▪ Advances in Scientific and Applied Accounting, ▪ ISSN 1983-8611 ▪ São Paulo ▪ v.17, n.3 ▪ p. 054-067 ▪ Sep. / Dec. 2024
ASAA
▪ DOI: 10.14392/asaa.2024170303

Relationship Between the Job Market and Performance in the Accounting Proficiency Exam

Daysi Leal de Santana[1], **José Sérgio Casé de Oliveira**[2]

[1] Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, Rio de Janeiro, Brasil
[2] Universidade Federal de Pernambuco (UFPE), Recife, Pernambuco, Brasil

[1]daysi.leals@hotmail.com
[2]jose.scoliveira@ufpe.br

Edited by:
Elisabeth de Oliveira Vendramin

Abstract

Objective: This study investigates whether the economic condition of the labor market influences performance in the Accounting Proficiency Examination (APE).
Method: Academic performance is presented as a percentage pass rate with threshold values of 0 and 1. The proxies for the market condition are the number of accounting organizations (ORG) and the average accounting salary (AAS). Inflated beta regression models were used to analyze data from two editions of the Accounting Examination in 2018.
Results: The findings indicate that the condition of the labor market influences the Pass Rate in the Accounting Sufficiency Exam, a promising discussion about academic performance, in addition to the characteristics of the educational institutions. In addition, the Enade concept and the HEI category proved to be influential in terms of the occurrence of 0 in Pass Rate. However, no significant variables were identified for the occurrence of 1.
Contributions: Besides the labor market being pointed out as an incentive for professional choice, the study adds to the literature on the relationship between the labor market and performance at the APE. It also suggests an integrated dialogue between accounting councils, HEIs and business organizations to strengthen relations between accounting education and training and increase the pass rate.
Keywords: Labor Market Condition; Academic Performance; Accounting Proficiency Exam.

How to Cite:

Santana, D. L. de, & Oliveira, J. S. C. de. (2024). Relationship Between the Job Market and Performance in the Accounting Proficiency Exam. *Advances in Scientific and Applied Accounting*,17(3), 040–053/054. https://doi.org/10.14392/asaa.2024170303

Submitted: 09 March 2024
Revisions required on: 04 December 2024
Accepted: 13 December 2024

Introduction

Academic performance can be understood as the result of assessments that measure the degree of understanding of certain subjects. In addition to individual tests, performance can also be measured by the average of several subjects in a period or result from the combination of different criteria/weights given to the components assessed (Miranda et al., 2015).

When analyzing academic performance, the first challenge is to define how to measure it. In the accounting field, performance is measured using exams external to the educational institution, such as the Accounting Sufficiency Exam (ESC) (Miranda et al., 2015) - an exam taken by accounting bachelors whose approval grants professional registration before the class body.

Throughout the editions of the APE, a low pass rate has been observed (Bugarim et al., 2014; Sprenger et al., 2018). This scenario encourages discussion and understanding of what factors may influence this pass rate. Academic performance, according to the Educational Production Function (Hanushek, 1987, 2020), is the response obtained by the relationship between different inputs such as institutional, educational and family variables.

Previous studies have measured different institutional and educational characteristics in terms of their influence on performance, such as information on infrastructure, the quality of the course and the Higher Education Institution (HEI), the quantity, title or work regime of the teaching staff, etc. (Barroso et al., 2020; Ferreira et al., 2022; Duarte et al., 2023; Durso, 2021; Marçal et al., 2019; Rodrigues et al., 2017; Souza & Sardeiro, 2019). The personal and family characteristics of those enrolled in the APE are not made available, making it impossible to analyze these inputs to APE performance.

In another vein, it is suggested that an individual's performance can generate significant financial returns when they enter the job market (Rudakov & Roshchin, 2019; Hanushek, 2020). Economic factors in the labor market have also been shown to be motivating factors in choosing a higher education course and in academic dropout (Aina et al., 2022; Bartalotti & Menezes-Filho, 2007; Martins & Machado, 2018; Rodriguês et al., 2020; Rodríguez-Esteban & Vidal, 2022).

Considering that the job market encourages professional choice, it is suggested that it can also influence performance, generating the following research question: Does the economic condition of the job market influence the pass rate of accounting students in the ESC? With this in mind, the aim of this study is to verify whether, at a national level, the economic condition of the labor market influences performance in the Accounting Proficiency Exam (APE).

The labor market condition discussed in this research is composed of the proxies job offers and remuneration, respectively represented by the number of accounting organizations and the average salary of the class (Ziroldo & Abbas, 2021). Although these variables do not cover the entire field of professional accounting practice, they are added to assess whether they encourage obtaining professional registration, increasing the APE pass rate.

It is relevant to discuss performance beyond institutional issues, broadening the perspective with economic variables in the Brazilian accounting labor market. This can foster a more integrated dialog between accounting councils, HEIs and companies, boosting adequate professional training and strengthening relations between accounting education and training.

In addition to this introduction, the paper has five more sections. The next section deals with the literature review and the definition of the hypotheses. The third section deals with the data, including a description of the sample and a presentation of the variables. The fourth section presents the descriptive statistics in order to establish the appropriate econometric model. Subsequently, the findings are presented and discussed and, finally, there are the considerations about the work.

2 Literature review

2.1 Measuring Academic Performance

Academic performance represents the understanding of individuals, measured by individual tests, the average of several subjects or based on specific weights. It is influenced by institutional, educational and family factors, and it is a challenge to define the best way to measure it (Hanushek, 1987, 2020; Miranda et al., 2015). In the accounting area, this performance is measured by two exams external to the educational institution: Enade and the Sufficiency Exam (Miranda et al., 2015).

As for the Enade, there is the bias of students not committing themselves, as the result is generalized and not individualized (Vogt et al., 2016), reinforcing motivation as an explanatory factor of academic performance (Miranda et al., 2015). Therefore, as the Accounting Proficiency Examination (APE) grants professional certification to those who pass, it is suggested that motivation is the most appropriate proxy for measuring performance.

However, what we see throughout the editions of the APE is the low pass rate (Bugarim et al., 2014; Silva et al., 2018; Sprenger et al., 2018) and research seeking to investigate what would explain such performance. Hanushek (1987, 2020) points out that the Educational Production Function (EPF) is characterized by a relationship of different inputs (related to the characteristics of educational institutions and the quality of teaching staff, as well as family and socioeconomic information of students) applied to obtain an output: academic performance.

Among the inputs pointed out by Hanushek (2020) are student-level characteristics such as gender, age, parents' education, income and family size. However, this information is not always available, as in APE, leaving analysis based on institutional, educational and faculty characteristics.

However, in addition to factors that are relevant to teaching and institutions (Ferreira et al., 2022; Barroso et al., 2020; Duarte et al., 2023; Durso, 2021; Marçal et al., 2019; Rodrigues et al., 2017; Souza & Sardeiro, 2019), there are factors that can influence performance in APE, but which have not yet been considered. Therefore, we seek to introduce new characteristics that may be relevant to performance.

2.2 Labor Market Conditions and Academic Performance

Economic factors or expectations about the job market can influence students in their choice of higher education course, namely: remuneration and greater job offers (Bartalotti & Menezes-Filho, 2007; Gondim, 2002; Martins & Machado, 2018; Rodriguês et al., 2020). In addition, the market can also be a factor of regret and consequent dropout (Aina et al., 2022; Gondim, 2002; Machado et al., 2021; Rodríguez-Esteban & Vidal, 2022).

