

THE SUFFICIENCY EXAM IN THE PERCEPTION OF ACCOUNTING STUDENTS

JOELSON VISCOVINI DA SILVA

Universidade do Estado de Mato Grosso. Address: Rua Guanandi, 02 | Santos Dumont | 78211-395 | Cáceres/MT | Brazil.

<http://orcid.org/0000-0002-9753-7896>

joelson_viscovini2015@hotmail.com

ALMIR RODRIGUES DURIGON

Universidade do Estado de Mato Grosso. Address: Rua Marcílio Dias, 243 | São Luiz | 78205-155 | Cáceres/MT | Brazil.

<http://orcid.org/0000-0002-3460-2048>

ardurigon@edu.unisinos.br

JULIANA VITÓRIA VIEIRA MATTIELLO DA SILVA

Universidade do Estado de Mato Grosso. Address: Rua dos pescadores, 06 | Cavahada | 78216-110 | Cáceres/MT | Brazil.

<http://orcid.org/0000-0002-7295-6541>

julianamattiello@unemat.br

RUBENS DOS SANTOS

Universidade do Estado de Mato Grosso. Address: Rua dos Mutuns, 261 | Santa Isabel | CEP 78205-750 | Cáceres/MT | Brazil.

<http://orcid.org/0000-0003-4608-6279>

rubens@unemat.br

ABSTRACT

The Sufficiency Exam is defined by the Federal Accounting Council (CFC) as an equalization test, designed to prove the achievement of average knowledge, according to the syllabus developed in the Bachelor of Science courses in Accounting. Considering this context, this article aims to identify students' perceptions about taking the sufficiency test. The study is classified as an exploratory-descriptive research, with data collection performed by means of a questionnaire applied by the researchers in person, with the participation of 188 undergraduate students in Accounting Sciences (about 58.75% of the population), from a public university of the State of Mato Grosso, in 2019. Data have been treated with the following statistical techniques: descriptive statistics (mean, median, frequency, maximum, minimum and sum) and factor analysis. The research results indicate that the importance and need to apply the sufficiency test for the accounting profession is considered most valued by the students. In the factor analysis, it became evident that professional valorization has a greater weight in the students' perceptions (88.15%), followed by the academic environment with 6.39%. We come to the conclusion that the Sufficiency Exam, at a students' perception, is an instrument that values the accounting profession, however it is necessary that teachers discuss this theme more punctually in classroom.

Submission on 11/1/2019. Review on 3/13/2019. Accepted on 3/31/2020. Published on 5/25/2020.

Keywords: Exam. Sufficiency. Perception. Students. Accounting.

1 INTRODUCTION

In Brazil, in order to dedicate oneself to accounting profession, the bachelor must undergo the professional licensing exam, known as the Sufficiency Examination of the Federal Accounting Council (CFC), which is a necessary condition for the exercise of the profession. Its mandatory nature has been instituted in 1999, through Resolution CFC No. 853 (CFC, 1999), being suspended in 2005, by the Public Ministry, claiming that this requirement had no legal support. With the suspension, the bachelors returned to request their registration without the need to submit to the exam. Only in 2010 has CFC achieved the return of professional licensing through Law No. 12,429 (2010), turning the approval of Bachelor of Science in Accounting a mandatory element for obtaining registration and, thus, being able to exercise the profession of accountant.

In the literature on occupational licensing exam, there are two opposite views on the theme. The first is that councils representing the professions argue that the purpose of the exam is to protect society from bad professionals (Pagliero, 2011). The second assumes that the bodies representing the profession act in their own interest (Stigler, 1971; Becker, 1986; Peltzman, 1984, Graddy, 1991), such as creating market reserves, favoring those already working in the profession (Thornton, Timmons & Deantonio, 2017).

Another issue that comes up for discussion when the sufficiency exam is addressed is related to the students' approval rate. In this sense, studies point to a significant decrease in approvals of the sufficiency test stand out, exploring the variables that influence the result of the exam. According to Sprenger, Kronbauer, Silvestre, Azevedo and Alves (2018), while addressing the factors that explain the average pass rate of the sufficiency test by the federal unit, they state that the national pass rate is low, corresponding to 35%. For Barroso (2018), the positive result of graduates in the professional evaluation instrument is directly related to the attributes that the institutions present, such as good performance in the National Student Performance Exam, better evaluations in the General Course Index (IGC), belonging to a public university located in major Brazilian centers, to be mentioned in the University Ranking of Folha and to have graduate programs in Accounting. These characteristics possess statistical significance and positive estimated coefficient, which explains, in a way, the performance of Higher Education Institutions (HEIs) in the CFC exam.

In this direction, the present investigation brings some considerations about the exam of sufficiency in the perception of students of Accounting Sciences guided by the following question: what is the perception of the students about the accomplishment of the sufficiency exam? The goal of this research is to identify the students' perceptions about taking the sufficiency test. Analyzes whose objective is to appreciate the perception are significant, not to express the right or wrong opinion, but to understand what certain groups think about the investigated subject (Rabuske, 1995).

The present study gets justified by contributing with information to the accounting profession about the attributes that are valued by the students and, that way, when getting to know these points, provoke reflections in favor of the improvement of the referred exam as well as allowing discussions at a student scope. This study differs from others by the way it explores the students' conception about such an instrument, since, by identifying the characteristics most valued by students, it is possible to define the main aspects to be worked on by CFC and teachers, contributing to the issues most considered by the students.

