

Entrepreneurship and its Relation with Financial Education of University Students

Empreendedorismo e sua Relação com a Educação Financeira dos Universitários

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ABSTRACT

This study aimed to evaluate the relationship between the entrepreneurial intention of university students and their financial education. It also sought to assess whether the subjects of entrepreneurship and finance increase their entrepreneurial intention and financial education, respectively. For that, a descriptive research with a quantitative approach was carried out, carrying out a survey with students of the Administration course of all levels of three Higher Education Institutions in the South Region of Brazil. The sample consisted of 420 students. For data processing, Exploratory Factor Analysis, Confirmatory Factor Analysis and Analysis of Variance were used. The results showed that the hypothesis that tested whether students who took courses in entrepreneurship have a greater entrepreneurial intention was not confirmed, while the one that verified whether those who took courses related to finance have greater financial education was confirmed. The relationship between the constructs for the complete sample was not confirmed, but when disaggregated by state, it was found that financial education positively influences the entrepreneurial intention of students in Paraná.

Keywords: Entrepreneurship. Entrepreneurial Intent. Financial education.

Submitted: 18/04/2023

Accepted: 08/12/2023

RESUMO

Este estudo teve como objetivo avaliar o relacionamento entre a intenção empreendedora de estudantes universitários com sua educação financeira. Buscou também avaliar se as disciplinas de empreendedorismo e finanças aumentam sua intenção empreendedora e educação financeira, respectivamente. Para tanto, foi feita uma pesquisa descritiva com abordagem quantitativa, realizando-se uma **survey** com os alunos do curso de Administração de todos os níveis de três Instituições de Ensino Superior da Região Sul do Brasil. A amostra esteve composta por 420 estudantes. Para o processamento dos da-

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RESUMO

dos, utilizou-se a Análise Fatorial Exploratória, Análise Fatorial Confirmatória e Análise de Variância. Os resultados apontaram que a hipótese que testou se os alunos que cursaram disciplina de empreendedorismo têm uma maior intenção empreendedora não foi confirmada, já aquela que verificou se aqueles que cursaram disciplinas relacionadas com finanças têm uma maior educação financeira confirmou-se. Não foi confirmada a relação entre os constructos para a amostra completa, mas quando desagregada por estado se constatou que a educação financeira influencia positivamente a intenção empreendedora nos alunos do Paraná.

Palavras chave: Empreendedorismo. Intenção Empreendedora. Educação Financeira.

Introduction

After the emphasis given by the Organization for Economic Co-operation and Development (OECD, 2005) on issues related to financial literacy, with the elaboration of principles and good practices of financial awareness, the theme began to gain notoriety in an academic, as well as social and governmental contexts. In addition, according to Silva and Lucena (2022), moments of financial crises show the unpreparedness of families with regard to financial planning, causing debt levels to grow.

The combination of unfavorable scenarios and the inability of individuals to stimulate and manipulate investments directly affects the country's capacity for development. This is evident since the set of individual actions affects the entire national economy, as it is directly linked to the levels of delinquency, indebtedness and the country's investment capacity. According to a survey carried out by the National Confederation of Commerce of Goods, Services and Tourism, released in January 2023, indebtedness reached 77.90% of Brazilian families in 2022 (credit card, store cards, personal loans or car financing installments, real estate), with 26% of these families having overdue bills.

Entrepreneurial intentions, as Bird (1988) points out, are not only characterized by the creation of a new business, but also by ideas in an existing business. They encompass the motivational factors that influence behavior, being indicators of how much effort the individual intends to exert to manifest a behavior (AJZEN, 1991). Moraes et al. (2021) treat entrepreneurial intention as the real behavior of the

individual and a set of social, cultural, and economic variables that influence the willingness to start a business.

Considering that the failure of an enterprise may be related to the lack of adequate financial education and that these deficiencies have already been pointed out in the works of Lizote, Simas and Lana (2012); Verdinelli and Lizote (2014); Gonçalves and Ponchio (2018); Karakurum-Ozdemir, Kokkizil and Uysal (2019); Veiga, Moura and Iguchi (2019), Muñoz-Murillo, Álvarez-Franco and Restrepo-Tobón (2020), a research that analyzes the relationships between the intention to undertake and the degree of financial knowledge of the students becomes relevant. In addition, López-Medina et al. (2021) and Couto, Maracajá and Machado (2022) show that this theme, due to the growing number of scientific productions in recent years, has been gaining relevance in the scientific community.

Campos, Moraes and Spatti (2021) point out that it is up to Higher Education Institutions, in fulfilling their function of training students as social contributors and wealth generators, to train and stimulate them to entrepreneurial initiatives, so that managing their own businesses emerges as a profitable and fulfilling alternative. In view of this reality highlighted by the authors and considering that many of the students in the programs of applied social sciences present entrepreneurial behavior, there is a concern to relate their financial education with the possible entrepreneurial actions that they feel in a position to develop.

In view of the above, the question that guided this research arises: How is the entrepreneurial intention of university students related to their financial education? To answer this question, the general objective was to evaluate the relationship between the entrepreneurial intention of university students and their financial education. It also sought to assess whether the courses of entrepreneurship and finance increase their entrepreneurial intention and financial education, respectively. Thus, the findings of this research will support the understanding of the existing theoretical framework on the themes. The practical aspect is also highlighted, as the result of this study may help to improve the curriculum of the courses. And, therefore, contribute so that students have enough knowledge to properly manage their finances when they graduate, as well as give subsidies to future entrepreneurs to make decisions with confidence for their business to grow and to heat up the economy.

Regarding this study being directed to young university students, it is justified by the importance of the economic decisions that will be made, in the near future, by this segment of the population. Thus, by forming more financially aware adults, Higher Education Institutions, doing justice to the relevant role they play in society, will be collaborating to reverse the lack of financial education among economically active people, from their youth to old age.