Faced with a more competitive job market, students tend to increase their academic performance to differentiate themselves from their competitors (Paul & Ruhland, 2013) and achieve higher future earnings (Rudakov & Roshchin, 2019; Saavedra-Caballero & Van Bellegem, 2021). Also, good job prospects attract better-prepared candidates (interested in working for large companies), who naturally have higher pass rates on the professional certification exam (Gaynor et al., 2019).

Both educational and socio-economic factors can be related to ESC performance. Regarding socio-economic indicators, Sprenger et al. (2018) used HDI, GDP at current prices and the average income of workers. However, they considered the income received from all jobs in the month by people over the age of 14, which is not representative of the accounting reality. Ziroldo and Abbas (2021) investigated whether professional accounting determinants influence the APE and adopted the availability of jobs and the salaries offered in the accounting area as labor market proxies, but found no influence. However, the analysis was restricted to one Brazilian state and presented data limitations.

On the international scene, the Certified Public Accountants (CPA) is used as a measure of performance, like the APE in terms of 'obtaining professional certification'. However, there are some practical differences: APE is taken in one day and grants national qualification, while in the CPA candidates have 18 months to pass all sections and certification is obtained for a specific jurisdiction (state).

Regarding the CPA, Wen et al. (2015) show that students are encouraged to pursue the CPA qualification by both the competitive job market and the favorable public accounting market. Gaynor et al. (2019) showed that states with high economic activity had higher CPA pass rates, using the proxies state GDP and the total number of Big4 accounting firms/state.

The structures of educational institutions and courses, as well as labor market conditions, differ substantially in the Brazilian context compared to the North American one. However, it is pertinent to investigate whether the better market opportunities Brazil have an impact on the behavior of candidates at the APE. This analysis could lend applicability to the study by providing a triangulated dialogue between HEIs, accounting boards and business organizations, as well as providing subsidies for improving the educational context and the professional training process.

2.3 Developing the Hypotheses

The choice of higher education courses can be affected by the job market, as young people tend to choose their careers based on the most recent data available at the time of choosing the course, which they consider to be more reliable (Bartalotti & Menezes-Filho, 2007). Therefore, we suggest lagging the labor market variables by four years in relation to the APE adopted, considering an approximate time between choosing and completing the course.

It has already been shown that academic performance has a positive influence on graduates' future earnings (Rudakov & Roshchin, 2019). And, considering the area of business, higher performance leads to higher average salaries in the market (Saavedra-Caballero & Van Bellegem, 2021).

Thus, the number of organizations and the average salary are considered proxies for the economic condition of the

Brazilian accounting labor market (Ziroldo & Abbas, 2021). About the accounting market, Santana Junior and Callado (2017) and Vogt et al. (2020) identified variations between states and regions, both in the number of registered professionals and in salary differences. This suggests that the labor market is not homogeneous throughout the country. For a more detailed national analysis, state data will be considered. Therefore, the labor market proxies will be lagged by four years and measured at the state level.

It's worth pointing out that the field of accounting is vast, and these variables don't represent the market in its entirety, considering only a more limited field of action for accounting professionals, restricted to accounting, consulting and auditing and tax activities. In addition, there is a bias, since it is possible that bachelors do not work in the accounting area (where accounting would be a second degree, complementary to the first degree) or work in an area that does not require professional registration.

The first labor market proxy is the number of accounting organizations. According to Wen et al. (2015) and Paul and Ruhland (2013), when there is a higher probability of unemployment and the market becomes more competitive, students tend to work harder to obtain better academic performance and a competitive advantage over their competitors. In Gaynor et al. (2019), economic competitiveness has a positive relationship with CPA exam pass rates. While in Ziroldo and Abbas (2021), the number of accounting organizations negatively influences academic performance in the APE.

This proxy represents the possibility of employment or the opening up of the market for professional accounting work, and its dichotomy may suggest that: i) the profession is prominent, and therefore there is greater interest among students in joining the course and working in the area; or ii) having a market full of professionals may not generate interest in the course and, consequently, in academic performance at the APE.

Given the conflicting results in previous literature, there is a need for further research into the influence of the market on academic performance. Thus, based on the possibility that economic conditions influence academic performance (Gaynor et al., 2019), the first hypothesis of this research is proposed:

H1: The higher the number of accounting organizations in the region, the higher the performance in the APE.

As for the second market proxy, the average salary of the accounting category, is expected that the remuneration of the class will be an incentive for demand for the course (Bartalotti & Menezes-Filho, 2007; Rodriguês et al., 2020), resulting in the search for professional registration. Given that professional qualification is a prerequisite for working in the market, it is assumed that there would be greater interest in passing the APE and, consequently, higher pass rates.

Gaynor et al. (2019) found that US states/jurisdictions with higher economic activity have higher CPA rates. However, when analyzing a Brazilian state (Paraná), Ziroldo and Abbas (2021) found no evidence of the effect of the accountant's average salary on APE performance. In line with Gaynor et al. (2019), the following hypothesis is proposed:

H2: The higher the average salary of professionals in the region, the higher the performance in the APE.

3 Data

3.1 Research design

The APE Pass Rate (APEPR) was adopted as a proxy for performance. This indicator, at institutional level, is given by the percentage of participants (by HEI) who are approved. The APE under study was held in 2018. This choice was aimed at compatibility with another database, specifically Enade, which has most of the institutional variables studied.

Compatibility was necessary because, at the time the study was written, there was no data from Enade 2022, and the APE data was available from 2017. As the variables were analyzed at institutional level, there was not enough variability between the editions of the APE for a temporal analysis.

It is not suggested that the students were the same between the exams, because: i) the literature points to the possible bias of students being obliged to take the Enade, but not being obliged to take the APE; ii) candidates are allowed to take part in the APE before completing their degree (still in the last academic year), or after completion, if they have not yet passed, and may be enrolled in any edition, including APE/2018.

The APE data was analyzed in two windows (1st and 2nd edition), thus allowing to verify possible differences in performance between them. There is also the fact that the entry selection itself (entrance exam) provides different profiles between semesters. As discussed above, the market variables were lagged by four years (corresponding to 2014).

3.2 Description of the Population and Sample

The research sample was presented at HEI level, considering those that offered undergraduate courses in Accounting and, above all, that had students enrolled in the APE in at least one of the editions. Initially, there were

4,991 observations for each edition of the APE in 2018. However, there was missing information between the two time windows, since some APEs had candidates enrolled in only one of the editions. And, as in Barroso et al. (2020), APEs fewer than ten applicants were not analyzed.

Inconsistencies were found in the data regarding the number of Accounting course enrolments per HEI, which was higher than the number of course enrolments per state. Therefore, 5 observations were removed from each edition (i.e. 10 exclusions from the total sample). After the necessary filters and adjustments in the two time windows, the sample had 759 observations in the 1st edition and 732 in the 2nd edition of the APE.

3.3 Presentation of Variables and Data Collection

The study considered 24 variables: 2 associated with the research hypotheses and 22 control variables, as described in Table 1. It should be noted that all the information considers data from 2018, except ORG and AAS (data from 2014 was considered).

