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# The Impact of the Family Background on Students' Entrepreneurial Intentions: An Empirical Analysis

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**Abstract:** In the current economic and social environment, a real challenge for youth is the acquisition and development of the relevant skills in entrepreneurship in order to consider entrepreneurship as a desirable employment choice. Given this aspect, the purpose of this paper is to investigate the main factors influencing students' entrepreneurial intentions, paying particular attention to their entrepreneurial family background. Additionally, the paper aims to explore the effect of entrepreneurial family background on the relationship between effectiveness of entrepreneurship education and entrepreneurial intention. We conducted a study where results were based on the outcomes of a survey among Romanian high school and university students in the final year (N = 617). Our four main hypotheses were tested through independent samples t-tests, correlation analysis, and hierarchical multiple regression analysis. The findings highlighted that the students with an entrepreneurial family background reported a higher entrepreneurial intention than those without such a background. The variables that positively influenced the entrepreneurial intentions of the students were entrepreneurial family background, effectiveness of entrepreneurship education, and entrepreneurial personality traits. Furthermore, this entrepreneurial family background negatively moderated the relationship between effectiveness of entrepreneurship education and entrepreneurial intention. For this reason, emphasis should be placed on both formal and informal entrepreneurial education, which will increase the propensity of young people to choose an entrepreneurial career.

**Keywords:** entrepreneurial intentions; self-employment; entrepreneurship education; entrepreneurial family background; entrepreneurial personality traits; students; hierarchical multiple regression analysis

## 1. Introduction

Unemployment is one of the biggest challenges for young people, taking into account that at EU level and elsewhere unemployment among young individuals (aged 18 to 24) is two to three times higher than the overall unemployment rate [1]. Choosing an entrepreneurial career is recognized as a plausible option for successfully integrating young people into the labour market and reducing the risk of social exclusion among youth [2–4]. Thus, an increase in employment through entrepreneurial activity among young people from different countries could achieve at least one of the 17 Sustainable Development Goals included in the 2030 Agenda for Sustainable Development [5]: Goal 8—“Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”.

Although there is plenty of evidence available that a fairly large segment of young people intends to develop an entrepreneurial career, statistical data [1,6] prove that there is a low level of

entrepreneurial activity among young people, measured both by the young self-employed and total early stage entrepreneurship activity (TEA) for those aged between 18 and 24. Therefore, the central question of entrepreneurship research is why individuals, especially young ones, choose or do not choose an entrepreneurial career, self-employment, or starting their own business.

Theoretical and empirical studies point out that intentionality is a central concept in understanding the reasons for individuals' careers [7]. In particular, entrepreneurial intention is considered a key aspect that explains the determination to start a business or to become self-employed. Entrepreneurial intentions (EIs), defined as "desires to own or start a business" [8], represent the antecedent of entrepreneurial behaviour in most career choice models [9], being a prerequisite for entrepreneurial behaviour [10].

Prior studies [4,7,11] have found that EIs of individuals can be determined by different factors (environmental or contextual factors and personal background factors), which can have a positive or negative influence, a direct or indirect influence, respectively. Also, a specific combination and interaction of the determinants of EI can drive entrepreneurial career choice [12–14]. Moreover, according to Dyer's model [15] of entrepreneurial careers, there are three important factors that can influence the entrepreneurial career choice. These are social factors, including educational experiences (formal and informal); individual factors such as entrepreneurial attitudes and traits; and economic factors, like the availability of network resources and economic resources. As regards the social factors, based on the social learning theory [16], researchers found that social influence via parents is an essential determinant of entrepreneurial career decisions. Thus, parental roles within the family business, observed from an early age, influence "the children's attitude towards becoming self-employed themselves" [13] (p. 122).

Based on these premises, the aim of this paper is to highlight the impact of Romanian students' exposure to prior family business as informal education, both directly, on students' entrepreneurial career intentions, and indirectly, on the entrepreneurship education–entrepreneurial intention relationship. The objectives of the research focus on analysing student entrepreneurial intentions and identifying differences between EI students in terms of entrepreneurial family background (EFB); identifying the direct effect of an EFB, effectiveness of entrepreneurship education (EEE), and entrepreneurial personality traits on students' entrepreneurial intentions; and emphasizing the moderating effects of an EFB on the EEE–EI relationship.