Structured with this introduction, the article is based on a theoretical framework on financial education (GILLIGAN, 2012) and the theory of planned behavior (AJZEN, 1991; LIÑÁN; CHEN, 2009). The research method, of a descriptive, quantitative nature and with the support of statistical procedures, made it possible to relate the entrepreneurial intention with the financial education of university students, testing the conjectured hypotheses. The final considerations and references on the cited bibliographic material complement the text.

Theoretical Framework

FINANCIAL EDUCATION

Financial success does not depend on how much one earns, but on how the individual works out their personal finances. Remund (2010, p. 284) defines financial education as “the understanding of financial concepts and the way in which they manage their finances in planning and decision-making, considering aspects of the individual’s financial life as well as economic aspects”. Thus, financial education and personal finance are the skills and the knowledge for effective decision-making in relation to financial resources (STRÖMBÄCK et al., 2017). Lusardi (2019) highlights that those who have a better level of financial knowledge are more likely to plan, save, invest in stocks, and accumulate wealth throughout their lives.

According to Gaudecker (2015), with financial education, individuals can develop skills that help them in decision-making and in efficient planning of their personal finances. According to a study conducted by Allgood and Walstad (2016), it was evidenced that people manage their budgets, facing restrictions, income restraints, acquisition of goods and services, and even long-term investments. Therefore, facing an unstable and constantly changing financial scenario becomes a challenge even for the most organized ones.

It should be noted that there is no correct formula for financial planning, each individual must adapt the techniques to their conditions. Planning does not require complex calculations, only discipline and some sacrifices that are nothing more than the postponement of consumption (COSTA et al., 2021).

Gilligan (2012) defends the idea that a lack of financial education may have long-term consequences. In this sense, Carraro and Merola (2018) highlight that part of personal indebtedness comes from the lack of budget planning and control of Brazilian families, and financial education is a fundamental element to improve financial organization. Financial education can help develop skills for financial planning and better emotional control in various situations, such as choosing to save instead of making an impulsive purchase motivated by internal or external factors (COUTO; MARACAJÁ; MACHADO, 2022).

Complementing Gilligan's (2012) idea, Potrich, Vieira, and Kirch (2015) ratify the need for individuals to acquire financial literacy, and suggest the development of actions to solve this problem, such as the inclusion of finance courses in all undergraduate programs.

Individuals should be prepared to take care of their finances even before entering college, since this stage is when they enter the workforce and begin to plan for their future. In this sense, the school has a fundamental role in serving as a support to transform the current model of society by assisting individuals in the acquisition of notions or by complementing the knowledge already acquired about financial education (DAL MAGRO et al., 2018).

In this study, we chose to work with Gilligan's (2012) measurement model. To collect the data, the author validated an instrument that differs from others because it considers the variable financial stress. As a basis for his alignment, Gilligan used Remund's (2010) concept that defines financial education as a measure of the degree to which one understands the main financial concepts and possesses the ability and the confidence to manage personal finances through this perspective, short-term decision-making and long-term financial planning aware of life events and evolving economic conditions.

The measurement model designed by Gilligan (2012) approaches personal finance under four dimensions: social capital, perceived self-efficacy, consideration of future consequences, and financial stress.

Portes (2010) understands social capital as the ability to access resources by virtue of the participation of broad social networks or structures. That is, social interactions influence the development and characteristics of society, bringing consequences to the individuals who belong to it.

Self-efficacy is identified as people's judgment of their abilities to organize and to perform actions necessary to achieve designated types of performance – it is not concerned with the skills one has, but with the judgment of what one can do with the skills one has (Bandura, 1986). For the author, it is also understood as a personality trait that affects the motivation to successfully perform tasks or the degree of tolerance to face certain adverse situations, and also the individual perception of risk.

The consideration of future consequences, according to Strathman et al. (1994), is a construct that expresses the difference that may exist in people's responses when comparing the immediate consequences with the future ones, as a result of a potential behavior in the present. The research of these authors, carried out with university students, has demonstrated its validity by studying how much an individual can be influenced by persuasive communication and also by demonstrating that it is a very effective construct to predict behaviors.

The inefficient management of financial resources results in stress, and given that many college students manage their resources for the first time, it is very likely that they are prone to experiencing this feeling, although it is not because they have mismanaged. In any case, stress can serve as a benchmark of low financial literacy (GILLIGAN, 2012). In Gilligan's study, financial stress was used, and thus defined as any perceived difficulty due to unforeseen financial emergencies or inadequate financial resources.

ENTREPRENEURIAL INTENT

The formalization of research on entrepreneurial intention (EI) began with the studies of Shapero (SHAPERO; SOKOL, 1982; SHAPERO, 1984), and Ajzen (1991). Subsequently, with the growth of research in this area, the works of Autio et al. (2014); Saeed et al. (2015); Ferreira, Loiola and Gondim (2017); Paiva et al., (2018); Martins, Santos and Silveira (2019); Paiva et al. (2020), Krüger et al. (2021); Rocha, Pelegri and Morais (2022); Frota, Bezerra and Martins (2022).

Krueger and Carsrud (1993) assume that the intention to start a new business is preceded by the desire to achieve it, the feasibility and the propensity to act on the opportunities. Entrepreneurial intent is the commitment to start a new business, that is, a predisposition of an individual to create one. Thus, according to Ajzen (1991), intention encompasses motivational factors that inspire behavior. Such factors are indicators of how strong the will to try is, or how much effort the individual makes to show a behavior. Vasconcelos et al. (2020), in turn, highlight that entrepreneurial intention is a cognitive representation of the readiness to perform a certain behavior and an immediate antecedent of behavior.