Table 1. Presentation of variables

	Variables	Acronym	Form of measurement	Data source/ collection
Dependent	APE Pass Rate	APEPR	Percentage of passers (continuous variable)	Federal Accounting Council
Independent	Number of accounting organizations	ORG	Natural logarithm	SIDRA*
	Average accounting salary	AAS	Natural logarithm	
Control	Region	NORTH NORTHEAST SOUTH SOUTHEAST COESTE	Dummy by region (Southeast as reference)	Federal Accounting Council
	Courses in capital cities	CCC	Dummy: 1 if the HEI is located in the capital; 0 otherwise.	
	APE editing	EDITION	Dummy: 1 when 1st edition ESC; 0 otherwise.	
	Enade Concept	ENADE		
	Infrastructure	INFR	Continuous variable from 0 to 5	CPC 2018
	Teaching Staff Degree (equal to or higher than masters)	TITmd		
	Teachers' working conditions	REGIME	Continuous variable from 0 to 5	
	Academic Organization	IF CUniv Faculty Univ	Dummy by type of Organization: Federal Institute; University Center; College; and, University (reference variable)	CPC 2018
	Administrative category	AC	Dummy: 1 if Public HEI; 0 otherwise.	
	Number of teachers	DOC	Discrete variable (numeric)	Fala.BR
	Number of course enrolments	NCE		
	General Course Index	GCI	Continuous variable from 0 to 5	GCI 2018
	Number of enrolments by state	NCEst	Discrete variable (numeric)	Higher Education Census
	Course load	TIME	Discrete variable (in hours)	
	Length of time the HEI has existed	YEAR	Discrete variable (in years)	eMEC Portal
	Stricto Sensu Course in Accounting	POS	Dummy: 1 if HEI has a Stricto Sensu course; 0 otherwise.	CAPES Open Data
	Folha University Ranking	RUF	Dummy: 1 when the HEI is cited in the ranking of the Accounting course; 0 otherwise.	Folha University Ranking
	State Gross Domestic Product	GDP	Discrete variable (in reais)	IBGE

Note: *SIDRA: IBGE Automatic Recovery System.
Source: Prepared by the authors.

The information on dummyCAP was based on the data filled in by ESC participants at the time of registration. For the ORG and MSAL variables, we filtered the CNAE (National Classification of Economic Activities) 69.2, which refers to Accounting, consulting and auditing activities.

4 Methodological procedures

4.1Descriptive Analysis of the 1st and 2nd Edition of the APE

In order to define which econometric model best suited the data analysis, it was necessary to know the domain of the dependent variable in each window. Table 2 shows the descriptive statistics of the variables used in the two editions.

Table 2. Descriptive Statistics of the Variables

	Minimum	Maximum	Average	Median	Variance	Standard deviation
1st edition						
APEPR	0,00	0,97	0,35	0,32	0,03	0,17
lnORG	4,30	9,59	7,96	8,30	1,43	1,20
lnAAS	6,98	7,66	7,30	7,23	0,04	0,20
GDP	13,37	2.210,56	702,52	440,03	600.760,04	775,09
ENADE	0,02	5,00	2,30	2,23	0,69	0,83
INFR	0,00	5,00	3,32	3,37	1,31	1,14
TSD	0,00	5,00	3,75	3,99	1,35	1,16
REGIME	0,00	5,00	3,93	4,38	1,54	1,24
dummyIF	0,00	1,00	0,00	0,00	0,00	0,05
dummyCUniv	0,00	1,00	0,28	0,00	0,20	0,45
dummyFacul	0,00	1,00	0,39	0,00	0,24	0,49
dummyCAT	0,00	1,00	0,16	0,00	0,13	0,36
DOC	1,00	388,00	27,55	20,00	901,70	30,03
NCE	7,00	11.229,00	296,30	178,00	3,45e+11	586,91
NCEst	1.296,00	70.527,00	28.657,00	22.173,00	5,11e+14	22.601,83
TIME	2.344,00	4.052,00	3.130,00	3.040,00	3,66e+10	191,19
YEAR	7,00	103,00	25,42	20,00	230,19	15,17
dummyNORTH	0,00	1,00	0,09	0,00	0,08	0,29
dummyNORDESTE	0,00	1,00	0,19	0,00	0,16	0,39
dummySUL	0,00	1,00	0,21	0,00	0,16	0,40
dummyCOESTE	0,00	1,00	0,11	0,00	0,01	0,31
dummyCAP	0,00	1,00	0,31	0,00	0,22	0,46
dummyPOS	0,00	1,00	0,04	0,00	0,04	0,19
dummyRUF	0,00	1,00	0,96	1,00	0,04	0,20
GCI	1,10	4,30	2,73	2,70	0,23	0,48
2nd edition						
APEPR	0,00	1,00	0,42	0,38	0,04	0,19
ENADE	0,02	5,00	2,31	2,25	0,70	0,84
INFR	0,00	5,00	3,33	3,41	1,31	1,14
TSD	0,00	5,00	3,77	4,00	1,30	1,14
REGIME	0,00	5,00	3,93	4,37	1,54	1,24
dummyIF	0,00	1,00	0,00	0,00	0,00	0,05
dummyCUniv	0,00	1,00	0,29	0,00	0,20	0,45
dummyFacul	0,00	1,00	0,39	0,00	0,24	0,49
dummyCAT	0,00	1,00	0,16	0,00	0,13	0,36
DOC	1,00	388,00	28,06	21,00	921,33	30,35
NCE	10,00	11.229,00	303,50	183,50	3,56e+08	596,38
NCEst	1.296,00	70.527,00	28.348,00	22.173,00	5,13e+11	2,27e+06
TIME	2.344,00	4.052,00	3.127,00	3.030,00	3,54e+07	188,24
YEAR	6,00	103,00	25,56	21,00	231,95	15,23
dummyNORTH	0,00	1,00	0,09	0,00	0,08	0,29
dummyNORDESTE	0,00	1,00	0,20	0,00	0,16	0,40
dummySUL	0,00	1,00	0,21	0,00	0,16	0,40
dummyCOESTE	0,00	1,00	0,11	0,00	0,10	0,31
dummyCAP	0,00	1,00	0,32	0,00	0,22	0,47
dummyPOS	0,00	1,00	0,04	0,00	0,04	0,20
dummyRUF	0,00	1,00	0,96	1,00	0,04	0,20
GCI	1,31	4,31	2,73	2,69	0,23	0,48

Source: Research data.

According to Table 2, the lowest APEPR in the 1st edition was 0 (no successful applicants), and the highest APEPR was 97.4%. For the 2nd edition, there was an APEPR of 0 and 1 (100% pass rate). The low average APEPR of 34.7% and 41.6% ratifies previous studies (Bugarim et al., 2014; Silva et al., 2018; Sprenger et al., 2018).

The lnORG, lnAAS and GDP variables are annual and therefore have the same values in both semesters/editions, being omitted from the presentation in the 2nd edition. The market variables (ORG and AAS) were tabulated in natural logarithm but commented on in numerical form: the lowest ORG was in the state of Roraima (74) and the highest in São Paulo (14,606); the lowest AAS was in the state of Piauí (R$ 1,071.13) and the highest in São Paulo (R$ 2,117.43).

