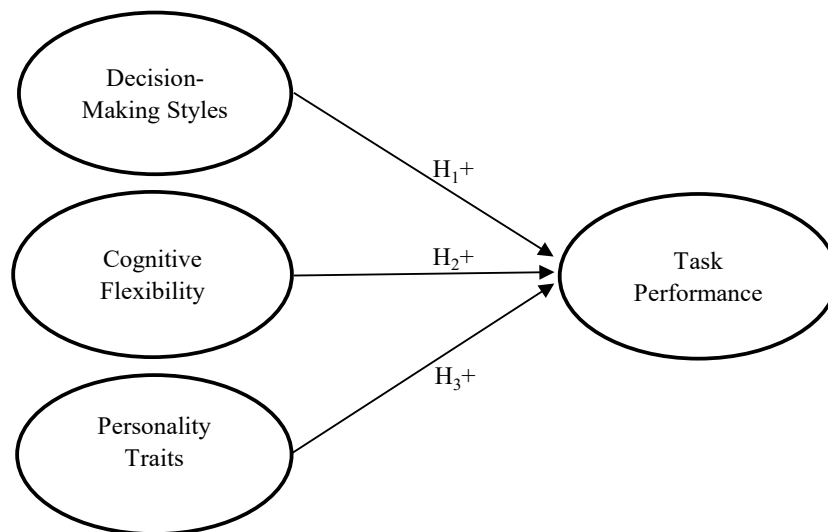
However, it is possible that personality traits also affect the judgment of facts in addition to decision-making styles and cognitive flexibility (Cunha, Silva, Peyerl & Haveroth, 2019). An individual's personality is unique and distinguishes people according to consistent patterns of feelings, thoughts, and behaviors (Trentini, Hutz, Bandeira, Teixeira, Gonçalves & Thomazoni 2009), and tends to influence how people respond to decision-making contexts (Scott & Bruce, 1995).

In the literature, Saucier (1994) explains that awareness is linked to the ability to reflect upon phenomena before making a decision, extraversion is associated with the level of sociability, agreeableness concerns an individual ability to be kind to him/herself and others, neuroticism refers to a tendency to experience emotional instability, and finally, openness to experiences concerns an individual's ability to face new challenges.

According to Debusscher, Hofmans and Fruit (2016), the relationship between personality traits and task performance occurs through perceptions of work pressure and task complexity, which may trigger momentary states of neuroticism, predicting momentary task performance. From this perspective, but narrowing the lens to the specific context of task performance among forensic accounting experts, the third hypothesis is proposed:

$H_3$ : Personality traits positively influence the task performance of forensic accounting experts.

Figure 1 presents the three latent variables (decision-making styles, cognitive flexibility, and personality traits), the two first are cognitive variables whereas personality traits are intrinsic to individuals.



**Figure 1.** Theoretical Model

Source: developed by the authors.

In the relationships presented, task performance is expected to be understood based on the proposed variables, and current literature is expected to advance through the joint analysis of cognitive variables and personality traits.

### 3. Methodological procedures

A survey was conducted with the population of accounting experts. The lists of accounting experts were taken from the National Registry of Experts of the Federal Accounting Council (CNPc, 2020) and professional associations. With the study population established, a structured questionnaire developed on Google Forms was sent via email to 3,200 accounting experts from November 9th to December 2020. The final sample was composed of 259 respondents, which corresponds to 8.09% of the population.

The profile of respondents indicates that 71.4% were men aged 55+ years old. Regarding education, 62.9% of the respondents reported a specialization. One aspect draws attention regarding experience as an accounting expert; despite the prevalent age group not being young, 30.9% of the respondents reported an experience from 1 to 5 years in the field. Thus, demographic data suggest that the respondents meet the conditions necessary to answer the survey.

The study instruments (Appendix A) were extracted from previous studies investigating one or more of the constructs object of this investigation. A five-point Likert scale was used to rate all the statements, regardless of the original scale, though the initial semantics of each instrument's limits were maintained.