In addition, the research is complementary to several others carried out on the subject, with emphasis on Peterson and Reider (2002), Santos and Andrade (2016), Galvão (2016), Miranda, Araújo and Matos Miranda (2017), Sprenger *et al.* (2018), Morikawa (2018), Barroso (2018) and, Souza, Barreto and Gomes Filho (2019).

After explaining these initial considerations and, in order to achieve the proposed goal, this article, in a sequence, presents the theoretical framework, followed by the presentation of the methodology used, data analysis and final considerations and, lastly, references.

2 THEORETICAL FRAMEWORK

2.1 Professional licensing exam

Licensing exams are instruments used by professional councils in order to grant authorization of practicing the profession and are common among doctors, lawyers and teachers (Morikawa, 2018). Morikawa (2018) states that the main goal of professional licensing is protecting consumers from information asymmetry inherent to professions, because in the service sector, where information asymmetry between service providers and users is serious, many occupations are regulated by the licensing system. Information asymmetry occurs when the professional knows the skills, but the consumer is not aware of QoS (Cox & Foster, 1990).

In this sense, in Brazil, according to the CFC (2015), the goal of the exam is to prove the achievement of average knowledge, according to the syllabus developed in the Bachelor's degree in Accounting. For Madeira, Mendonça and Abreu (2003) the licensing exam, in addition to providing professional qualification, also serves as an instrument to support undergraduate courses in Accounting in its evaluation and monitoring processes, because access to the tests allows for checking the required contents and comparing them with those taught in the classroom.

The models built by Akerlof (1970) and Leland (1979) portray sufficiency tests as an important and necessary barrier for entry and, mainly, as a sign of quality, since passing the professional accounting licensing exam is a necessary condition for becoming an accountant, but not enough, due to other requirements (Grant, Ciccotello & Dickie, 2002).

According to Thornton *et al.* (2017), licensing exams protect society's interest from incompetent or disrespectful professionals, in addition to ensuring a high level of service quality. In this context, CFC (2007) states that, as a representative body of the accounting class in Brazil, by regulating the exam of sufficiency as a professional licensing instrument, it defends the public interest, as it fulfills its role of selecting bachelors who have at least average knowledge and, in its conception, guarantees the society quality services, safer, more accurate accounting information, and ethical professionals, that is, who offer more qualitative work.

2.2 Related studies

In order to support the present study, a bibliographic research has been carried out in order to identify the occurrence of specific publications on professional licensing exams. It is understood that this makes possible knowing the treatment that other researchers have given to the subject.

Databases studies have been consulted, such as Capes journals portal, SciELO, Science Direct and EBSCOhost platform. The research also had access to papers on the exam of sufficiency, presented at Brazilian congresses and consultation to collections of theses and dissertations from universities. The consultations have been carried out using the following expressions: “*professional licensing exams*” AND “*accounting*” AND “*sufficiency exam*” OR “*exames de licenciamento profissional*” AND “*contabilidade*” AND “*exame de suficiência*”.

Similar study initiatives are common in the professional licensing literature. Based on the carried out literature review, some national and international developed studies have been found. Figure 1 shows the studies most directly related to the object of this research.

Author	Title	Objectives
Peterson and Reider (2002)	Perceptions of computer-based tests: a focus on the CFM exam	Analyzing computerized tests as a viable alternative to paper and pencil exams, reporting the perceptions of candidates to <i>Certified in Financial Management - CFM</i>
Galvão (2016)	Accountants' perception of the CFC sufficiency test	Checking the accountants' perception of the sufficiency test.
Santos and Andrade (2016)	Sufficiency exam under the perspective of accounting professionals who had articles published in Qualis B3 magazines	Analyzing the opinion of authors who published articles in national journals, with Qualis B3, on the sufficiency test.
Miranda, Araújo and Miranda (2017)	The accounting sufficiency exam: an assessment from the researchers' perspective	Identifying the perception of teachers and professionals about the exam of sufficiency for accounting profession, as well as evaluating its current model.
Morikawa (2018)	Occupational licenses and labor market results in Japan	Present empirical evidence on the relationship between occupational licenses and labor market outcomes in Japan.
Souza, Barreto and Gomes Filho <i>et al.</i> (2019)	Teacher's perception of the accounting sufficiency exam: a study in a higher education institution in the municipality of Icó, Ceará - Brazil	Analyzing the importance of accounting and of the exam of sufficiency and the main difficulties presented by the students under a teaching perspective of an HEI.

Figure 1. Related national studies

Source: Research data (2019).

Research by Peterson and Reider (2002) has been carried out with 200 candidates who were successful in taking the CFM (Certified in Financial Management) exam, and 200 candidates who presented unsatisfactory results. The results were positive with the computerized exam, however, the authors state that the test is a necessary evil for those seeking professional certification.

The study by Galvão (2016), carried out with accountants registered within the Regional Accounting Councils of the federative units in Brazil, mainly resulted in the confirmation of the need for a better adaptation of proof to business reality. In addition, the author has found that 89.55% are in favor of continuing the exam.