For better visualization, GDP is shown in Table 2 in millions of reais. As with the market variables, their values were repeated between editions, and the minimum value obtained refers to the state of Roraima (R$13 million) and the maximum is reported for the state of São Paulo (R$2 billion).

As the descriptives of the other variables in the two editions of the APE were similar, a general overview is presented. In both editions there were HEIs that had institutional evaluations with minimum scores of 0 (INFR, TSD and REGIME) or close to zero (ENADE), although these same evaluations had maximum scores (five).

Regarding Academic Organization, it was found that most of the samples were made up of Colleges, followed by Universities, University Centres and Federal Institutes (which with only two institutions had an average close to 0). The averages of 16% for dummyCAT (in each edition) show that there were more private HEIs in the sample.

The variables DOC, NCE, NCEst, TIME, YEAR, dummyCAP, dummyRUF and GCI showed similar averages between the editions of the ESC. In addition, most of the HEIs were in the Southeast (the reference region), followed by the South, Northeast, Midwest and North. As for the dummyPOS, there were very few HEIs with Stricto Sensu postgraduate courses, given the average of 3.8% and 4% in the 1st and 2nd editions, respectively.

4.2 Multicollinearity Analysis of the 1st and 2nd Edition of the APE

According to Table 3, the multicollinearity analyses of the two editions were similar. The highest VIFs were associated with NCE State and GDP. It was therefore decided to remove them from the model.

Table 3. Multicollinearity Analysis

	VIF analysis 1st edition				VIF Analysis 2nd edition			
	1ª	2ª	3ª	4ª	1ª	2ª	3ª	4ª
ENADE	1,67	1,67	1,67	1,67	1,66	1,66	1,66	1,66
INFR	1,52	1,52	1,50	1,52	1,50	1,50	1,48	1,50
TSD	1,79	1,77	1,76	1,76	1,80	1,79	1,78	1,78
REGIME	1,55	1,54	1,54	1,54	1,61	1,59	1,59	1,59
dummyIF	1,04	1,04	1,04	1,04	1,04	1,04	1,04	1,04
dummyCUniv	1,99	1,98	1,97	1,97	1,98	1,97	1,96	1,02
dummyFacul	2,51	2,50	2,49	2,48	2,50	2,48	2,48	2,47
dummyCAT	2,31	2,30	2,30	2,27	2,24	2,23	2,23	2,20
DOC	2,25	2,22	2,21	2,22	2,25	2,22	2,21	2,22
NCE	1,73	1,72	1,72	1,72	1,73	1,73	1,72	1,72
NCEst	140,88	-	-	-	140,94	-	-	-
TIME	1,02	1,02	1,02	1,02	1,02	1,02	1,02	1,02
YEAR	1,34	1,34	1,34	1,34	1,38	1,38	1,37	1,37
dummyNORTH	4,41	3,59	1,73	3,38	4,33	3,52	1,73	3,34
dummyNORDESTE	3,43	3,30	2,30	3,29	3,56	3,39	2,40	3,38
dummySUL	3,95	1,54	1,36	1,53	4,02	1,55	1,37	1,54
dummyCOESTE	2,40	2,22	1,54	2,19	2,39	2,23	1,56	2,21
dummyCAP	1,41	1,40	1,37	1,39	1,41	1,40	1,38	1,40
dummyPOS	1,50	1,50	1,49	1,49	1,53	1,53	1,52	1,52
dummyRUF	1,08	1,08	1,08	1,07	1,09	1,08	1,08	1,08
GCI	3,06	3,06	3,06	3,06	3,16	3,16	3,15	3,15
lnORG	23,19	7,18	-	4,29	23,12	7,09	-	4,24
lnAAS	27,97	3,45	2,06	-	27,21	3,56	2,13	-
GDP	170,78	-	-	-	168,90	-	-	-

Source: Research data.

In the second analysis, after removing these variables, lnORG had a VIF greater than 5. It was therefore decided to remove it from the model, and in the third analysis no multicollinearity was identified.

However, in order to solve the multicollinearity problem, one of the variables of interest (lnORG) had to be removed, which would have made it impossible to analyze the two research hypotheses. To find a solution to this problem, we tried including lnORG and removing lnAAS.

Looking at the 4th analysis in Table 3, it was noted that the variables did not present any multicollinearity problems. Thus, to infer the hypotheses, two models were adopted: one including only the lnMSAL variable as a proxy for the labor market and the other, the reverse, including lnORG and omitting lnAAS.

4.3 Statistical modeling

Given the incompatibility in time between the data sources used (already mentioned), it became impossible to use panel data analysis in this research.

The dependent variable (APEPR) is limited to the interval 0 and 1. However, the linear regression model is not appropriate when the response is restricted to this interval (Ferrari & Cribari-Neto, 2004; de Oliveira et al., 2023). In contrast, beta distribution is useful and flexible for modeling data on a continuous scale with an open interval (0,1) (Ospina & Ferrari, 2010). For closed interval cases such as [0, 1], (0, 1] or [0, 1], Ospina and Ferrari (2010) propose inflated beta modeling distributions. Thus, it was necessary to adopt the inflated beta regression models already validated in Barroso et al. (2020).

According to the description of the 1st edition of APE/2018, the interval was [0,1] and the appropriate model was the Beta Inflated Regression at 0 - BEZI (Ospina and Ferrari, 2010). In the 2nd edition, it was possible to see IAESC at 0 and at 1, with the interval set at [0,1], and the appropriate model was Beta Inflated Regression at 0 and at 1 - BEINF (Ospina and Ferrari, 2010).

Ospina and Ferrari (2010) add that the BEZI model is based on the analysis and interpretation of three submodels: mean (μ), dispersion (σ) and mixture (ν). It is worth explaining that the σ submodel identifies variables that influence the variability of the data, while the ν submodel seeks to identify which variables influence the occurrence of 0 in the dependent variable. Furthermore, in the BEINF model, in addition to the three submodels mentioned above, the τ submodel was added, associated with the occurrence of 1 in the APEPR.

Thus, the research objective and the proposed hypotheses were met by interpreting the results based on the model estimated in averages (μ). In addition, contributing to the robustness of the research, findings of the other sub-models are discussed. To this end, the BEZI(μ,σ,ν) and BEINF(μ,σ,ν,τ) econometric models were estimated in the R software.

5 Presentation and Discussion of Results

This section describes the estimates using the BEZI model to measure data from the 1st edition of the APE, the BEINF model for the 2nd edition and a discussion of the findings. It should be noted that the absence of some variables in the presentation of the tabulated results means that the estimation indicated that the best-fit model should not contain these variables.

5.1 BEZI Model Results - 1st Edition ESC/2018

Table 4 shows the estimates of the best-fit model, according to the AIC and SBC criteria, when the proxy for the labor market (represented by Δ) is lnORG and lnAAS, i.e. Δ=lnORG or Δ=lnAAS.