An instrument developed by Scott and Bruce (1995), General Decision-Making Style Inventory (GDMS), was used to capture each of the five decision-making styles (dependent, avoidant, rational, intuitive, and spontaneous). The original instrument contains 25 statements rated on a five-point Likert scale. When Löbler, Reis, Nish and Tagliapietra (2019) validated it to the Brazilian context, however, the number of statements was reduced to 19, and internal consistency (Cronbach's alpha) of 0.624 was obtained.

Cognitive flexibility was investigated using an instrument proposed by Martin and Rubin (1995). It measures the individuals' ability to integrate knowledge and actions related to problem-solving. There are four statements for each of the three dimensions of flexibility (attention, representational, and response). These statements were initially rated on a six-point Likert scale ranging from 1 (totally disagree) to 6 (totally agree), but a five-point Likert scale was adopted in this study.

The instrument developed by Gosling, Rentfrow and Swann (2003) was used to analyze personality traits. They modeled their questionnaire on the descriptors of the big-five instruments proposed by Goldberg (1992). It captures five of the main personality traits consolidated in the literature and comprises ten statements, two for each dimension, rated on a seven-point Likert scale. In this study, we agreed to adopt a five-point Likert scale.

Finally, task performance was verified using an instrument designed by Kathuria and Davis (2001) and adapted by Mahama and Cheng (2013). It was originally composed of four statements rated on a five-point Likert scale ranging from 1 (not satisfied) to 5 (very satisfied).

For descriptive statistics and hypothesis testing, the partial least squares structural equation modeling (PLS-SEM) was performed using Smart PLS, version 3. This method can be defined as a set of techniques that simultaneously examines a group of theoretical relationships between one or more independent variables and one or more dependent variables (Hair Jr., Hult, Ringle & Sarstedt, 2014). It is suitable to model complex relationships with multiple dependence and independence relationships between latent variables (Hair Jr. et al., 2014).

## 4. Descriptions and Analysis of Results

### 4.1 Measurement Model

In structural equation modeling, data are analyzed in two stages. Confirmatory factor analysis is performed in the first stage to verify covariance between latent variables, which results in the measurement model (Anderson & Gerbing, 1988; Bido & Silva, 2019). The second stage consists of a structural model that reflects the adjustments necessary to optimize the model.

The model's reliability and discriminant validity was analyzed in the measurement model. Discriminant validity was based on cross-loading verification, which indicates whether the values of the original latent variables' largest loadings are larger than the remaining (Chin, 1998). In addition, criteria proposed by Fornell and Larcker (1981) were used to verify whether the square roots of the average variance extracted (AVE) of each construct were larger than the constructs' correlations.

Table 1 presents the statistical values of the variables considered in the model's robustness analysis, such as Cronbach's alpha, rho\_A, composite reliability, R<sup>2</sup>, and average variance (AVE).

Table 1

**Measurement Model**

<b>Panel A - Without excluding indicators</b>					
<b>Variables</b>	<b>Cronbach's alpha</b>	<b>rho_A</b>	<b>Composite reliability</b>	<b>R<sup>2</sup></b>	<b>Average variance extracted (AVE)</b>
Decision-making styles	0.712	0.785	0.112	0.187	0.195
Cognitive flexibility	0.730	0.759	0.792	0.159	0.252
Personality traits	0.681	0.718	0.744	0.326	0.252
Task performance	0.786	0.813	0.862	0.327	0.613
<b>Panel B - Excluding indicators</b>					
<b>Variables</b>	<b>Cronbach's alpha</b>	<b>rho_A</b>	<b>Composite reliability</b>	<b>R<sup>2</sup></b>	<b>Average variance extracted (AVE)</b>
Decision-making styles	0.742	0.769	0.749	-0.127	0.289
Cognitive flexibility	0.730	0.759	0.792	0.199	0.252
Personality traits	0.681	0.718	0.744	0.344	0.252
Task performance	0.786	0.813	0.862	0.317	0.612