The topic is of real interest because the totalitarian regime in Romania, which lasted over 40 years, led to the drastic limitation of private initiative and the cessation of family business, in favour of large state-owned enterprises, based on common property. Moreover, a sustainable market economy is based on entrepreneurship, and Romania took this direction after the change of political regime in December 1989. Therefore, we are interested in the extent to which the family inheritance of entrepreneurial initiatives in the last three decades influenced the career intentions of the youth, and, at the same time, what types of young people show entrepreneurial intentions and to what extent entrepreneurial intentions are influenced by entrepreneurial education.

As for novelty, this paper fills the gap in the available research because it focuses on the moderating effect of entrepreneurial family background on the relationship between entrepreneurship education and the entrepreneurial intention of students. Also, the novelty of the paper lies in the socioeconomic context of the research, taking into account that in Romania, a former communist country, there is no other study that explores this moderating effect. Other Romanian studies [17,18] in the field highlighted the extent to which entrepreneurial intentions are influenced by certain psycho-behavioural traits of individuals and evaluated the influence of different types of education on these intentions or on the important determinants of venture creation among young students, such as locus of control, that are needed for achievement and entrepreneurial education.

## 2. Theoretical Background and Research Hypotheses

Scholars have recognized a broad influence of entrepreneurial family background (EFB) on the entrepreneurial intentions of offspring: modeling career options [12,19], acquiring human capital—especially entrepreneurial knowledge and skills [20]—providing better access to knowledge about entrepreneurial opportunities [21], and transferring financial and social capital to their children [21–23].

Empirical research [20,24–27] highlighted that the children from families with entrepreneurial backgrounds are more likely to start their own businesses or to join the family business. Sørensen [21] found that children with self-employed parents are twice as likely to become self-employed, but there is little evidence (from Danish data) to show that these young people become independent because they have privileged access to the financial or social capital of their parents, or because they have superior entrepreneurial abilities [21]. The most recent international report of the GUESSS Project—Global Student Entrepreneurship 2018 [26], based on 208,000 completed responses from 54 countries and 3000 universities, highlighted that the higher intention to become an entrepreneur among students with entrepreneurial parents, as opposed to students without entrepreneurial parents, depends on the parents' entrepreneurial performance.

According to social learning theory [16], which emphasizes that new patterns of behaviour can be acquired either through direct experience or by observing the behaviour of others, individuals learn (the informal learning) by observing the actions of their parents. In the context of role identification and social learning theories, Bosma et al. [28] state that four functions of entrepreneurial role models can be formulated that are interrelated: inspiration and motivation, increasing self-efficacy, learning by example, and learning by support.

The mechanisms of social influence via parents may include the transmission of skills gained through experience, tacit knowledge, and modeling of career options [20]. Walter and Dohse [29] argue that social networks play an important role in transferring tacit knowledge regarding how to seize entrepreneurial opportunities, with parental role models serving as a substitute for tacit knowledge obtained through entrepreneurial experience [28]. As Faas et al. [30] point out, parents with jobs requiring managerial skills, training and communication skills are able to transfer these skills to their children through a number of direct resources and indirect behaviours [30].

There have been studies [21,31] that explained the intergenerational transmission of self-employment, suggesting different mechanisms such as the influence of parental characteristics on children's aspirations and values and on the development of human capital (entrepreneurial skills). In addition, other potential sources of closure fostering the inheritance of self-employment are the financial and social capital of self-employed parents.