Table 4. Estimates of the 1st edition submodels

	When Δ=lnORG				When Δ=lnAAS			
	Estimates	Standard error	p-value		Estimates	Standard error	p-value	
Submodel μ								
(Intercept)	-2,7810	0,2021	0,0000	***	-2,0980	0,1268	0,0000	***
lnORG	0,0702	0,0193	0,0003	***	-	-	-	
ENADE	0,2784	0,0318	0,0000	***	0,2963	0,0315	0,0000	***
INFR	-	-	-		-0,0426	0,0205	0,0383	*
REGIME	-0,0779	0,0191	0,0001	***	-0,0800	0,0193	0,0000	***
dummyCUniv	-0,0780	0,0451	0,0844	.	-	-	-	
dummyCAT	0,6055	0,0672	0,0000	***	0,5533	0,0699	0,0000	***
DOC	0,0041	0,0006	0,0000	***	0,0037	0,0005	0,0000	***
NCE	-0,0001	0,0000	0,0000	***	-0,0001	0,0000	0,0000	***
dummyNORTH	-	-	-		-0,0172	0,0759	0,0236	*
dummyNORDESTE	0,1088	0,0574	0,0582	.	-	-	-	
dummySUL	0,1505	0,0520	0,0039	**	0,1409	0,0515	0,0064	**
GCI	0,3783	0,0607	0,0000	***	0,3851	0,0618	0,0000	***

(Continued)

(Continued from previous page)

	When Δ=lnORG				When Δ=lnAAS			
	Estimates	Standard error	p-value		Estimates	Standard error	p-value	
Submodel σ								
(Intercept)	2,9190	0,1641	0,0000	***	2,9010	0,1656	0,0000	***
ENADE	-0,2573	0,0692	0,0002	***	-0,2600	0,0694	0,0002	***
dummyCAT	-0,4223	0,1455	0,0038	**	-0,4090	0,1462	0,0053	**
DOC	0,0041	0,0020	0,0427	*	0,0040	0,0020	0,0454	*
MATRIC	0,0004	0,0001	0,0455	***	0,0005	0,0001	0,0000	***
YEAR	0,0071	0,0036	0,0455	*	0,0067	0,0036	0,0615	.
Submodel ν								
(Intercept)	-12,9939	5,8198	0,0259	*	-12,9939	5,8311	0,0262	*
MATRIC	-0,0165	0,0087	0,0589	.	-0,0165	0,0087	0,0591	.
TIME	0,0031	0,0018	0,0834	.	0,0031	0,0018	0,0841	.
dummyCOESTE	1,6474	0,9466	0,0822	.	1,6474	0,9467	0,0822	.
Significance: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1								
AIC	-1.044,1540				-1.041,3060			
SBC	-946,8816				-948,6658			

Source: Research data.

The estimates of the average submodel (μ), when Δ=lnORG, indicate ten influential variables. Of these, lnORG proved to be positively influential in explaining IAESC. In the μ submodel, when Δ=lnAAS, nine variables had an influence on IAESC, but lnAAS was not influential.

Looking at Table 4, the estimated coefficients in the submodel for dispersion (σ), it can be seen that the data is heteroscedastic, a problem circumvented by the methodology. Both submodel results for σ identified five significant variables with the same form of influence. The submodel for ν indicates which variables influence the occurrence of 0 in the APEPR (total failure). There is evidence that the same variables were influential in both submodels.

5.2 BEINF Model Results - 2nd Edition APE/2018

Table 5 shows the estimates for the BEINF model and its four sub-models. As for the average APEPR of the 2nd edition, both labor market variables proved to be influential, but in different ways: lnORG had a positive influence, while lnAAS had a negative influence.

Table 5. Estimates of the 2nd edition submodels

	When Δ=lnORG				When Δ=lnMSAL			
	Estimates	Standard error	p-value		Estimates	Standard error	p-value	
Submodel μ								
(Intercept)	-2,3920	0,1996	0,0000	***	-	-	-	
lnORG	0,0446	0,0179	0,0130	*	-	-	-	
lnAAS	-	-	-		-0,2521	0,0179	0,0000	***
ENADE	0,3441	0,0327	0,0000	***	0,3351	0,0327	0,0000	***
INFR	-0,0820	0,0210	0,0001	***	-0,0829	0,0210	0,0001	***
TITmd	-0,0617	0,0232	0,0081	**	-0,0649	0,0231	0,0050	**
dummyCAT	0,3588	0,0712	0,0000	***	0,3713	0,0756	0,0000	***
DOC	0,0031	0,0007	0,0000	***	0,0032	0,0007	0,0000	***
NCE	-0,0001	0,0000	0,0041	**	-0,0001	0,0000	0,0004	***
YEAR	0,0041	0,0014	0,0050	**	0,0037	0,0014	0,0090	**
dummyNORTH	-	-	-		-0,3179	0,0715	0,0000	***
dummyNORDESTE	-	-	-		-0,1654	0,0587	0,0050	**
dummySUL	0,2394	0,0539	0,0000	***	-	-	-	
dummyCOESTE	-	-	-		-0,2036	0,0751	0,0069	**
IGC	0,4158	0,0702	0,0000	***	0,3940	0,0707	0,0000	***
Submodel σ								
(Intercept)	-1,4838	0,1084	0,0000	***	-4,7269	1,3446	0,0005	***
lnAAS	-	-	-		0,4408	0,1826	0,0161	*
ENADE	0,2357	0,0450	0,0000	***	0,2172	0,0463	0,0000	***
dummyCAT	-	-	-		0,1940	0,0994	0,0000	.
DOC	-0,0055	0,0011	0,0000	***	-0,0060	0,0012	0,0000	***
dummyNORDESTE	0,1769	0,0876	0,0438	*	0,3132	0,1022	0,0023	**
dummySUL	0,1505	0,0854	0,0784	.	0,1839	0,0856	0,0320	*
dummyCOESTE	0,1996	0,1083	0,0657	.	0,2782	0,1125	0,0137	*
Submodel ν								
(Intercept)	-1,6450	0,9572	0,0861	.	-	-	-	
ENADE	-1,6152	0,5939	0,0067	**	-1,7536	0,4272	0,0001	***
dummyRUF	-	-	-		-1,5608	0,7322	0,0334	*
Submodel τ								
(Intercept)	-6,5850	1,0010	0,0000	***	-6,5850	1,0010	0,0000	***
Significance: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1								
AIC	-834,1475				-838,7241			
SBC	-742,2319				-728,4254			

Source: Research data.

As for the estimates of the submodel for σ, the dispersion is influenced by five variables. Given the closed interval [0, 1] in the APEPR, the submodel for ν shows the variables that influence the occurrence of 0, while in the submodel for τ, no variable was shown to influence the occurrence of 1 in the APEPR.

5.3 Discussion of the Results - 1st Edition ESC/2018

The first research hypothesis proposes that the number of accounting organizations in the region positively influences the APEPR. Using Δ=lnORG, we obtain evidence not to reject H1. This result suggests that, when there are greater possibilities of employment (greater ORG), students are more interested in enrolling in the course and, in order to gain a competitive advantage in the market, they strive to gain their professional qualification by passing the APE. As for the μ sub-model, when Δ=lnAAS, there is no significant influence of the lnAAS variable, leading to the rejection of H2.

Highlighting the similar results obtained for the two average submodels (Δ= {lnORG, lnAAS}), the variables ENADE, dummyCAT, DOC, dummySUL and GCI proved to be positively influential, while REGIME and NCE were negatively influential.

In view of the above, the higher GCI and ENADE scores influence the performance of accounting students, as shown by Rodrigues et al. (2017) and Barroso et al. (2020). It is therefore suggested that HEIs should strive to prepare their students so that, once they are trained, better institutional indexes and higher approval in the APE are a consequence.