Intention is a construct that has been gaining attention in the field of entrepreneurship due to its ability to predict behavior and to understand how intentions are shaped within the field of entrepreneurship (FAYOLLE; GAILLY, 2015; MORAES et al., 2021). Due to this issue, there has been a growing interest in initiating and increasing the promotion and the support of entrepreneurship among students (ADEEL; DANIEL; BOLTELHO, 2023), in addition to being pointed out as one of the most relevant aspects to be researched in relation to the phases of creating a business (VODĀ; FLOREA, 2019). Therefore, entrepreneurial intent can be a state of mind that directs individuals toward a specific goal (SAEED et al., 2015; SANTOS et al., 2020).

Paiva et al. (2018) point out that entrepreneurial intention is directly linked to entrepreneurship, and can be considered an individual process. Entrepreneurship, in turn, is established as a key to productivity and competitiveness in a dynamic process of vision, and is related to economic growth, expressed in innovation and job creation. (SCHUMPETER, 1982; KURATKO, 2016; SANTOS, SÁ BARRETO; GUZMAN, 2017; BRITO et al., 2022). The entrepreneur is not only an executor, but a thinker, because he or she plans before acting, that is, an actor who innovates, recognizing opportunities; he or she makes moderately risky decisions that lead to actions that require efficient use of resources and contribute with an added value (BEHLING; LENZI, 2019).

However, there is no consensus on the variables that influence the individual's decision to start a business. Cognitive approaches involve considerable interest and are crucial in understanding the decision related to the creation of companies (KRUEGER, 2000; BARON; WARD, 2004). For Fayolle, Liñán and Moriano (2014), the predominant perspective in the cognitive behavioral approach to entrepreneurship focuses on entrepreneurial intent, integrating diverse personality traits and a range of related values.

In the theoretical field, there are several models that address entrepreneurial intent. Krueger and Carsrud, in 1993, applied in a pioneering way in the field of entrepreneurship the Theory of Planned Behavior (TPB) presented and proposed by Ajzen (1991). TPB predicts that behavior and intention to act result from the combination of three attitudes: (i) the individual attitude towards this behavior; (ii) that of the subjective norm that is implicit in it; and (iii) perception of perceived behavioral control. Intention is considered the best independent predictor of behavior (AJZEN, 1991; 2001). The variables that influence intentions are called motivational antecedents (AJZEN, 1991). Thus, the entrepreneurial intention is greater when the three antecedents or attitudes are favorable to the behavior, which makes the individual more likely to perform it (AJZEN, 1991).

Although TPB suffers criticism for not ensuring that this entrepreneur will undertake, it helps to understand the formation of entrepreneurial intention (LIÑÁN; CHEN, 2009) and turned out to be an important model of cognitive evaluation process (KOE et al., 2012). The model explains the complexity of the relationship between human behavior and determinants. The most important thing is the identification of human behavior as the cause of the intention.

Based on this, Liñán and Chen (2009) adapted the model developed by Ajzen (1991) to manifest human behavior in certain situations and created an instrument with the objective of measuring entrepreneurial intention.

In the present study, we chose to use the model of Liñán, Chen (2009) in the Brazilian context. For the authors, the instrument is composed of four subscales, namely: attitude towards entrepreneurship, subjective norms, perceived behavioral control and entrepreneurial intention.

Personal attitude is related to the positive or negative personal evaluation of the individual being an entrepreneur (KOLVEREID, 1996; AJZEN, 2001; AUTIO; KEELEY; KLOFSTEN, 2001). It includes not only the affective, but also considers an evaluation (LIÑÁN; CHEN, 2009). Individuals develop attitudes based on the beliefs they hold and on the consequences of performing the behavior (AJZEN, 2005) Such consequences include intrinsic and extrinsic rewards, such as financial rewards, independence or autonomy, personal rewards, and family security, all of which favorably influence the intention to start a business (VASCONCELOS et al., 2020; MONTEIRO et al. 2020). The attitude towards entrepreneurial behavior according to

Marcon, Silveira, and Frizon (2021) refers to the degree to which the person makes a positive or a negative evaluation of the behavior.

The subjective norm measures the perceived social pressure to perform or not to perform entrepreneurial behavior, and reflects the effect of social values (AJZEN, 2001). It is determined by the individual's perception of the beliefs that the people important to him have about the behavior he should perform, and also by the individual's motivation to satisfy the expectations that others have about him (MARCON; SCOTT; FRIZON, 2020).

Perceived behavioral control is defined as the perception of the individual's ease or difficulty in performing a certain behavior, based on past experiences, impediments, and obstacles (LIÑÁN; CHEN, 2009). In the context of entrepreneurial activity, according to Ajzen (2001) it can also be called entrepreneurial self-efficacy. Krueger, Reilly and Carsrud (2000) have argued that business self-efficacy greatly influences behavior, whereas someone's propensity to act on an opportunity refers to their innate willingness to act on decisions and depends on their own perceptions of control.

In the model of Liñán and Chen (2009) there is a particularity: they studied whether the subjective norm can influence both personal attitudes and perceived behavioral control, but this hypothesis was not confirmed. As Liñán and Santos (2007) have already described, the subjective norm is a specific form of social capital and has a causal effect on the other two antecedents of entrepreneurial intention.

For Fontenele, Brasil and Souza (2015), in the process of entrepreneurial intention, the components of TPB must be added to other aspects such as demographic, cultural, business and family trajectories. Such factors may facilitate or hinder entrepreneurial action. Rocha, Pelegrini, and Moraes (2022) highlight the contextual perspective, especially the university, which can contribute to the formation of entrepreneurial intention.