Santos and Andrade (2016) concluded that, for the most part, the teachers have not adapted their classroom with the return of the exam, considering their contents updated with relation to those charged in the test, as well as they have not performed specific preparation of students for its realization.

As for Miranda *et al.* (2017), in their studies, have had as target audience researchers and professionals who published in congresses and journals in the accounting area, about 1185 respondents, corresponding to a return of 34.8% of the sent base. The research concluded that, in general, the questions applied in the exam were considered average, but a total of 70% of the professors usually use them, to a greater or lesser degree, in their didactic activities.

For Morikawa (2018), the possession of occupational credentials, particularly licenses, has positive associations with the link between the labor market and the salary of individuals. On the other hand, the occupational licensing system may negatively affect the efficiency of the market through monopoly rents.

According to Souza *et al.* (2019), by means of a research carried out with the professors of the Accounting Sciences course of a Higher Education Institution, the sufficiency exam is necessary and contributes significantly in professional life, functioning as a filtering instrument, thus allowing for the establishment of graduates who prepare themselves effectively as students.

Given the above, it is believed that the studies carried out by Peterson and Reider (2002), Santos and Andrade (2016), Galvão (2016), Miranda *et al.* (2017), Morikawa (2018) and, Souza *et al.* (2019), who addressed the professional licensing exams, may bring complementary contributions to this research, both in construction of the theoretical framework and in analysis.

3 METHODOLOGY

This study is classified as exploratory-descriptive research, since it seeks to describe the functions of the sufficiency exam in the perception of students of the undergraduate course in Accounting. For Marconi and Lakatos (2010) exploratory-descriptive research are studies that aim to completely describe a certain phenomenon.

Before the application, the research instrument has been subjected to a pre-test carried out with researchers on the study and who were not part of the selected population. In this phase, the scope and understanding of the assertions have been evaluated, considering that the research instrument has been developed based on the established literature on theoretical framework and validating the instrument with adaptations made, based on the suggestions pointed out in the pre-test. Main changes resulting from the pre-test were: (1) readjustment of the items that made up the blocks of the statements; and (2) textual redefinition of some statements for a better understanding of the respondent.

The statements have been answered on a 5-point *Likert* scale. The target audience of the research was composed of undergraduate students in Accounting Sciences, from a public university, located in the countryside of the State of Mato Grosso. The study population consisted of 320 students. However, a total of 188 questionnaires have been received as an answer, an approximately 58.75% return, as shown in Table 1.

Table 1
Questionnaire return per semester

Semester	Frequency	Percentage
1 st semester	36	19.1%
2 nd Semester	22	11.7%
3 rd Semester	29	15.4%
4 th Semester	29	15.4%
5 th Semester	24	12.8%
6 th Semester	10	5.4%
7 th Semester	19	10.1%
8 th Semester	19	10.1%
Total	188	100%

Source: Research data (2019).

Data collection has been carried out through research applied personally by the researchers during the week between September 23 and 27, 2019. The research instrument has been divided into two parts and adapted by the authors based on the found literature and arranged in the theoretical framework. In the first part, the students answered the following information: a) gender, b) age and c) term. The second section consists of statements about the sufficiency test (see Table 2).

Table 2
Synthesis of construction of the research instrument

1 st part – Participant's profile		
Participants' profile	Sex	
	Age	
	Current term	
2 nd part - Students' perception of Sufficiency Exam		
The Sufficiency	Its application is important and necessary for the	Figueiredo (2017).

Exam and the accounting profession	accounting profession.	
	Values the accounting profession.	Galvão (2016); Miranda <i>et al.</i> (2017)
	Raises the quality of the profession.	Galvão (2016); Miranda <i>et al.</i> (2017)
	Helps the accounting profession to keep up with the demands of the globalized market.	Galvão (2016); Miranda <i>et al.</i> (2017)
	Contributes to the evolution of the accounting profession.	Galvão (2016)
The Sufficiency exam and the accounting professional	The Sufficiency Exam is an important tool for the training of accounting professionals.	Santos and Andrade (2016)
	Passing the Sufficiency Exam opens up new opportunities for the accounting professional.	Miranda <i>et al.</i> (2017)
	Ensures more qualified professionals to provide quality services to society	Santos and Andrade (2016); Souza <i>et al.</i> (2016)
	It guarantees professionals with a minimum level of knowledge for the exercise of the profession.	Galvão (2016); Santos and Andrade (2016)
	Directs the education of professionals to serve the public area.	Galvão (2016)
	Directs the education of professionals to serve the private area.	Galvão (2016)
The Sufficiency Exam and teaching of the Accounting course	Passing or not the Sufficiency Exam serves as an indicator of the professional and course performance and quality.	Galvão (2016); Miranda <i>et al.</i> (2017); Santos and Andrade (2016)
	The content presented in the classroom is sufficient to pass the Sufficiency Exam.	Miranda <i>et al.</i> (2017)
	Teachers include questions of the Sufficiency Exam in academic activities.	Santos and Andrade (2016)
	The subject of Sufficiency Exam is discussed frequently within the classroom	Miranda <i>et al.</i> (2017)

Source: Prepared by the authors (2019).