The Administrative Category (public HEIs) proved to be influential, confirming Lemos and Miranda (2015), Marçal et al. (2019), Souza and Sardeiro (2019), Barroso et al. (2020) and Ferreira et al. (2022). The number of teachers had an influence on the APEPR, confirming Barroso et al. (2020), and the Southern region was also influential, as in Silva et al. (2018), Marçal et al. (2019) and Barroso et al. (2020).

Still on the similarities of the results between the two average submodels of the 1st edition, there is the negative influence of the variables NCE, which was not influential in Barroso et al. (2020), and REGIME, as in Souza and Sardeiro (2019) and Barroso et al. (2020).

Regarding the finding on work regime, there is evidence of a positive influence on this variable (Duarte et al., 2023). However, it is important to note that this proxy considers teachers who work part-time or full-time, without including another form of work regime: Exclusive Dedication (ED).

In addition, with regard to the average APEPR of students, the submodel μ when Δ=lnORG, presents two other influential variables, namely: dummyNORDESTE, with positive estimation, also identified in Rodrigues et al. (2017) and differently from Barroso et al. (2020); and dummyCUniv with negative estimation, corroborating Barroso et al. (2020).

The significance of the parameter associated with theCUniv dummy demonstrates a differentiation in performance between the types of academic organization (considering the university as a reference). Marçal et al. (2019) did not identify differences between the average pass rates of university centers and universities, but they did find differences when comparing university centers or universities with colleges. It is possible that this is due to the use of an appropriate methodology, capable of better capturing the information contained in the data.

As for the average submodel using Δ=lnAAS, in addition to the common variables already mentioned, we add: INFR and dummyNORTE, both with a negative influence, corroborating Barroso et al. (2020). Silva et al. (2018) and Marçal et al. (2019) show that the North region has the lowest performance, confirming this finding.

Infrastructure was positively influential in Souza and Sardeiro (2019) and Duarte et al. (2023). There are two characteristics that may justify this variation: the first is that private HEIs usually have better physical structures than public HEIs; the second is that most private HEIs have a college structure and these have lower average pass rates (Marçal et al., 2019). As a large part of the sample is made up of private HEIs and college structures, we can suggest an association between better structures and lower performance.

The 1st edition APEPR ranges from 0 to 97.4%. The two dispersion submodels (variability) of the 1st edition APEPR, submodel σ (Δ={lnORG, lnAAS}), showed the influence of the same variables: dummyCAT (public HEIs) and ENADE have a negative influence, while YEAR, DOC and NCE have a positive influence. The work by Barroso et al. (2020) highlighted this sub-model and identified three of the variables studied (ENADE, NCE and AC).

Regarding the complementary results on the occurrence of 0 passes in the APE, the result was also repeated for the two submodels ν (Δ={lnORG, lnAAS}) of the 1st edition. Among the significant variables, the only one previously shown was the number of students enrolled in the HEIs (Barroso et al., 2020), which had a negative influence on the occurrence of APEPR at 0. It was also found that the HEIs located in the Central-West region and the workload of the

courses have a positive influence on the case of "failure".

5.4 Discussion of Results - 2nd Edition ESC/2018

The estimates of the μ submodel, when Δ=lnORG, show that lnORG is positively influential; therefore, H1 was not rejected. In the μ submodel, when Δ= lnAAS, it is clear that the average accounting salary in the region has a negative influence on the APEPR; therefore, H2 is rejected. This result differs from the hypothesis. One possible explanation could be that, given the greater attractiveness of the job market (represented by higher average salaries), students are attracted to firms while they are still undergraduates. This causes them to devote less time than they should to their studies, leading to lower levels of performance throughout the course and, consequently, in the APE.

In undergraduate Accounting courses, it is increasingly common for students to work during the course, restricting the time available for studying and, naturally, damaging academic performance. In addition, the work they do is often not associated with what they are studying in the course, creating a gap between professional practice and the content taught in the course (Silva & Padoin, 2008; also in Barahona, 2014; Nasu & Sasso, 2021; Niquini et al., 2015; Rezende et al., 2022).

Furthermore, the average pass rate in the second edition was higher than in the first edition, and the influence of lnAAS was only evident in the second edition. This suggests that, without the possible simultaneity of activities (working and studying), academic performance could have been even higher in the second edition of the exam.

For the middle submodel, when Δ=lnORG, nine other control variables proved to be statistically significant. These were also influential in the submodel in which Δ=lnAAS. Thus, common to both models and with a positive influence, the following were identified: ENADE, dummyAC, DOC, YEAR, dummySUL and GCI; and with a negative influence: INFR, TSDmd and NCE.

Most of the findings corroborate previous studies, such as Lemos and Miranda (2015), Rodrigues et al. (2017), Souza and Sardeiro (2019) and Barroso et al. (2020), except for INFR (already discussed) and TSDmd.

Regarding the proportion of teachers with a master's degree or higher, the results were not similar to those reported by Souza and Sardeiro (2019) and Duarte et al. (2023). This proportion tends to be higher in public institutions compared to private HEIs. However, as there are relatively few public HEIs in the sample (generally with a higher density of PhDs), TSD may be less significant in terms of the overall average performance and therefore vary from previous results.

Another possible interpretation of this result, as already mentioned, is that those enrolled in the 2nd edition of the APE are the students with the lowest performance. Therefore, in general, it is suggested that the qualifications of the teaching staff or the infrastructure of the HEI do not influence them as much as is necessary.

Still on the influence for the average, when Δ=lnAAS, three more negatively influential variables on the APEPR stand out: dummyNORTE, dummyNORDESTE and dummyCOESTE, ratifying Barroso et al. (2020) and the differentiation of regional performance, taking the Southeast region as a reference.

Adding relevant results to the research, the variables that influence the dispersion of the data were presented. For the σ sub-model, there were five significantly influential variables when Δ=lnORG and seven variables when Δ=lnAAS. Common to both models was the negative influence of DOC and the positive influence of ENADE, dummyNORDESTE, dummySUL and dummyCOESTE.

For the dispersion sub-model (σ), when Δ=lnAAS, it was found that the average salaries in the states positively influence the dispersion of the 2nd edition APE data, as does the administrative category (public HEIs).

Other additional results are linked to the verification of the variables that influence the occurrence of APEPR in 0 and 1, which are the responses to the ν and τ submodels, respectively. For the occurrence of 0 (which can be seen as student failure at the APE), ENADE proved to be negatively influential in the two estimated submodels, corroborating Barroso et al. (2020). Still on failure, it was found that when Δ=lnAAS, the RUF is also negatively influential.

As for success (100% passing the APE), submodel τ (Δ={lnORG, lnAAS}), no variable proved relevant in explaining it. The institutional and market variables were not influential. Therefore, it would be pertinent to have data available on registrants in order to measure this sub-model, given the relevance that this result could provide to both HEIs and APE participants. Thus, it was not possible to suggest what makes for success in the APE.

6 Final considerations

The research aimed to verify whether the labor market condition influences performance in the APE. In both editions, the number of organizations positively influenced performance, failing to reject H1. The finding suggests that the greater possibility of employment motivates students to commit to their studies.