Based on the theory presented, the following hypotheses were formulated:

- H1:** Financial education positively influences entrepreneurial intent.
- H2:** Students who have already taken finance courses have a better financial education.
- H3:** Students who have already taken the entrepreneurship course have a better entrepreneurial intention.

Methodology

The methodological conception adopted had a quantitative approach with relational scope and the method chosen was the survey, with a cross-sectional design. The universe of the research was composed of the southern region of Brazil and the sample consisted of three Higher Education Institutions (HEIs) in the south of Brazil, one institution from each state – Rio Grande do Sul, Santa Catarina and Paraná. The data for this research were collected from students at all levels of the Business Administration undergraduate program. Liñán and Chen (2009) state that a sample composed of university students is very common in research on entrepreneurial intention. This sample offers advantages, such as similar age and qualification, making the sample more homogeneous.

Data were collected through a self-administered questionnaire (survey). First, telephone contact was made with the three largest universities (considered by the number of students enrolled) through the coordinators, and later, an e-mail was sent with the cover letter justifying the importance of the answers to the present study, as well as the questionnaire to verify the participating universities. Subsequently, the coordinators sent the questionnaires to the students via e-mail with the help of the Google Docs tool. The population consisted of 732 students and the sample resulted in 420 respondents.

The research instrument was organized into three blocks. The first and second blocks referred to Gilligan's (2012) model. In the first one, social capital data were recorded with 11 questions and 2 more questions were included, investigating whether or not the respondent had attended the entrepreneurship and finance course, and the finance course referred to any course related to finance.

The second block referred to financial education. It consisted of 29 questions with 7 answer options, ranging from strongly disagree (1) to strongly agree (7). Comprising: a) self-efficacy perceived with seven items; b) consideration of future consequences with ten items and c) financial stress with 12 items.

The third block consisted of questions related to entrepreneurial intention according to the model of Liñán and Chen (2009), based on the theory of planned behavior (AJZEN, 1991) composed of 18 questions. They comprise four subscales: a) personal attitudes, with four items; b) subjective norms, with four items; c) perceived

behavioral control, with six items, and d) entrepreneurial intention, with four items. The first item of the entrepreneurial intention (IE1) had its value reverted because it referred to a negative question.

A total of 514 questionnaires were collected and organized in an Excel® spreadsheet to perform the pre-treatment according to the recommendations of Hair Jr. et al. (2009). Initially, 82 questionnaires from Rio Grande do Sul were eliminated to balance the sample. Respondents who failed to answer more than five questions were excluded, and 5 questionnaires from Rio Grande do Sul, 5 questionnaires from Santa Catarina and 2 from Paraná were excluded. Thus, the total number of valid questionnaires was 420, of which 152 were from Paraná, 123 from Santa Catarina and 145 from Rio Grande do Sul.

After this procedure, it was found that there were 149 missing data, which represent 0.75% of the total, much lower than the maximum allowed of 10% (HAIR Jr. et al., 2009). The missing data were filled in by the median value of the question in which there was no answer. Next, the data were imported into the Statistica® and SPSS softwares® with which the statistical analyses were performed.

Subsequently, the calculations of asymmetry and kurtosis were performed in order to estimate the normality of the data. The asymmetry aims to identify the degree of deviation in the frequency distribution of a variable from the position in which the mean and median coincide (HAIR JR. et al., 2009). The purpose of kurtosis is to verify the degree of elevation or flattening of a frequency distribution (KLINE, 2011). Finney and DiStefano (2006) state that data with modulus coefficients of up to 2 for asymmetry and 7 for kurtosis can be considered almost normal.

To analyze whether the entrepreneurship course increases their entrepreneurial intention and whether the finance-related courses increase their financial education, the Analysis of Variance (ANOVA) was used. To evaluate the relationship between financial education and entrepreneurial intention, the factorial model and structural equation modeling were used. In order to define unidimensionality, the following criteria were established: confirmation of the feasibility of factor analysis by means of the Kaiser-Meyer-Olkin test (higher than 0.7) and Bartlett's sphericity test (less than 0.05); commonality (higher than 0.4); factor loadings of the items (higher than 0.6); variance extracted by the factor (higher than 50%); and the reliability of internal consistency, as measured by Cronbach's alpha (higher than 0.6).

Exploratory Factor Analysis (EFA) was performed for each dimension of each construct in the Gilligan (2012) questionnaire, which refers to perceived self-efficacy, consideration of future consequences and financial stress, and also for the Liñán and Chen's (2009) questionnaire, related to personal attitude, subjective norms, perceived behavioral control, and entrepreneurial intention. Through Confirmatory Factor Analysis (CFA), the measurement model for each construct was evaluated, including the dimensions considered, using the AMOS® software. From this analysis, it was found that the load values of the dimensions of each construct are higher than 0.4.

After this phase, the factor scores for each respondent were obtained according to the representative items of the dimensions, and from them the analyses of the relationships among the constructs were performed.

Results and Analysis

The values of asymmetry and kurtosis were within the values stipulated in the previous chapter, showing that the data may be considered almost normal. To verify if it was possible to use factor analysis with the data of the two constructs (financial education and entrepreneurial intention), the commonality, the Kaiser, Meyer and Olkin sample adequacy test (KMO) and the Bartlett sphericity test were verified. In commonality, only item IE1 of the entrepreneurial intention dimension did not reach the minimum recommended value. In this case, the analyses were performed again without this item, which presented a commonality of 0.294. In the construct of financial education, item CCF6 of the indicator consideration of future consequences did not reach the minimum recommended value, with a commonality of 0.245.