In order to highlight how the family business can impact, encourage, or constrain the EI of children, it is also important to take into consideration the main characteristics of the family business. Researchers [32] pointed out a high heterogeneity among family firms caused by a series of factors such as type of goal (economic vs. non-economic, and family-centred vs. business-centred) [33,34], resources, the involvement in and influence of the family upon the business [35–37]. As regards the entrepreneurial behaviours of family firms, entrepreneurship research identified significant differences among these firms that are determined by multiple factors. Thus, the feeling of family unity around their own firm [38], as well as the financial and social capital of the family [21] can explain why some family firms are more entrepreneurial than others. The organizational culture of family firms that fosters decentralization, a long-term orientation, as well as the ability to perceive technological opportunities and the desire for change [39,40] is also an important determinant of entrepreneurship in family firms. There are studies that claim entrepreneurship in family firms may be influenced by genetic factors [41] and by "role modeling by entrepreneurial parents" [27], suggesting that transgenerational inheritance is another driver factor of entrepreneurship in family firms. According to Jaskiewicz et al. [42], entrepreneurial heritage as a rhetorical reconstruction by the family of past entrepreneurial achievements or resilience helps to explain transgenerational entrepreneurship [42].

In addition, the same authors stated that children are taking over the inherited entrepreneurial legacies through active involvement in the family business and through storytelling in large and cohesive families. Exceeding common succession, entrepreneurial heritage motivates owners of the current and next generation to engage in three strategic activities feeding the transgenerational entrepreneurship, namely—strategic education, entrepreneurial bridging, and strategic succession [42].

Regarding students from this particular family background who inherit the atmosphere of a business environment that could influence their future career intentions, this aspect seems to induce optimism about their resources and abilities to follow an entrepreneurial career. Thus, an entrepreneurial career path can be feasible, but not necessarily desirable [22]. Also, the same authors pointed out that education received from parents who are firm owners might have a negative impact on their offspring's entrepreneurial career through their understanding of locus of control.

Entrepreneurial values and know-how can be taken up by children from parental role models, both during primary socialization and in later stages of life [29]. Based on the effect of parental role models, the decision to become an entrepreneur is positively correlated, according to some studies [13,24,27,43], with having parents who are or have been entrepreneurs or self-employed. According to Chlosta et al. [13], the EI analysis done on students from eight German universities showed that there is a positive relationship between the presence of parental role models of self-employment and the self-employment of the offspring, this relationship being moderated by aspects of their personality, such as the openness of the individual. According to Athayde [44], both EE and EFB positively influence high school students' intentions to become self-employed in the UK.

Entrepreneurial intentions can be indirectly influenced by the family business background [45,46], which has implications for antecedents of EI (perceptions of venture feasibility and desirability, attitude, and subjective norms). Peterman and Kennedy's research [46], based on a sample of Australian high school students, found a significant positive relationship between prior exposure to family business and entrepreneurship education, and the antecedents of entrepreneurial intention. Carr and Sequeira [12] found a significant, direct as well as indirect, influence of previous exposure to the existence of family businesses on entrepreneurial intention, by means of variables such as attitude towards starting a business, perception of family support, and entrepreneurial self-efficacy.

Empirical evidence regarding the EFB–EI relationship remains mixed, and there are also studies that highlight the existence of negative parental role models [9] or insignificant ones [47] for EI. Turkur and Selcuk [48], analysing the EI of students from universities in Turkey as a function of entrepreneurial educational, relational, and structural support, showed that only educational support (entrepreneurship education) and structural support influence the entrepreneurial intentions of students, whereas relational support (family background) does not affect entrepreneurial career choice. Mungai and Velamuri [31] emphasized that parental influence may not exist in case of parents' economic failure in self-employment, and the choice of an entrepreneurial career depends on the performance of self-employed parents. Criaco et al. [19] found, based on a large sample of 21,895 people from 33 countries, that the perceived performance of parents in entrepreneurship acts as a "double-edged sword". Thus, this perception, on the one hand, enriches the entrepreneurial desire and the feasibility of the descendants through mechanisms of exposure, but, on the other hand, inhibits the transposition of both the desires and the perceptions of feasibility regarding the entrepreneurial career intentions because of the ascending mechanisms of social comparison. Moreover, Murphy and Lambrechts [49] suggested that the family business involvement of the next generation, through the activity of helping, not only influences, but in some cases alters the career decisions of the next generation family members. Also, the same authors underlined the fact that these members strive to make "pure" career choices, because they are divided between helping and doing what is best for the family business, and following their own careers.