Source: Study's data

Panel A in Table 1 shows that the measurement model initially presented some values below the minimum statistical significance suggested in the literature, that is, Cronbach's alpha and composite reliability with loadings <0.7 (Hair Jr. et. al, 2014), and AVE values <0.50 (Henseler, Ringle & Sinkovics, 2009). Bido and Silva (2019) recommend excluding indicators with lower loadings. To preserve the constructs' content validity, however, we opted for excluding the lowest possible number of indicators, even though AVE did not reach the desired statistical significance.

Panel B in Table 1 shows that Cronbach's alpha presented a significant improvement for decision-making styles but not for personality traits. In turn, the composite reliability for decision-making styles started presenting statistical significance. Eliminating six statements (10, 12, 13, 14, 16, and 19) from the cognitive flexibility construct resulted in an insignificant increase in AVE though. Thus, it does not harm the model's reliability, but it is a restriction.

Hence, in the second stage of the statistical analysis, we considered the situation in which six indicators were excluded.



## 4.2 Structural Model

Table 2 presents the statistical values of the data analyzed for the structural model, considering the relationships proposed in the study's hypotheses.

Table 2

### Descriptive statistics

	Hypotheses	VIF	Original sample	Standard deviation	t-value	p-value
Decision-making styles → Task performance	H <sub>1</sub> (-)	1.286	-0.127	0.061	2.082	0.037
Cognitive flexibility → Task performance	H <sub>2</sub> (+)	1.662	0.199	0.068	2.915	0.004
Personality traits → Task performance	H1(+)	1.749	0.344	0.078	4.422	0.000

Legend: Values of  $p \leq 0.05$ ; VIF:  $\leq 2$ ; Standard deviation  $\leq 5$

Source: Study's data

The descriptive statistics presented satisfactory significance for the relationships analyzed, in which VIF values showing collinearity of data are below 2, the standard deviation is considered low, and p-values are significant at  $\leq 0.05$  level. Also, note that decision-making styles are negatively related to task performance while the remaining relationships are positive, as expected.

## 4.3 Discussion of Results

The literature provides theoretical support for the construct task performance to be analyzed under three domains: task performance, contextual performance, and counterproductive behavior at work (Sackett & Lievens, 2008). This study's focus was on task performance though, which is linked to behaviors that contribute to the production of a good or service.

Hypothesis H<sub>1</sub> was negatively related to decision-making styles and task performance with  $p=0.037$ , significant at 0.05, i.e., the hypothesis was rejected. The characteristics of subjectivity and individuality (Harren, 1979) present in the perception of tasks and decision-making (Sohail, 2013) may be a complexity factor. Additionally, the self-regulation factor, that is, the ability of an individual to maintain a stable pattern of decisions over time (Löbner et al., 2019; Thunholm, 2004), not measured in this study, may contribute to a negative relationship.

Thunholm (2004) notes that further studies addressing the relationship between decision-making styles and task performance on real-life decision-making at work are needed. Unfortunately, this relationship could not be analyzed in this study, but the results indicate a gap in the literature. This is magnified in the forensic field because the work is not standardized, and each expert establishes the methodology that better adapts to the object of investigation, which may impact task performance.

Hypothesis H<sub>2</sub> was confirmed for the sample analyzed, with a  $p\text{-value}=0.004$ , which supports the assumption that cognitive flexibility is positively related to the task performance of forensic accounting experts. The need for accounting experts to adapt to the most diverse work strategies influences task performance.

This inference is supported by Martin and Rubin (1995), who emphasize that cognitive flexibility is the ability of individuals' consciousness to recognize the options and alternatives available, be willing to be flexible and adaptable, and have self-efficacy in being flexible. Thus, it may improve the decision-making process and lead individuals to adapt to the task (Laureiro-Martínez & Brusoni, 2018).