In the data analysis process, we used SPSS® *software* version 22.0. The applied statistical techniques were: descriptive statistics (mean, median, frequency, maximum, minimum and sum) and factor analysis. The use of descriptive statistics is relevant to the research, since it makes it possible to “understand the behavior of the data to identify trends, variability and outliers” (Fávero, Belfiore, Silva & Chan, 2009, p. 51). The purpose of factor analysis favors “synthesizing information from a large number of variables into a smaller number of variables or factors” (Hair Jr, Anderson, Tatham & Black, 2009, p. 388).

Performing the factor analysis, in order to verify the grouping of variables for formation of constructs, the *Kaiser-Meyer-Olkin – KMO* tests have been performed, which verifies the adequacy of the sample, *Bartlett's* sphericity test, to identify the correlation between variables, and *Cronbach's Alpha*, for analyzing the internal consistency of the factors found in the factor analysis. At a sequence, the characteristics of the researched sample are presented.

4 RESULTS ANALYSIS

4.1 Profile of respondents

With relation to the surveyed public, students were taken from the undergraduate course in Accounting Sciences at a public university, located in the interior of the State of Mato Grosso, which offers the presential Accounting Science course. Respondents constitute 188 students, of which 63.8% (120) are female and 36.2% (68) are male, as shown in Table 3.

Table 3
Sex

Sex	Frequency	Percentage
Women	120	63.8%
Male	68	36.2%
Total	188	100%

Source: research data (2019)

Regarding age, the vast majority of students are concentrated in the age group between 20 and 25 years old, which shows that it is a course formed by young people, as can be seen in Table 4. The results of this analysis correspond to the work of Nogueira, Nova and Carvalho (2012), who carried out studies investigating the good teacher from the perspective of generation Y, and found that there is the presence of a considerable population that corresponds to this age group in the Courses of Accounting Sciences.

Table 4
Age Group

Age Group	Frequency	Percentage
Up to 20 years old	64	34
Between 21 and 25 years	74	39.4
Between 26 and 30 years	21	11.2
Between 31 and 35 years	11	5.9
Over 35 years	18	9.5
Total	188	100%

Source: Research data (2019).

When asked about the semester they were attending, students enrolled in 1st to 4th semester accounted for 61.60% of the respondents, most of whom were at an initial stage of the course, as shown in Table 5.

Table 5
Course semester

Semester	Frequency	Percentage
1 st semester	36	19.1%
2 nd Semester	22	11.7%
3 rd Semester	29	15.4%
4 th Semester	29	15.4%
5 th Semester	24	12.8%
6 th Semester	10	5.4%
7 th Semester	19	10.1%
8 th Semester	19	10.1%
Total	188	100%

Source: Research data (2019).

After a brief presentation of the respondents' profile, in terms of gender, age group and semester of the course, the resulting data from the analysis on sufficiency test, in the perception of the surveyed students, shall be presented.

4.2 Sufficiency exam: accounting students' perception

Beginning the analysis of the research results, averages of all items of the questionnaire have been determined, as well as their standard deviation, and other measures of descriptive statistics, such as: median, minimum, maximum and sum, as shown in Table 6.

Table 6
Perceptions of students of Accounting regarding the realization of the sufficiency exam

Sufficiency Exam	Average	Standard deviation	Median	Min. Max	Sum
Its application is important and necessary for the accounting profession.	4.30	0.98	5	1 5	809
Values the accounting profession.	4.25	0.99	5	1 5	799
Raises the quality of the profession.	4.18	1.03	4	1 5	786
Values the accounting professional.	4.16	1	4	1 5	782
The Sufficiency Exam is an important tool on formation of the accounting professionals.	4.04	1.09	4	1 5	760
Passing the Sufficiency Exam opens up new opportunities for the accounting professional.	4.04	1.01	4	1 5	760
Ensures more qualified professionals to provide quality services to society	3.93	1.06	4	1 5	739
It guarantees professionals with a minimum level of knowledge for the exercise of the profession.	3.87	1.21	4	1 5	729
Helps the accounting profession to keep up with the demands of the globalized market.	3.79	1.17	4	1 5	714
Passing or not the Sufficiency Exam serves as an indicator of the professional and course performance and quality.	3.75	1.28	4	1 5	706
Contributes to the evolution of the accounting profession.	3.71	0.68	4	1 4	698
Directs the education of professionals to serve the public area.	3.56	1.14	4	1 5	670
Directs the education of professionals to serve the private area.	3.50	1.17	4	1 5	658
The content presented in the classroom is sufficient to pass the Sufficiency Exam.	2.71	1.30	3	1 5	511
Teachers include questions of the Sufficiency Exam in academic activities.	2.49	1.28	2	1 5	469
The subject of Sufficiency Exam is discussed frequently within the classroom	2.47	1.29	2	1 5	466

Source: Research data (2019).

As can be seen in Table 6, *the application of the sufficiency test “is important and necessary for the accounting profession”* (4,30) appears as the first most relevant characteristic, followed by *“valuation”*. When analyzing the characteristics in isolation, it appears that the sufficiency test is important and necessary for the accounting class, as it favors the profession, favors esteem, gives more credibility, raises the quality of services, values the accounting professional, protects the society of bad professionals and, consequently, opens up new opportunities for future accountants. In this sense, Pagliero (2011) explains that entry into many professions depends on passing a sufficiency exam. According to the author, professional councils emphasize that the sole purpose of the licensing exam is to protect the public. For Bolt-Lee and Foster (2003) professionals have got to not only have solid knowledge of Accounting, but also other aspects, developing critical thinking as an integral part of the profession.