For both constructs, the Kaiser, Meyer and Olkin tests were significant, and when performing the Bartlett sphericity test, the results were all significant. The adequacy measures of the KMO sample in all its indices reached values higher than 0.70. The sphericity tests, in turn, showed a significance of $0.000 < 0.05$. For this reason, the variables of the correlation matrix have significant associations among them. Regarding Cronbach's alpha, the value was adequate. These values indicated that with the data collected for the constructs, factor analysis can be used.

In the construct of financial education, when analyzing the data on considerations of future consequences, two factors were generated, representing different dimensions of this variable. Associating the issues included in each factor, it can be observed that one refers to the immediate consequences, that is, the individual will make his decisions thinking about today. The other factor refers to issues that are related to decisions made with the long term in mind. Considering this fact, a separate analysis was performed for each dimension.

With the aid of SPSS® and AMOS® software and using the data obtained from the EFA, confirmatory factor analysis was performed in order to verify the validity of the constructs of the measurement model. Following, the indicators of adjustment of the constructs or their dimensions are presented in accordance with the minimum expected values, being absolute adjustment GFI – higher values indicate better fit, without established reference; RMSEA expected value ≤ 0.10 , incremental adjustment NNFI and NFI expected value > 0.900 ; and parsimonious adjustment χ^2/ gl expected value ≤ 3 ; CFI, IFI and RFI expected value ≥ 0.900 , according to Hair Jr. et al. (2009).

By the CFA, it was found that the relationships between the latent variables and their indicators had values higher than 0.5, the recommended value, with the exception of item EF10 of the financial stress variable of the financial education construct, which had 0.39. Although it had a value below the recommended one, it was maintained to have three indicators related to debts, generating stress.

Chart 1. Shows the adjustment indicators of the confirmatory factor analysis

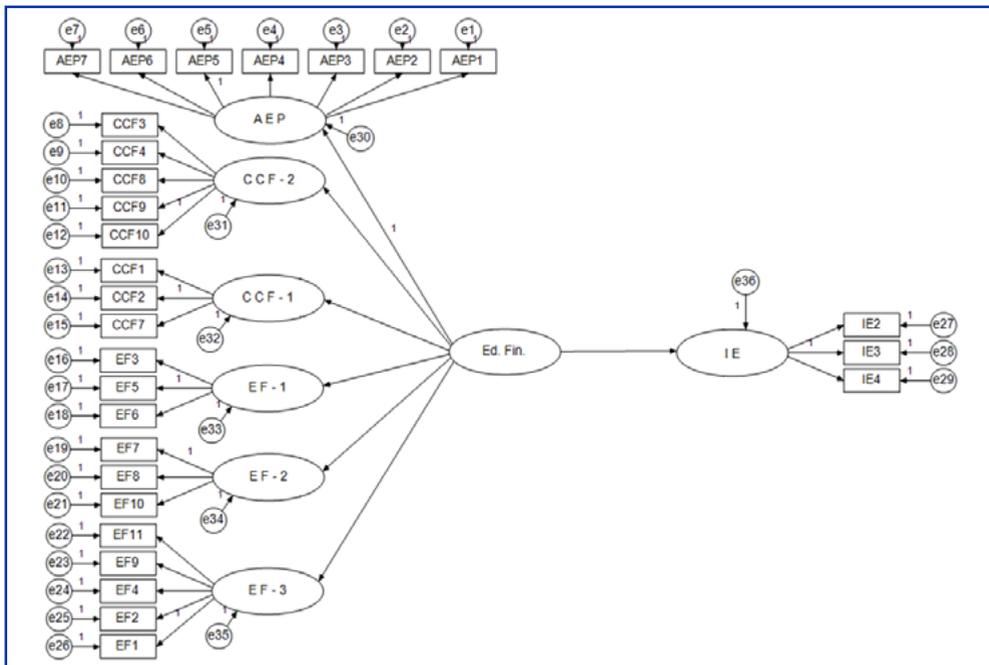
Variável	Qui quadrado (χ^2)	p do (χ^2)	gl	(χ^2)/gl	CFI	GFI	NFI	NNFI	RMSEA
AEP	129,246	0	14	9,232	0,923	0,917	0,915	0,885	0,140
CCF-1	Não se aplica quando há três itens								
CCF-2	45,551	0	5	9,11	0,937	0,956	0,93	0,874	0,139
EF-1	Não se aplica quando há três itens								
EF-2	Não se aplica quando há três itens								
EF-3	40,169	0	5	8,034	0,922	0,961	0,922	0,845	0,130
IE	Não se aplica quando há três itens								
ARC	0,35	0,84	2	0,175	0,998	0,983	0,992	0,985	0,000
CCP	127,878	0	9	14,209	0,924	0,9	0,919	0,873	0,178
NS	21,628	0	2	10,814	0,983	0,973	0,981	0,948	0,153

The results of the table above indicate that the variables can be considered acceptable to be included in the measurement model.

After performing the individual analyses of the covariance relationships by the CFA, the general measurement model was established. When processing the data with the AMOS® software, it was found that the covariance relationships were significant, making it possible to formulate the structural model.

Figure 01 shows the structural model defined from the general measurement model, which included entrepreneurial intent. Entrepreneurial intent is formed by the antecedents - attitudes towards behavior, perceived behavioral control, and subjective norms, these antecedents that represent the construct. Thus, the model to be tested follows with the entrepreneurial intention only. In the figure, the ellipses represent the latent variables, the rectangles, in turn, correspond to the observable indicators, and the circles show the error terms associated with each indicator or dimension. The single-pointed arrows in reflective relations move from the ellipse to the rectangles, while in causal relationships, they go from one ellipse to the other. In the model presented, we only have the causal relationship between financial education and entrepreneurial intention.