Hypothesis H<sub>3</sub> was accepted considering that a positive statistical relationship was found for the relationship between personality traits and the task performance of forensic accounting experts, with a p-value=0.000. This result is consistent with Gridwicha, Kulwanich, Piromkam and Kwanmuangvanich (2020), who used structural equation modeling and found a positive statistical relationship between personality traits and job performance.

## 5. Final Considerations

This study analyzed the effects of decision-making styles, cognitive flexibility, and personality traits on the task performance of forensic accounting experts. The results show that task performance is of complex measurement that may, in addition to economic rationality, be explained by behavioral variables, such as those considered in this study.

Additionally, it contributes to the literature by showing that one needs to expand the scope of analysis of task performance beyond positivist approaches; that is, one cannot assume that individuals improve their performance solely by rational work commands. Therefore, this study's results open up possibilities for investigations and encourage a search for new approaches and constructs to explain behaviors related to individuals' task performance.

This study also presents practical contributions as it considers behavioral aspects in empirical research that may affect task performance among forensic accounting experts. Identifying the effects of behavioral factors on task performance may contribute to select and nominate experts who are apt to present expert reports more adherent to the object of investigation and more efficient in promoting the balance of justice.

Therefore, considering Frezatti's (2020) influences and mentioning the importance of the well-being research should generate in the lives of people, this study was intended to find behavioral answers to understand decision-making and reduce bias in the work of forensic accountants. Parsimony is necessary when making inferences though, considering that subjective measures may lead individuals to interpret questions differently (Kahneman & Krueger, 2006).

Regarding this aspect, it is also essential to consider the restrictions of a self-report questionnaire (Skinner, 1978), considering we cannot identify whether the items chosen by the respondents represent their actual behavior or a socially desirable behavior (Tracey, 2016).

Another bias of self-reporting tools is acquiescence, which is a tendency of individuals to choose items without adequately analyzing their content (Zanon, Lessa & Dellazzana-Zanon, 2018). Definitive responses may not be found in the first scientific attempt (Frezatti, 2020), however, so that this study is not an end in itself but a starting point to support future research.

Finally, the analyses performed here do not allow for the generalization of all tasks performed in the forensic field, which suggests the need for future studies to analyze the performance of specific tasks and the relationship between forensic accounting standards, the professional's methodological choices, and judgment expectations, considering that even if a forensic accountant follows legal guidelines, his/her report may not meet the object of investigation. Additionally, in-depth research and case studies or experiments can be relevant to investigate this subject.

## Appendix A – Study's Instruments

### Personality Traits (Gosling, Rentfrow & Swann, 2003)

Please indicate for each of the following statements the extent to which you agree or disagree with the pair of characteristics that apply to you, considering a scale from 1 (strongly disagree) to 5 (strongly agree).

1. I see myself as extraverted, enthusiastic.
2. I see myself as critical, quarrelsome.
3. I see myself as dependable, self-disciplined.
4. I see myself as anxious, easily upset.
5. I see myself open to new experiences, complex.
6. I see myself as reserved, quiet.
7. I see myself as sympathetic, warm.
8. I see myself as disorganized, careless.
9. I see myself as calm, emotionally stable.
10. I see myself as conventional, uncreative.

### Decision-making styles (Scott & Bruce, 1995; instrument validated in Brazil by Löbner, Reis, Nishi & Tagliapietra, 2019)

Please indicate for each of the following statements concerning how an individual makes important decisions, the extent to which you agree or disagree, considering a scale from 1 (strongly disagree) to 5 (strongly agree).