As for average salary, no statistical significance was found in the 1st edition, while in the 2nd edition its influence was negative, rejecting H2. This finding may reflect the characteristics of the students, such as ability or economic situation/professional occupation, which cannot be controlled in this study due to the unavailability of this data.

In response to the objective, it appears that while the number of organizations suggests a promising job market prospect for those who pass, high salaries can attract students prematurely to the job market and reduce their performance. The findings reveal a relationship between labor market conditions and performance in the APE.

As for "failure", the results between the editions were different, which may reflect the profile of the students enrolled in each edition (as mentioned, these characteristics are not controllable). However, the findings could be useful for promoting discussions about educational development and increasing the pass rate, mediated by a dialogue between HEIs, accounting boards and business organizations.

As far as "success" is concerned, no variables were identified between the two editions that could explain it. Nevertheless, triangulating the dialog between the strands and developing improvements in education and training can indirectly promote an increase in the pass rate.

The study's limitations include: i) the incompatibility in time of the main databases (APE and ENADE), making it impossible to analyze a long historical series of data; ii) the unavailability of data from students/enrollees in the APE. It is hoped that future research will use other methodologies to compose and analyze the sample, such as panel data analysis. They will also present proposals for incentives and practices for triangulated dialog, in order to contribute to the advancement of education and the accounting profession.

References

Aina, C., Baici, E., Casalone, G., & Pastore, F. (2022). The determinants of university dropout: A review of the socio-economic literature. Socio-Economic Planning Sciences, 79, 101102. https://doi.org/10.1016/j.seps.2021.101102

Barahona, P. (2014). Factores determinantes del rendimiento académico de los estudiantes de la Universidad de Atacama. Estudios Pedagógicos (Valdivia), 40(1), 25-39. https://dx.doi.org/10.4067/S0718-07052014000100002

Barroso, D. V., Freitas, S. C., & Oliveira, J. S. C. (2020). Exame do CFC e Educação Contábil: Análise das características das IES e seus índices de aprovação. Revista de Educação e Pesquisa em Contabilidade (REPeC), 14(1), 100-117. https://doi.org/10.17524/repec.v14i1.2470

Bartalotti, O., & Menezes-Filho, N. (2007). A relação entre o desempenho da carreira no mercado de trabalho e a escolha profissional dos jovens. Economia Aplicada, 11(4), 487-505. https://doi.org/10.1590/S1413-80502007000400002

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), 121-136. http://dx.doi.org/10.5380/rcc.v6i1.33455

Cadastro e-MEC. (2022). Cadastro Nacional de Cursos e Instituições de Educação Superior. https://emec.mec.gov.br/emec/nova

Conselho Federal de Contabilidade – CFC. (2018). Resultado Oficial do Exame de Suficiência de 2018. Recuperado de: https://cfc.org.br/registro/exame-de-suficiencia/relatorios-estatisticos-do-exame-de-suficiencia/

Dados Abertos CAPES. (2018). Cursos da Pós-Graduação Stricto Sensu no Brasil. Recuperado de: https://dadosabertos.capes.gov.br/dataset/2017-a-2020-cursos-da-pos-graduacao-stricto-sensu-no-brasil/resource/ee100132-d316-42df-8675-5c80f6cd2505

de Oliveira, J. S. C., Ospina, R., Leiva, V., Figueroa-Zúñiga, J., & Castro, C. (2023). Quasi-Cauchy regression modeling for fractiles based on data supported in the unit interval. Fractal and Fractional, 7(9), 667. https://doi.org/10.3390/fractalfract7090667

Duarte, C. A. A., Souza, J. M., Quirino, M. C. D. O., Melo, M. C. D. L., & Melo, T. D. S. (2023). Fatores Determinantes para o Desempenho Acadêmico dos Discentes do Curso de Ciências Contábeis no ENADE. Revista Evidenciação Contábil & Finanças, 11(1), 120–133. https://congressousp.fipecafi.org/anais/21UspInternational/ArtigosDownload/3384.pdf

Durso, S. (2021). RUF e a qualidade da educação superior: o caso dos cursos de contabilidade no Brasil. Capital Científico, 19(3), 44-62. https://revistas.unicentro.br/index.php/capitalcientifico/article/view/6546

Ferrari, S., & Cribari-Neto, F. (2004). Beta regression for modelling rates and proportions. Journal of applied statistics, 31(7), 799-815. https://doi.org/10.1080/0266476042000214501

Ferreira, C. O., de Araújo, G. A., Pereira, V. H., & da Cunha, J. V. A. (2022). Desempenho acadêmico dos discentes de graduação em ciências contábeis: relação entre os resultados obtidos no exame de suficiência do CFC e a nota do Enade. ForScience, 10(1), e00992-e00992. https://forscience.ifmg.edu.br/index.php/forscience/article/view/992/398

Gaynor, G., Korb, P., Gerlowski, D., & Zhang, T. (2019). An alternate state in mind: the effect of CPA exam credit-hour requirements and economic competitiveness on state-level exam candidate pools and pass rates. Accounting Education, 28(6), 621-641. https://doi.org/10.1080/09639284.2019.1670685

Gondim, S. M. G. (2002). Perfil profissional e mercado de trabalho: relação com formação acadêmica pela perspectiva de estudantes universitários. Estudos de Psicologia (Natal), 7(2), 299-309. https://doi.org/10.1590/S1413-294X2002000200011

Hanushek, E. A. (1987). Educational production functions. In: Economics of Education. (Cap. 6, pp. 33-42). Pergamon Press. https://doi.org/10.1016/B978-0-08-033379-3.50013-9

Hanushek, E. A. (2020). Education production functions. In: The economics of education. (Cap. 13, pp. 161-170). Academic Press. https://doi.org/10.1016/B978-0-12-815391-8.00013-6

Instituto Brasileiro de Geografia e Estatística – IBGE. (2018). PIB por Unidade da Federação, 2018. Recuperado de: https://www.ibge.gov.br/estatisticas/economicas/contas-nacionais/9088-produto-interno-bruto-dos-municipios.html?edicao=29720&t=destaques

Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira – Inep. (2018). Indicadores de Qualidade da Educação Superior. Recuperado de: https://www.gov.br/inep/pt-br/acesso-a-informacao/dados-abertos/indicadores-educacionais/indicadores-de-qualidade-da-educacao-superior

Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira – Inep. (2018). Sinopse Estatística | Educação Superior 2018. Recuperado de: https://www.gov.br/inep/pt-br/areas-de-atuacao/pesquisas-estatisticas-e-indicadores/censo-da-educacao-superior/resultados

Lei n. 10.861, de 14 de abril de 2004 (2004). Institui o Sistema Nacional de Avaliação da Educação Superior – SINAES e dá outras providências. Recuperado em 11 de setembro de 2021, de http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/l10.861.htm

Lei n. 12.249, de 11 de junho de 2010 (2010). Altera os Decretos-Leis nos 9.295, de 27 de maio de 1946. art. 76. Recuperado em 11 de setembro de 2021, de http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2010/Lei/L12249.htm#art76

Lemos, K. C. S., & Miranda, G. J. (2015). Alto e baixo desempenho no ENADE: que variáveis explicam? Revista Ambiente Contábil, 7(2), 101-118. https://ojs.ccsa.ufrn.br/index.php/contabil/article/view/546