Figure 1. Structural model



Initially, the modeling was developed with the data from the three HEIs together and it was possible to verify that the relationship between Financial Education (Ed. Fin.) and Perceived Self-Efficacy (AEP) and the dimension that deals with immediate consequences (CCF1) for Future Consequences Considerations were positive, with standardized coefficients of 0.28 and 0.16 respectively. The other relationships with Financial Education were negative, so the Long-Term Decisions (CCF 2) dimension of the Future Consequences Considerations had a coefficient of -0.31, and the Financial Stress in the Unpredictable Income dimension (EF1) -0.87, in the Debts dimension (EF2) -0.67 and in the Low-Income dimension (EF3) had a coefficient of -0.91. The causal relationship between the construct Financial Education and Entrepreneurial Intention (IE) was the only non-significant coefficient ($p=0.656$).

In order for the found results to be considered relevant, the model must find sustainability in relation to the adjustment ratios. Among the indicators, most were within or very close to the ranges interpreted as desirable. The chi-square divided by the degrees of freedom (χ^2/gf) and the Root Mean Square Error of Approximation (RMSEA) are considered optimal when they have values lower than those suggested as desirable.

The model was also tested for respondents from each state separately, but only students from Paraná had a significant causal relationship, with a standardized coefficient of 0.34, with a significant value ($p=0.002$). The χ^2/gf and RMSEA adjustment indices were also excellent, with values of 2.499 and 0.10, respectively.

This research sought to know if there is a relationship between the constructs Financial Education and Entrepreneurial Intention. To this end, Hypothesis H1 was formulated: *Financial education positively influences entrepreneurial intention*. The complete data, that is, including the answers obtained from the students of the three states, showed that there is no relationship between these two constructs. In other words, financial education does not influence students' entrepreneurial intent.

These results seem surprising, because, as Machado and Verdinelli (2004) point out, in the case of micro and small enterprises, behavioral factors are determinants of the success or failure of this type of enterprise in the first five years of life. In this way, a behavior appropriate to personal finance would help these individuals to make the right decisions also in relation to their business, as already mentioned by Vieira et al. (2011).

These previous findings lead to research that hypothesis, taking into account the curricula of the Higher Education Institutions (HEIs) participating in the sample. In the case of the HEI in Paraná, it was found that entrepreneurship and courses related to financial management are part of the curriculum at the beginning of the career, which does not occur in other institutions. Therefore, we proceeded to test H1 with data from each state and it was found that the hypothesis is supported only in the case of Paraná.

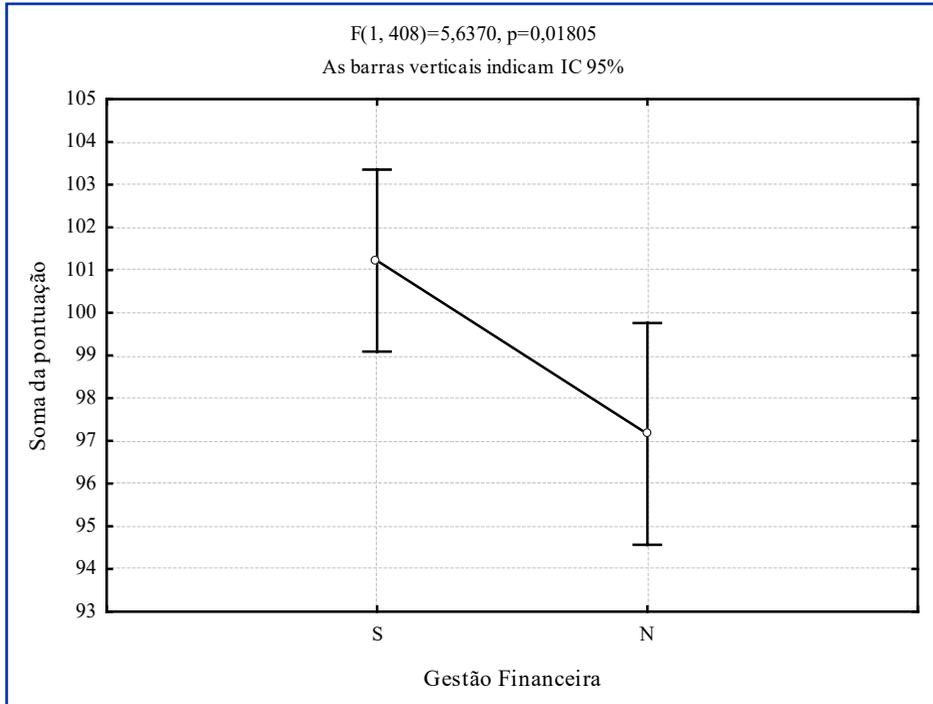
Taking into consideration the placement of Thompson (2009), who states that although the intention to open a business may exist, some individuals may open it in the future and others may never create their business. As well as the view Lima et al. (2015), who emphasize that a potential entrepreneur does not imply that he should have the intention to undertake, in other words, that there are individuals prepared to undertake but do not have the intention, just as some have the intention, however, are not prepared, we sought to answer the research question, which says: *how is the entrepreneurial intention of university students in Business Administration programs related to their financial education?*

The results showed that the students from Paraná, although scoring lower values, their entrepreneurial intention and financial education maintained coherence in their answers. That is, those who score low values do so for both constructs and those who score high values to one also do so for the other. In this way, the relationship between the constructs becomes significant and, according to the model proposed based on the theory, it is possible to support the hypothesis that financial education positively influences entrepreneurial intention.

To answer hypotheses 2 and 3, the ANOVA test was performed.

Graph 01 shows the sum of the scores of the items defined by the EFA of financial education, which refers to the sum of the students' answers. It can be verified by the F test that there was significance when the dependent variable was whether the students had already participated in finance-related courses ($p=0.018$). This result shows that students who have taken these courses score higher values, that is, they consider themselves to have a better financial education than students who have not yet participated in such courses.