1. I often need the assistance of other people when making important decisions.
2. I rarely make important decisions without consulting other people.
3. If I have the support of others, it is easier for me to make important decisions.
4. I use the advice of other people in making my important decisions.
5. I like to have someone steer me in the right direction when I am faced with important decisions.
6. I postpone decision-making whenever possible.
7. I often put off making important decisions.
8. I generally make important decisions at the last minute.
9. I put off making decisions because thinking about them makes me uneasy.
10. I make decisions logically and systematically.
11. My decision-making requires careful thought.
12. When making a decision, I consider various options in terms of a specified goal.
13. I explore all of my options before making a decision.
14. When making decisions, I rely upon my instincts.
16. When making a decision, I trust my inner feelings and reactions.
17. I generally make snap decisions.
18. I often make decisions on the spur of the moment.
19. I make quick decisions.

**Cognitive Flexibility** (Martin & Rubin, 1995)

Please indicate for each of the following statements the extent to which they represent your beliefs and feelings about your behavior, considering a scale from 1 (strongly disagree) to 5 (strongly agree).

1. I can communicate an idea in many different ways.
2. I avoid new and unusual situations.
3. I feel like I never get to make decisions.
4. I can find workable solutions to seemingly unsolvable problems.
5. I seldom have choices when deciding how to behave.
6. I am willing to work at creative solutions to problems.
7. In any given situation, I can act appropriately.
8. My behavior is a result of conscious decisions that I make.
9. I have many possible ways of behaving in any given situation.
10. I have difficulty using my knowledge on a given topic in real-life situations.
11. I am willing to listen and consider alternatives for handling a problem.
12. I have the self-confidence necessary to try different ways of behaving.

**Task performance** (Kathuria and Davis, 2001, adapted by Mahama and Cheng, 2013)

Please indicate for each of the following situations your level of satisfaction with your performance at work, considering a scale from 1 (not satisfied) to 5 (very satisfied).

1. Accuracy of the work performed.
2. Amount of the work performed.
3. Quality of the work performed.
4. Operational efficiency.

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# Guidelines for Authors

## 1. Paper Submission Guidelines

To submit articles to the *Journal of Education and Research in Accounting* – REPeC authors should follow the standards and criteria set by REPeC. From January 2013, the guidelines of the American Psychological Association (APA) with regard to citations and references should be followed. Submissions not complying with the standards will be rejected.

Articles submitted to the journal must be original, i.e., cannot have been published or submitted to another journal.

Articles may be written in Portuguese, English, with at least 5,000 and maximum 9,000 words, including tables, figures, notes and references. A maximum of 5 (five) authors are allowed per article. All papers accepted will be translated and published in two languages: Portuguese and English.

Articles containing tables or figures, they [the tables and figures] should be in a format that allows them to be edited. In case some of these Figures or Tables have been imported from other programs such as Excel, Power Point etc., the source file must also be sent as Supplementary File.

Do not use expressions like *id.*, *ibid.*, *op. cit.*, *loc. cit.* and the like, or reference notes and footnotes. Notes at the end of the text are acceptable, but should be avoided.

The submission of articles should be done electronically, through the [www.repec.org.br](http://www.repec.org.br) website. At the end of the submission an electronic message will be sent by e-mail, confirming receipt of the article.

## 2. Content and Formatting of Papers

At the moment of submission, the articles should contain:

- The **title** in the language of origin of the article (Portuguese or English) without identifying the author(s);
- An **abstract** written in the language of origin of the article (Portuguese or English) with at least 150 and at most 200 words, single space between lines, in four paragraphs containing the following elements, highlighted: **Objective, Method, Results and Contributions**. At the end of the abstract should be placed **three to five** keywords;

**Objective:** this study was aimed at investigating the relevance of accounting education and research for the growth of the Brazilian economy during the first decade of the 21st century.

**Method:** to collect the data, a structured questionnaire was used, elaborated based on the relevant literature. The questionnaire was tested and applied to a sample of Brazilian accountants and businessmen during 2017. In the analysis of these data, content analysis was applied and statistical tests were used to establish relations between the answers obtained.

**Results:** the main findings of this study indicate that the expansion of accounting education and research in Brazil was essential for the growth of the economy, according to the respondents' perception, despite the impression that accountants and businessmen need to make better use of the accounting information.