The statement “*values the accounting professional*” (4.25) stands out as second relevant characteristic. This variable, considered by the respondents, indicates that performance of the sufficiency test provides valuation of the accounting class, corroborating with the results found in the studies of Galvão (2016) and Santos and Andrade (2016).

For the variable “*the content presented in the classroom is sufficient to pass the Sufficiency Exam*” (2.71), it appears that, among the statements, it is the third lowest average. It is inferred from this data that the way students conceive the content presented by teachers in the classroom is related, even if indirectly, to the difficulties encountered in carrying out the sufficiency test, which may cause an unsatisfactory result.

Attention is drawn to the variables “*questions of the test of sufficiency in academic activities*” (2.49) and “*whether the test of sufficiency is frequently discussed in the classroom*” (2.47). These variables do not appear as relevant characteristics, obtaining the lowest averages, showing disagreement on part of the students. It is understood, that way, that the meaning of these questions may be of one of the items responsible for the high failure rates in that exam, as this result may be due to the students' lack of perception and connection between the contents of the activities, and the subjects applied in the sufficiency test. Such information implies observing that there are no discussions and reflections on the theme among students in the school space, indicating that, for most of them, the concern with the exam tends to start at a late time.

These findings are contrary to those found by Miranda *et al.* (2017). The authors found that the questions applied in the exam were considered average, but about 70% of teachers usually employ them relatively in their didactic activities. Divergence is in the perception of the professors, as they affirm that the questions of the sufficiency exam comprise their academic activities, however, in the perception of the questioned students, in the current research the work carried out in the classroom as a whole does not contemplate the topics covered in the sufficiency test.

According to Bugarim, Rodrigues, Pinho and Machado (2014), despite expectations regarding application, the observed in the presented results was a significant decrease in the levels of passing the CFC exam. Still, according to the author, the chances that the requirement of the sufficiency exam would boost educational institutions in view of improving the quality of their courses, have not come true.

4.2.1 Factorial Analysis

In order to verify the possibility of condensing the information on a measurement scale, we used the factor analysis technique. Regarding the adequacy of the sample, this was measured using the *Kaiser-Meyer-Olkin test (KMO)*, with values above 0.50 being accepted (Maroco, 2003). Associated with this, *Bartlett's* sphericity test has been performed, as it is indicated to verify the correlation between the variables of the scale. This test is statistically significant when it is less than 0.05, since it indicates whether there are sufficient correlations between the variables (Hair Jr *et al.*, 2009; Corrar, Paulo, Dias Filho & Rodrigues, 2011).

In this research, a KMO equal to 0.934 has been found, acceptable in order to proceed with the factor analysis. *Bartlett's* sphericity test was quite significant (Sig. = 0.000) which confirms the existence of a correlation between the variables, as shown in Table 7.

Table 7

KMO and Bartlett tests

<i>Kaiser-Meyer-Olkin</i> measure of sampling adequacy		.934
Sphericity test of <i>Bartlett</i>	Approx. Chi-square	7670.307
	Df	120
		.000

Source: Research data (2019).

After the *KMO* and *Bartlett* tests, factor analysis of all components has been performed, aiming to reduce the variables in a few constructs. In order to perform the factor analysis, Varimax rotation has been employed. From the statistical result, the following factors have been obtained, as shown in Figure 2: (1) professional development and (2) academic environment.

Professional development (0.992)	Academic environment (0.978)
Passing or not the Sufficiency Exam serves as an indicator of the professional and course performance and quality.	The subject of Sufficiency Exam is discussed frequently within the classroom.
Its application is important and necessary for the accounting profession.	Teachers include questions of the Sufficiency Exam in academic activities.
Values up the accounting profession.	The content presented in the classroom is sufficient to pass the Sufficiency Exam.
Raises the quality of the profession.	Directs the education of professionals to serve the private area.
Contributes to the evolution of the accounting profession.	Directs the education of professionals to serve the public area.
The Sufficiency Exam is an important tool on formation of the accounting professionals.	
Values the accounting professional.	
It guarantees professionals with a minimum level of knowledge for the exercise of the profession.	
Ensures more qualified professionals to provide quality services to society	
Passing the Sufficiency Exam opens up new opportunities for the accounting professional.	

Figure 2. Factors, their components and *Cronbach's Alpha*

Source: Research data (2019).

The factors have given rise to the constructs shown in Figure 2. We noticed that the examination of sufficiency in the perception of students of Accounting Sciences is synthesized in two groups: *professional development and academic environment*.

In order to assess the internal reliability of the constructs (factors), *Cronbach's Alpha* test has been performed. Results are shown in Table 9, arranged in parentheses in front of the factor names. Results of this statistical test are accepted when they are greater than 0.7. According to Hair, Babin, Money and Samouel (2005), alpha ranges from 0 to 1, researchers generally consider an alpha of 0.7 as a minimum, although lower coefficients may be acceptable, depending on the research goals.

Table 8 refers to the results found with the factor analysis.

Table 8

Factor Analysis With Varimax Rotation Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization.