Graph 1. ANOVA of financial education



The sum of the financial education scores was compared when the categorical variable was the states in which the samples were obtained, of which students from Rio Grande do Sul consider themselves to have a higher financial education compared to the states of Santa Catarina and Paraná.

The hypothesis H2 seeks to confirm whether *students who have already taken the course of finance have a better financial education*. As the undergraduate program does not have personal finance subjects, students were asked to answer this question based on courses taken in the area of finance. To find an answer to this question, we compared the sum of the scores of students who have already taken and those who have not yet taken courses related to financial management through ANOVA above.

As shown in Graph 01, hypothesis H2 was supported, since students who have already taken these courses have a higher average, which implies better financial education. This result corroborates Gilligan (2012) who points out that

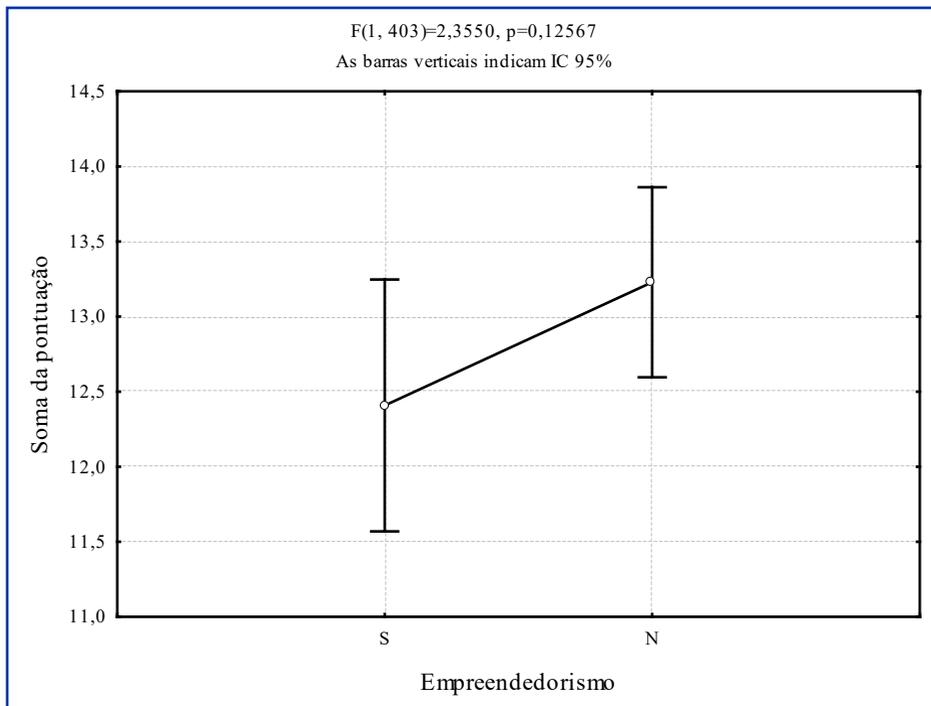
individuals should be prepared to take care of their finances even before entering college, since it is at this university stage that they enter the job market and begin to plan their future.

Finance-related courses are compulsory in all institutions in the sample. In Paraná, students have access to these courses in the first semester, considering the new 2015 grid, given that in the old one it happened only from the fourth semester on. In Santa Catarina, in the fourth semester, these courses begin to be worked on, and in Rio Grande do Sul, from the fifth semester on. Despite the importance, not all courses have finance in their curriculum. Potrich, Vieira and Kirch (2015) ratify the need for individuals to acquire financial education and suggest the inclusion of such courses in all undergraduate programs, as well as educational programs for all sectors of society to achieve financial education.

In the comparison of Financial Education by each state, students in Rio Grande do Sul consider themselves to have a higher Financial Education, followed by the state of Santa Catarina and later Paraná. However, the average of the students from Rio Grande do Sul and Santa Catarina were statistically equal. Paraná's average was lower, being statistically different from the other two states. In the findings of Potrich, Vieira and Ceretta (2013), students present a positive and satisfactory financial behavior, and the behavior seen as unsatisfactory is related to investment and savings. Therefore, these topics should be included in the courses that deal with finance.

Graph 02 shows the sum of the scores of the items defined by the EFA of Entrepreneurial Intention, which refers to the sum of the students' answers. The predictor variable was whether they had attended (Y) or not (N) the entrepreneurship course. The F test with a degree of freedom in the numerator and 403 respondents in the denominator shows a lack of significance, that is, the value of $p=0.126 > 0.05=$. This shows that those who have already taken courses related to the subject do not have a better entrepreneurial intention.

Graph 2. ANOVA of entrepreneurial intention



The ANOVA was also performed using the sum of the scores given to the entrepreneurial intention and the states where the sample was collected as a predictor variable. In the simultaneous comparison, it can be observed that there are differences ($p=0.00007$), with students from Rio Grande do Sul being the ones who consider themselves to have a greater entrepreneurial intention. This means that they feel safer to become entrepreneurs in the future or to have innovative ideas in their work, compared to the other states – Santa Catarina and Paraná. The state of Paraná was the one with the lowest average, below the other states.

In relation to hypothesis H3, which assumes that *students who have already taken the entrepreneurship courses have a better entrepreneurial intention*, through ANOVA, the sum of the scores of the items that were confirmed by the CFA of the respondents who have already participated or not in the course was compared. The result did not confirm this hypothesis. From the surveyed sample of 420 students, only 147 students took the course, representing 35% of the total sample. Entre-

preneurship is a mandatory course and is worked on in the second semester in the state of Paraná. For this reason, it has the majority of students who have already taken this course, with 103 students. For the states of Rio Grande do Sul and Santa Catarina, the course of Entrepreneurship has no prerequisite and may be taken in any period or phase of the program.