**Contributions:** from the academic viewpoint, the evidences from this research contribute to fill of an important existing gap in the Brazilian literature. What the market is concerned, they contribute by providing evidence that, despite its perceived relevance, its users need to make better use of the accounting information.

**Key words:** Education; Research; Accounting.

- The article itself, written in Portuguese or English, with at least 5,000 and at most 9,000 words, including tables, figures, notes and references.
- The pages of the articles should be properly numbered in the upper right corner, typed with Word for Windows, under the following conditions:
  - A4 paper (210 x 297 mm);
  - Times New Roman, size 12;
  - Spacing: single;
  - Paragraph input: 1.25;
  - Margins: 3cm top, 2cm bottom, 3cm left, 2cm right;
  - Tables and figures in Times New Roman, size 10;
  - Citations and references must comply with current standards of the APA (American Psychological Association).

### 3. Tables and Figures<sup>1</sup>

Tables and figures should be used in articles whenever their information make text comprehension more efficient, without repeating information already described in the text.

#### 3.1 Tables

The table should usually show numeric or textual information organized in an orderly exposition of columns and rows. Any other statement should be characterized as textual figure.

The table should be displayed with its information visible and sufficient for their understanding and should be formatted as follows:

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<sup>1</sup> Most of these guidelines were adapted from the Manual for Submissions of the *Revista de Administração Contemporânea* – RAC, available at [www.anpad.org.br](http://www.anpad.org.br).

Table editor	Word for Windows 97 or superior. In case authors have drawn their tables in Microsoft Excel or in a similar program, please remake the tables using the feature in Word.
Font	Times New Roman, size 10.
Line spacing	Simple.
Spacing before and after paragraphs	3 pt.
Table colors	Use only black and white (grayscale).
Title	The table title must be brief, clear and explanatory. It should be placed above the table, in the top left corner, and on the next line, just below the word Table (with a capital initial), followed by the number that designates it. The tables are presented with Arabic numerals in sequence and within the text as a whole. Eg: Table 1, Table 2, Table 3, and so on.
Citation of tables	When citing tables in the text, type only the number referring to the table, for example Table 1, Table 2, Table 3 and so on. (the word 'Table' should be presented with the first letter capitalized). Never write 'table below', 'table above' or 'table on page XX' because the page numbers of the article may change while formatting.
Table notes	The font used in the notes of the table should be Times New Roman, size 10, single spaced. The notes should be described in the footnote of the table, and they serve to indicate the Source of the information of the table, and other information important to understanding the table.

### 3.2 Figures

The figure should show a flow chart, a chart, a photograph, a drawing or any other illustration or textual representation.

The figure should be displayed with its information visible and adequate for its understanding, and should be formatted as follows:

Font	Times New Roman, size 10.
Figure colors	Use only black and white (grayscale).
Format	Figures should be submitted in an editable format.
Title	It explains the figure concisely, but discursively. The title should be placed under the figure and numbered with Arabic numerals in sequence, preceded by the word Figure (with initial capital). Eg: Figure 1, Figure 2, Figure 3, etc. After the title, any other information necessary for clarification of the figure or source must be added as a note.
Captions	The caption is the explanation of the symbols used in the figure and must be placed within the limits of the figure.
Size and proportion	Figures must fit the dimensions of the journal. Therefore, a figure should be drawn or inserted into the article so that it can be reproduced in the width of a column or page of the journal to which it will be submitted.
Citations in the main text	When citing a figure in the text type only the number referring to the figure, e.g. Figure 1, Figure 2, Figure 3 and so on. (the word 'Figure' should be presented with the first letter capitalized). Never write 'figure below' figure above ', or even 'figure on page XX' because the page numbers of the article can be changed during formatting.

## 4. Citations and References

For the full version of the standards of citations and references according to APA (American Psychological Association), access <http://www.repec.org.br/index.php/repec/article/view/1607/1237>.