Item	Component	
	1	2
Contributes to the evolution of the accounting profession.	.958	
Its application are important and necessary for the accounting profession.	.864	
Values up the accounting profession	.859	
Raises the quality of the profession.	.846	
Values the accounting professional	.807	
The Sufficiency Exam is an important tool on formation of the accounting professionals.	.752	
Ensures more qualified professionals to provide quality services to society.	.743	
It guarantees professionals with a minimum level of knowledge for the exercise of the profession.	.743	
Passing or not the Sufficiency Exam serves as an indicator of the professional and course	.704	

performance and quality.		
Passing the Sufficiency Exam opens up new opportunities for the accounting professional	.702	
Helps the accounting profession to keep up with the demands of the globalized market.	.700	
Teachers include questions of the Sufficiency Exam in academic activities.		.930
The subject of Sufficiency Exam is discussed frequently within the classroom.		.926
The content presented in the classroom is sufficient to pass the Sufficiency Exam.		.885
Directs the education of professionals to serve the private area.		.699
Directs the education of professionals to serve the public area.		.687

Source: Research data (2019).

In this sense, it appears that the two constructs, "*professional development*" and "*academic environment*", present internal reliability with results greater than 0.7. Based on the results of the research, the perception of Accounting students regarding the exam of sufficiency is summarized in Figure 3.

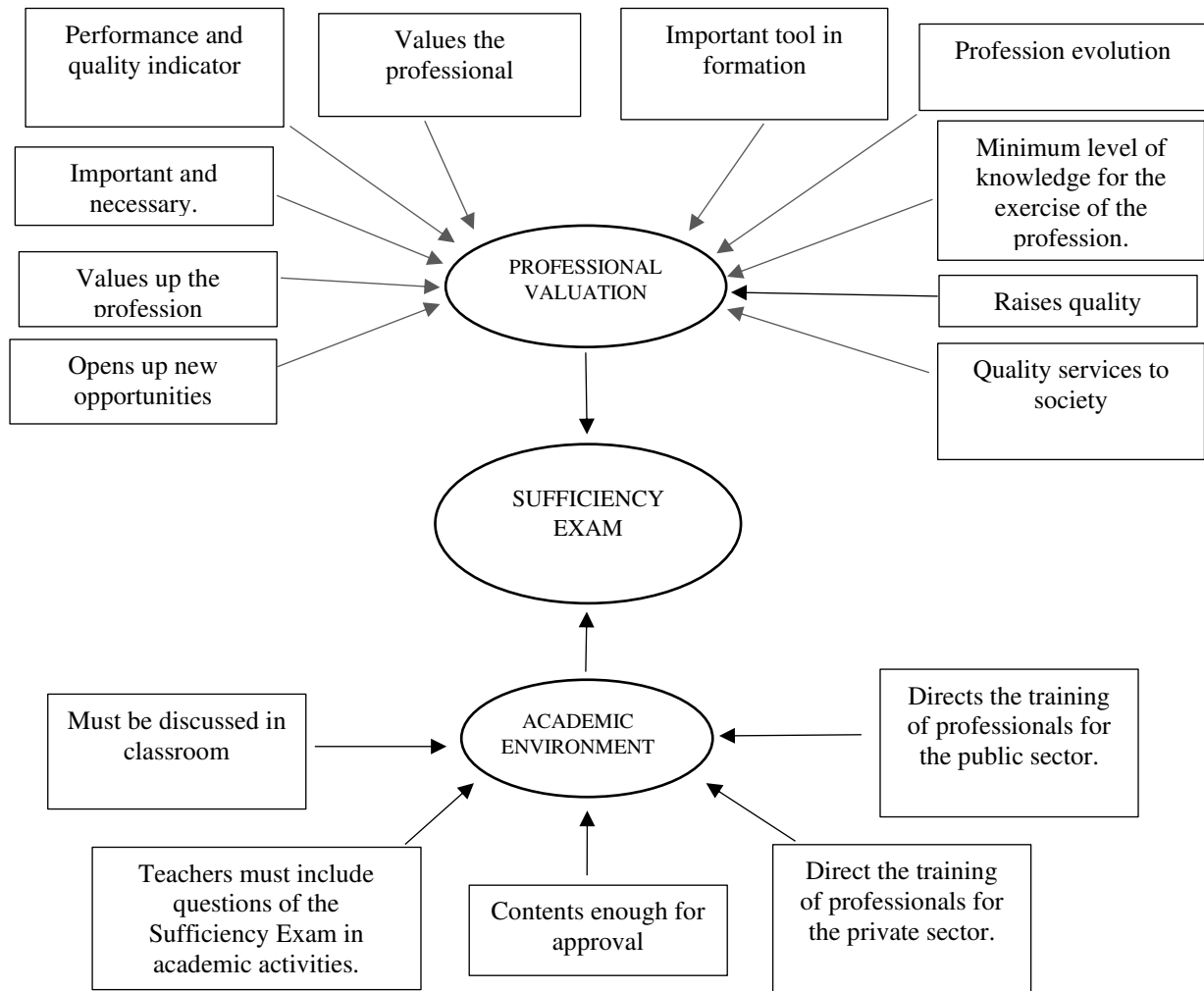


Figure 3. Constructs of perceptions of students of Accounting, regarding the realization of the sufficiency exam

Source: Research data (2019).