These results are in line with the findings of Lima et al. (2015) that there is no variation in students' entrepreneurial intention that can be associated with the variation in how much they take from courses. According to Alvarez and Busenitz (2001), when Higher Education Institutions do not offer adequate entrepreneurial education, it is expected that students will be less likely to become entrepreneurs. Thus, Bronoski (2008) already stressed the importance of placing courses related to entrepreneurship in the curriculum of all programs. Hecke (2011), corroborating Bronoski's study, states that some modifications may be necessary, first, in the curricular restructuring of the programs, Administration and Accounting Sciences, inserting courses that contemplate the development of students' entrepreneurial intention.

Although research shows that entrepreneurship courses would increase students' Entrepreneurial Intent, this hypothesis was not confirmed. The sample may have influenced this result, since few students end up taking these courses at the beginning of the program because it is not so defined in the curriculum. On the other hand, in the sample, the majority belongs to the state of Paraná (70% of the total number of students who took the course). This may have had an influence, as some factors such as demographic, cultural, business or family trajectories can influence individuals in relation to their attitudes. Also, for Jaén and Liñán (2013), cultural values may influence the antecedents of entrepreneurial intention. However, this can only be confirmed through further research, evaluating the cultural factors of this sample.

As it can be observed in the comparison of the averages of Entrepreneurial Intention by state, the averages of Paraná and Rio Grande do Sul were statistically different, with Paraná having the lowest average. This could be related to the fact that most students in the state of Paraná have already taken the entrepreneurship course, so it deserves its own research to dilute the issue, as its position can be more realistic and not just enthusiastic.

Final Considerations

Entrepreneurship is a viable option for those who cannot find a job in the job market and for those who dream of starting their own business. Additionally, new businesses can help heat up a country's economy, improving its bottom line. However, for entrepreneurship to bring such benefits, it is necessary that individuals, when opening their business, make a good management of their company, and as mentioned by Machado and Verdinelli (2004), behavioral aspects are indicative of the success or failure of micro and small companies in the first years of life.

A prior knowledge of aspects related to the management of the business, as well as entrepreneurship and finances would help the individual achieve the company's goals. For Santos (2010), it is the courses related to business management that can awaken or transform young people into great entrepreneurs. Although the limitation of the study is that the sample includes only business students, it is important to point out that these courses should be offered in other programs, because some of them, such as dentistry, nutrition, physiotherapy, speech therapy, among others, will train professionals who are likely to open their business, however, these undergraduates do not receive basic management knowledge. At this point, the hypotheses of this study in which the courses related to entrepreneurship and personal finance were evaluated come in.

This research sought to assess whether the courses of entrepreneurship and finance increase their entrepreneurial intention and financial literacy, respectively. For these hypotheses, the findings show that in the case of entrepreneurship it was not confirmed, because students who have already studied entrepreneurship do not have a greater entrepreneurial intention. For Bird (1988), entrepreneurial intention is not only characterized by the creation of a new business, but also by new ideas in an existing business. In this sense, it would be like saying that individuals may have a high average in entrepreneurial intent, but have no intention of starting a business. In addition, the concept of entrepreneurship in individuals who have not taken the course is linked to the creation of a company, that is, becoming an entrepreneur, and not thinking that it is linked to innovation and new ideas. Thus, the questions in the questionnaire of Liñán and Chen (2009) can lead students to think exclusively about opening a business. Another influence that may have existed is the fact that most

students are already inserted in the job market, and may think that it is less risky to maintain and grow in the positions they occupy.

The hypothesis that dealt with the course of finance was confirmed. In other words, those who have already taken courses related to finance have a greater financial education. These results lead us to seek more and more improvements in the curriculum of undergraduate programs, since research shows us that although students have financial education, it is still much lower than expected. Potrich, Vieira and Kirch (2015) ratify the need for individuals to acquire this financial education, and suggest the inclusion of finance-related courses in all undergraduate programs. In addition, personal finance courses such as investing, debt, savings, should be worked on so that students acquire basic knowledge of finance, and therefore they can make sound decisions regarding their personal finances.

Finally, the main objective of this study was to analyze the relationship between the entrepreneurial intention of university students in the Business Administration program and their financial education. Bearing this in mind, hypothesis H1 was formulated, in which we sought to understand the strength of the relationship between these two constructs, however, this hypothesis can only be confirmed, showing that financial education positively influences entrepreneurial intention, when the respondent students have the courses related to these constructs at the beginning of their curriculum, as it is the case of the HEI of Paraná. The non-confirmation of this hypothesis for the HEIs of Rio Grande do Sul and Santa Catarina allows us to think of some questions, which may be answered in future research.

The following are some examples of such questions as suggestions for further studies: a) if entrepreneurship is related to innovation, and the entrepreneurial intention is not only to open a new business, but also to the elaboration of new ideas in an existing business, would it be interesting to add any more variables to the entrepreneurial intention proposed by Liñán and Chen (2009)? Or questions that relate to new ideas within organizations?; b) if the course of entrepreneurship does not increase entrepreneurial intention, is it being worked on in a way that stimulates entrepreneurial thinking?; c) if the course of finance increases financial education, would the inclusion of courses that deal with personal finance help students to increase their financial education?; and, d) considering the findings for the HEI of Paraná, other HEIs in Rio Grande do Sul and Santa Catarina that have the courses

of entrepreneurship and financial management could be identified at the beginning of the program and replicate this study?

This research has some limitations. Among them, the one that can be highlighted is the one related to the sample that was not probabilistic. A stratified sample could have been made taking into account the periods of the program and the number of students in each class. Another limitation that can be pointed out is not having considered the diversity of institutions that include the Business Administration program within the educational services they provide.

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