Machado, C. G., Frare, A. B., Cruz, A. P. C. D., Quintana, A. C., & Gomes, D. G. D. (2021). Atribuição de causalidade à evasão dos graduandos de ciências contábeis de uma instituição de ensino superior pública. Pensar Contábil, 23(81), 25-35. https://webserver.crcrj.org.br/asscom/Pensarcontabil/revistaspdf/revista81.pdf

Marçal, R. R., Matos, V. S., Carvalho, T. F. M., & Carvalho, M. S. (2019). Avaliações de desempenho no ensino contábil brasileiro: Uma análise comparativa entre IES diante do Exame de Suficiência do CFC. RACE - Revista De Administração, Contabilidade e Economia, 18(2), 363-384. https://doi.org/10.18593/race.19638

Martins, F. S., & Machado, D. C. (2018). Uma análise da escolha do curso superior no Brasil. Revista Brasileira de Estudos de População, 35(1), 1-24. https://doi.org/10.20947/S0102-3098a0056

Miranda, G. J., Lemos, K. C. S., Oliveira, A. S., & Ferreira, M. A. (2015). Determinantes do desempenho acadêmico na área de negócios. Revista Meta: Avaliação, 7(20), 175-209. http://dx.doi.org/10.22347/2175-2753v7i20.264

Nasu, V. H., & Sasso, M. (2021). A bolsa faz a diferença? Uma análise do desempenho dos negócios dos alunos bolsistas cursos de formação da área de atuação. Education Policy Analysis Archives, 29(99), 1-24. https://doi.org/10.14507/epaa.29.5876

Niquini, R. P., Teixeira, L. R., Sousa, C. A. D., Manelli, R. N., Luz, A. A. D., Turte-Cavadinha, S. L., & Fischer, F. M. (2015). Características do trabalho de estudantes universitários associadas ao seu desempenho acadêmico. Educação em Revista, 31(1), 359-381. https://doi.org/10.1590/0102-4698122477

Ospina, R., & Ferrari, S. L. P. (2010). Inflated beta distributions. Statistical papers, 51(1), 111-126. https://doi.org/10.1007/s00362-008-0125-4

Paul, C. W., & Ruhland, J. S. (2013). A note on job market conditions and students academic performance. Journal of Business & Economics Research (JBER), 11(5), 223-228. https://doi.org/10.19030/jber.v11i5.7837

Plataforma Integrada de Ouvidoria e Acesso à Informação – Fala.BR. (2022). Acesso à Informação. Recuperado de: https://falabr.cgu.gov.br/

Ranking Universitário da Folha – RUF. (2018). Rankings de Cursos. Recuperado de: https://ruf.folha.uol.com.br/2018/ranking-de-cursos/ciencias-contabeis/

Rezende, C. C. da S., Cantarino, L. A. B., Souza, P. F. de, Alves, T. O. M., & Campos, R. S. (2022). O impacto de aspectos socioeconômicos no desempenho de estudantes de Sistemas de Informação no Enade. Revista Brasileira de Informática na Educação, 30, 157–181. https://doi.org/10.5753/rbie.2022.2093

Rodriguês, J. A. A., Bazani, C. L., & Leal, E. A. (2020). Fatores que afetam a escolha da profissão contábil: um estudo realizado com os alunos de uma IES pública de minas gerais. Revista de Contabilidade da UFBA, 14(3), 91-111. https://doi.org/10.9771/rc-ufba.v14i3.38698

Rodrigues, L. L., Pinho, C., Bugarim, M. C., Craig, R., & Machado, D. (2017). Factors affecting success in the professional entry exam for accountants in Brazil. Accounting Education, 27(1), 48-71. https://doi.org/10.1080/09639284.2017.1361851

Rodríguez-Esteban, A., & Vidal, J. (2022). El arrepentimiento respecto a los estudios en universitarios españoles desde la perspectiva del desajuste formación-empleo. Education Policy Analysis Archives, 30(79), 1-21. https://doi.org/10.14507/epaa.30.6683

Rudakov, V., & Roshchin, S. (2019). The impact of student academic achievement on graduate salaries: the case of a leading Russian university. Journal of Education and Work, 32(2), 156-180. https://doi.org/10.1080/13639080.2019.1617839

Saavedra-Caballero, F., & Van Bellegem, S. (2021). About job market outcomes: Assessing the performance of Colombian higher education institutions. Higher Education Quarterly, 76(4), 1-20. https://doi.org/10.1111/hequ.12340

Santana Junior, G. M. de, & Callado, A. L. C. (2017). Discriminação salarial entre homens e mulheres no mercado de trabalho dos contadores do nordeste brasileiro. Revista Mineira de Contabilidade, 18(2), 70-82. https://revista.crcmg.org.br/rmc/article/view/674

Silva, C. L. R., Pontes, G. A., & Silva, V. R. (2018). Análise do Desempenho dos Candidatos por Região no Exame de Suficiência do CFC no Período de 2011 a 2017. XV Congresso USP de Iniciação Científica em Contabilidade, São Paulo, São Paulo. https://congressousp.fipecafi.org/anais/18UspInternational/ArtigosDownload/790.pdf

Silva, M., & Padoin, M. J. (2008). Relação entre o desempenho no vestibular e o desempenho durante o curso de graduação. Ensaio: Avaliação e Políticas Públicas em Educação, 16(58), 77-94. https://doi.org/10.1590/S0104-40362008000100006

Sistema IBGE de Recuperação Automática – SIDRA. (2014). Cadastro Central de Empresas. Recuperado de: https://sidra.ibge.gov.br/Tabela/992

Souza, P. V. S., & Sardeiro, L. S. M. (2019). A Relação entre o Exame de Suficiência Contábil o Exame Nacional de Desempenho de Estudantes e o Conceito Preliminar de Curso das Instituições de Ensino Superior do Brasil. Sociedade, Contabilidade e Gestão, 14(2), 100-123. https://doi.org/10.21446/scg_ufrj.v0i0.16184

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), 4-18. https://seer.ufrgs.br/index.php/ConTexto/article/view/69431

Vogt, M., Barbosa, E. T., Silva, M. Z. D., & Schmitz, A. P. (2020). Fatores determinantes das diferenças salariais entre as ocupações da contabilidade. Cadernos EBAPE.BR, 18, 336-352. https://doi.org/10.1590/1679-395177220

Vogt, M., Degenhart, L., & Biavatti, V. T. (2016). Relação entre formação docente, metodologias de ensino e resultados do Exame Nacional de Desempenho dos Estudantes de Ciências Contábeis. Revista Catarinense da Ciência Contábil, 15(45), 63-77. http://dx.doi.org/10.16930/2237-7662/rccc.v15n45p63-77

Wen, L., Hao, Q., & Bu, D. (2015). Understanding the intentions of accounting students in China to pursue certified public accountant designation. Accounting Education, 24(4), 341-359. https://doi.org/10.1080/09639284.2015.1051561

Ziroldo, L., & Abbas, K. (2021). Exame de Suficiência Contábil: determinantes do índice final de aprovação. USP International Conference In Accounting 21. São Paulo, São Paulo. p. 1-21. https://congressousp.fipecafi.org/anais/21UspInternational/ArtigosDownload/3543.pdf

Acknowledgments:
This work was supported by the Bahia State Research Support Foundation (FAPESB), Grant term BOL0468/2021.