In view of the statistical results, found by the factorial analysis, it is possible to verify 02 (two) groups: *Professional Appreciation* (1) and *academic environment* (2) as factors of students' perception for taking the sufficiency exam. Figure 1 makes it possible to understand how these factors are interconnected, when performing the sufficiency test.

We observed that the professional valorization is the factor that explains 88.15% of the accomplishment of the sufficiency exam. This was possible to visualize by means of the factorial analysis, which approximated the factors.

We infer from these results that, in the perception of students of accounting sciences, the profession needs the presence of the sufficiency exam, since it guarantees to the Accounting area the recognition of relevance to society and, for this reason, attributes high value to the characteristic “*professional enhancement*”.

The factor “*Professional Valuation*” means, for society, that professionals in the field who will work in organizations, whether public or private, in addition to being more valued, are more qualified, because the presence of an evaluative instrument enhances professional quality, opens up new employment opportunities, and it proves that the subject accountant has the minimum levels of knowledge for the exercise of the profession. These findings correspond to those found in the studies by Galvão (2016), Santos and Andrade (2016) and Miranda *et al.* (2017);

Another factor that may be understood is in relation to the 6.49% of perception of accounting sciences students, linked to the “*academic environment*”. We observed that the sufficiency exam is a subject that, despite being considered as relevant and significant for the accounting profession, is still little discussed in the academic environment and a greater approach is needed, not as a form of preparation, but an encouragement to the daily practice of combining studies with training and professional performance. Considering both factors (professional valorization and academic environment), together, they explain 94.65% of the sufficiency exam functions, as can be seen in Table 9.

Table 9

Factor Analysis Results

Factors	Initial eigenvalues			Extraction sums of square loading			Square loading rotary sums		
	Total	variance %	cumulative %	Total	variance %	cumulative %	Total	variance %	cumulative %
professional valuation (0.992)	14.10	88.15	88.15	14.10	88.15	88.15	8.19	51.23	51.23
academic environment (0.978)	1.04	6.49	94.65	1.04	6.49	94.65	6.94	43.42	94.65

Source: Research data (2019).

In order to explain the actions of each of these factors in the accounting students' perception, regarding the performance of the sufficiency test, other types of statistical analysis could be used, such as regression, structural equations, among others. However, considering the research restrictions with relation to the number of participating students, and the lack of robust theoretical bases for some factors, it was not possible to go further in this research. That way, it sparks unique research possibilities for future studies.

5 FINAL CONSIDERATIONS

The goal of this research was to identify the students' perceptions about taking the sufficiency test. Throughout the theoretical framework, we sought to present the results of the literature to define the sufficiency test.

As a result of the investigation, when individually analyzed, the perception most valued by students as belonging to the sufficiency exam, the result was that the exam itself is important and necessary for the accounting profession, as it raises the quality of the courses and values the professional. In contrast to these results and with lower averages, according to the students'

perception, there are: teachers that include questions of the exam of sufficiency in academic activities and the subjects of the exam of sufficiency is frequently discussed within the classroom.

In addition, factor analysis has been used to create constructs from the students' perception. Within the results, two constructs have been obtained, contributing to the literature, these being: professional valorization and academic environment. Among these constructs, professional valorization is the one with the greatest weight, representing 88.15% of the sufficiency test, followed by academic environment, with 6.49%. Analyzing the results altogether, it appears that the students' essential perceptions with relation to the exam of sufficiency are linked to the professional valorization and indicators of academic performance.

Considering the limitations of the research, for example, using as sample only an undergraduate course in Accounting Sciences from a public university located in the interior of the State of Mato Grosso, we warn that the results of this research cannot be generalized to other undergraduate courses in Science Accounting. The goal of this work is to understand and clarify that the research findings may contribute to the understanding of the exam of sufficiency in the area of Accounting Sciences, in the students' perception. We suggest that further investigations seek to verify the examination of sufficiency in the perception of teachers, in other undergraduate courses in Accounting, in other regions of Brazil.

REFERENCES

- Akerlof, G. A. (1978). The market for "lemons": Quality uncertainty and the market mechanism. In *Uncertainty in economics* (pp. 235-251). Academic Press.
- Barroso, D. V. (2018). Exame de Suficiência Profissional como indicador da Qualidade da Educação Contábil: Analisando as características das IES e seus índices de aprovação. Dissertação de mestrado, Universidade Federal da Bahia, Salvador, BA, Brasil.
- Becker, G. (1986). The public interest hypothesis revisited: A new test of Peltzman's theory of regulation. *Public choice*, 49(3), 223-234.
- Bolt-Lee, C., & Foster, S. (2003). The core competency framework: A new element in the continuing call for accounting education change in the United States. *Accounting Education*, 12(1), 33-47.
- Bugarim, M. C. C., Rodrigues, L. L., Pinho, J. C. C., & Machado, D. Q. (2014). Análise histórica dos resultados do exame de suficiência do conselho federal de contabilidade. *Revista Contabilidade e Controladoria*, 6(1).
- Conselho Federal de Contabilidade (1999). *Resolução CFC n. 853*. Institui o Exame de Suficiência como requisito para obtenção de Registro Profissional em CRC. Brasília: CFC.
- Conselho Federal de Contabilidade (2007). *Caderno analítico do exame de suficiência: histórico dos resultados*. Brasília: CFC.
- Conselho Federal de Contabilidade (2015). *Resolução CFC n. 1486*. Regulamenta o Exame de Suficiência como requisito para obtenção de Registro Profissional em Conselho Regional de Contabilidade (CRC). Brasília: CFC.
- Corrar, L., Paulo, E., Dias Filho, J. M., & Rodrigues, A. (2011). *Análise multivariada para os cursos de administração, ciências contábeis e economia*.

- Cox, C., & Foster, S. (1990). *The costs and benefits of occupational regulation*. Washington, DC: Bureau of Economics, Federal Trade Commission.
- Fávero, L. P. L., Belfiore, P. P., Silva, F. L. D., & Chan, B. L. (2009). *Análise de dados: modelagem multivariada para tomada de decisões*. Rio de Janeiro: Elsevier.
- Figueiredo, A. E. S., Pederneiras, M. M. M., Saeger, M. M. D. M. T., Silva Filho, G. M. da, & Nascimento, D. J. do (2017). Exame de suficiência profissional na perspectiva de graduandos do Curso de Ciências Contábeis: Um estudo em uma instituição pública de Ensino Superior. *Revista de Contabilidade Dom Alberto*, 6(11), 156-177.
- Galvão, N. (2016). Percepção dos contadores sobre o exame de suficiência do CFC. *Revista Catarinense da Ciência Contábil*, 15(45), 49-62.
- Graddy, E. (1991). Toward a general theory of occupational regulation. *Social science quarterly*, 72(4), 676-695.
- Grant, C. T., Ciccotello, C. S., & Dickie, M. (2002). Barriers to professional entry: how effective is the 150-hour rule? *Journal of Accounting and Public Policy*, 21(1), 71-93.
- Hair Jr, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2009). Tradução: Adonai Schlup Sant 'Anna e Anselmo Chaves Neto. *Análise Multivariada de Dados*, 5.
- Hair, J., Babin, B., Money, A., & Samouel, P. (2005). *Fundamentos de métodos de pesquisa em administração*. Bookman Companhia Ed.
- Lei nº 12.249 (2010). [...] altera os Decretos-Leis nº 9.295, de 27 de maio de 1946, 1040, e 21 de outubro de 1969 [...]. Brasília, DF: Presidência da República.
- Leland, H. E. (1979). Quacks, lemons, and licensing: A theory of minimum quality standards. *Journal of political economy*, 87(6), 1328-1346.
- Madeira, G. J., Mendonça, K. F. C., & Abreu, S. M. (2003). A disciplina teoria da contabilidade nos exames de suficiência e provão. *Contabilidade Vista & Revista*, 14, 103-122.
- Marconi, M. D. A., & Lakatos, E. M. (2010). *Fundamentos de Metodologia Científica* (7a ed.). Rio de Janeiro: Editora Atlas.
- Miranda, C. D. S., Araújo, A. M. P. D., & Miranda, R. A. D. M. (2017). O exame de suficiência em contabilidade: uma avaliação sob a perspectiva dos pesquisadores. *Revista Ambiente Contábil*, 9 (2), 158-178.
- Morikawa, M. (2018). Occupational licenses and labor market outcomes in Japan. *Japan and the World Economy*, 48, 45-56.
- Maroco, J. (2003). *Análise estatística: com utilização do SPSS*.
- Nogueira, D. R., Nova, S. P. D. C. C., & Carvalho, R. C. O. (2012). O bom professor na perspectiva da geração Y: uma análise sob a percepção dos discentes de Ciências Contábeis. *Enfoque: reflexão contábil*, 31(3), 37-52.

- Pagliari, M. (2011). What is the objective of professional licensing? Evidence from the US market for lawyers. *International journal of industrial organization*, 29(4), 473-483.
- Peltzman, S. (1976). Toward a more general theory of regulation. *The Journal of Law and Economics*, 19(2), 211-240.
- Peterson, B. K., & Reider, B. P. (2002). Perceptions of computer-based testing: a focus on the CFM examination. *Journal of Accounting Education*, 20(4), 265-284.
- Rabuske, E. (1995). *Antropologia filosófica*. Petrópolis: São Paulo: Vozes.
- Santos, G. C., & Andrade, S. A. (2016). Exame de Suficiência sobre a Perspectiva dos Profissionais da Contabilidade que Tiveram Artigos Publicados em Revistas com Qualis B3. *RAGC*, 4(15).
- Sprenger, K. B., Kronbauer, C. A., Silvestre, A. O., Azevedo, E. R., & Alves, T. W. (2018). Fatores explicativos dos índices de aprovação no exame de suficiência contábil. *ConTexto*, 18(38).
- Stigler, G. J. (1971). The theory of economic regulation. *The Bell journal of economics and management science*, 3-21.
- Souza, C. N. P., Barreto, T. V., & Gomes Filho, A. S. (2019). Percepção Docente sobre o Exame de Suficiência Contábil: Um Estudo em uma Instituição de Ensino Superior do Município de Icó, Ceará-Brasil. *Id on Line Revista Multidisciplinar e de Psicologia*, 13(43), 280-294.
- Thornton, R. J., Timmons, E., & De Antonio, D. (2017). Licensure or license? prospects for occupational deregulation. *Labor Law Journal*, 68(1), 46-578.