Educational experiences (formal and informal) as social factors can influence the decision to pursue a career [15], including an entrepreneurial career. The fact that entrepreneurial skills associated with entrepreneurial behaviour can be taught and learned is proven by the research of several

authors [50]. Therefore, the main role of EE is to increase student awareness and to emphasize that entrepreneurship is a viable career choice [51]. Entrepreneurship education represents an important driver of the development of entrepreneurial attitudes of both potential and nascent entrepreneurs [51,52]. Different empirical researches [4,9,11,23,53,54] focused on the EE–EI relationship among university students from different countries (e.g., China, USA, Spain, Ukraine, UK, France, Poland, Romania) and found that EE's effect on students' EI is positive, but that its intensity varies among different countries. This positive impact was also confirmed by a university student sample from Hungary and Estonia [55]. Similar results were obtained by other studies [8,56], based on comprehensive qualitative and quantitative reviews, including meta-analyses of the EE–EI relationship.

Other researches [57–59] showed that the relationship between EE and EI is negative, a fact that can be explained by students' awareness of the risks associated with entrepreneurship because of higher education. This relationship is significantly influenced by the effectiveness of different types of entrepreneurship programmes and the field of study [4,26,60]. In a recent study, Herman and Stefanescu [4] stressed that the impact of EE in university on EI is higher in the case of Romanian business students than in engineering students. Solesvik [61] obtained similar results in the case of Ukraine university students, concluding that entrepreneurship education enhances entrepreneurial skills and competencies, as well as entrepreneurial intentions. Some researchers underlined the fact that providing only an adequate education may foster the entrepreneurial intention of individuals [48,62].

Therefore, taking into account that a large part of the empirical results highlights that an EFB provided as informal education and EE provided as formal education positively affect the EI, the following hypotheses can be formulated:

**Hypotheses H1a.** *Students who have previous entrepreneurial exposure within the family will demonstrate greater entrepreneurial intention.*

**Hypotheses H1b.** *Students' prior family entrepreneurial exposure positively influences the EI of students.*

**Hypotheses H2.** *Effectiveness of EE positively influences the EI of students.*

Prior researches [11,63–65] considered certain personality traits as important factors that influence students' EI. According to Rauch and Frese [64], personality traits are “dispositions to exhibit a certain kind of response across various situations” [64] (p. 355). The impact of the individual personality dimensions (conscientiousness, openness to experience, emotional stability, extraversion, and agreeableness) of the Big Five model (developed by Goldberg [66]) on entrepreneurial intention was largely analysed by several studies [65,67]. Şahin et al. [67] highlighted that “the multiple configurations of the big five personality traits and entrepreneurial self-efficacy” [67] (p. 1188) can generate a high level of entrepreneurial intention among Turkish students. Rauch and Frese [64], based on a meta-analysis of the relationship between business owners' personality traits and business creation, found that innovativeness, generalized self-efficacy, and proactive personality are significantly correlated with entrepreneurial behaviour. The risk-taking propensity and the locus of control have a strong impact on the attitude towards self-employment [63,65]. Ahmed et al. [68] found significant but small indirect effects of innovativeness and risk propensity on entrepreneurial intentions in the case of a sample of final year MBA students. According to Giacomini et al. [47], students who are more optimistic are more likely to intend to pursue an entrepreneurial career.

Zellweger and Sieger [69] emphasized that autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness reflect only a partial picture of entrepreneurial orientation. Thus, the authors highlighted a real need to extend the entrepreneurial orientation scale in order to provide entrepreneurial behaviours in long-lived family businesses [69]. The research results of other authors [17], using four personality traits (innovativeness, propensity for taking risks, the need for achievement, and the locus of control), pointed out that risk-taking propensity and the need for achievement positively influence the entrepreneurial intention among Romanian university students. Although many personality traits were identified as having a significant effect on entrepreneurial

intention, based on the EU report [70] we focused on the five student entrepreneurial personality traits, namely, innovativeness, risk-taking propensity, sense of self-confidence, optimism, and competitiveness. Therefore, we hypothesize:

**Hypotheses H3.** *Students' entrepreneurial personality traits positively influence their entrepreneurial intention.*

Entrepreneurial intentions represent the result of interrelated contextual factors [7,9,43], such as EE and EFB. Fayolle and Gailly [51] highlighted that students with prior exposure to entrepreneurship will benefit disproportionately from attending an EE programme. Thus, highly exposed students will be marginally or even negatively influenced by EE, whereas less exposed students could be impacted in a positive way. For the French students, their research results showed that the impact of EE on entrepreneurial intention is strongly affected by students' prior exposure to entrepreneurship, illustrating that this impact "on the variables of planned behaviour tend to supersede the impact of the training itself" [51] (p. 87). Bae et al. [8] reviewed 73 studies, analysing their results with a total sample size of 37,285 people, and identifying a significantly positive but weak correlation between EE and EI, which may explain EFB as a moderator of the EE–EI relationship.

Taking into account that students from entrepreneurial families are more likely than those without a similar background to have access to the human, financial, and social capital [22,24,27,43], and to learn techniques taught at universities, such as business planning or market analysis [29], their requirements for additional inputs from entrepreneurship education are reduced [8]. In the same line of ideas, Eesley and Wang [20] highlighted that, because the students who come from entrepreneurial families are already exposed to start-up norms, formal education such as EE in school has a marginal impact on EI. Additionally, exposed students can interpret the materials offered by EE more critically than others. Thus, EE may be less effective toward entrepreneurial intentions for students with an entrepreneurial family background than for those from non-entrepreneurial families [8]. Walter and Dohse [29] examined how the effect of entrepreneurial education on the entrepreneurial career intentions of German students is complemented by role models. Their study showed that parent role models motivate and qualify students for independent activity, significantly increasing entrepreneurial intentions. At the same time, role models surpass the effect of entrepreneurial education by simultaneously raising attitudes towards behaviour, subjective norms, and perceived behavioural control. Therefore, we hypothesize:

**Hypotheses H4.** *The intensity of the impact of EE on EI depends on the student's entrepreneurial family background.*

Figure 1 provides an illustration of our proposed conceptual model.

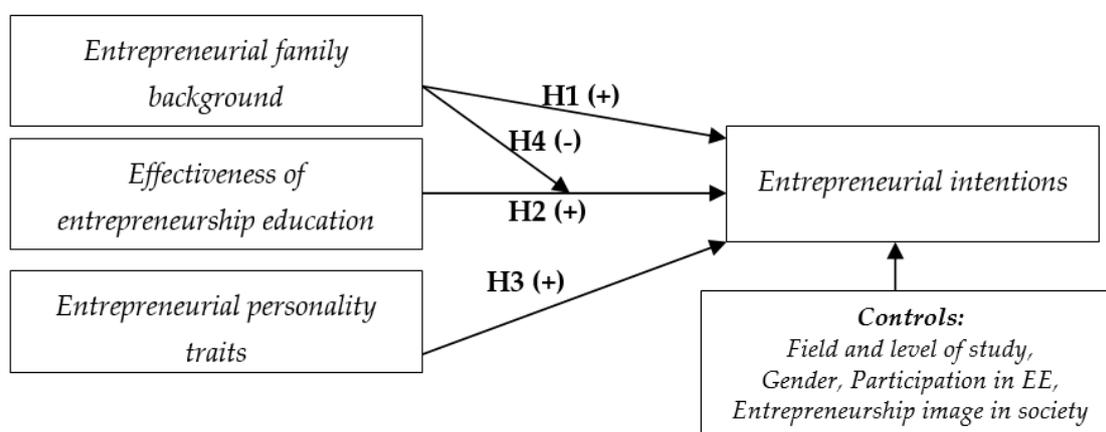


Figure 1. Conceptual model.

In summary, this study mainly hypothesizes that the EFB of students has both a direct effect and a moderating effect on the entrepreneurial intentions of students.

### 3. Methodology and Research Design

#### 3.1. Studied Population and Sample

An empirical explorative research was conducted based on a questionnaire that was applied to final year undergraduate students, high school and university students. Two high schools (economics and non-economics) and two faculties were selected (the Faculty of Economics and the Faculty of Engineering of “G.E. Palade” University of Medicine, Pharmacy, Sciences and Technology of Tirgu-Mures (former “Petru Maior” University of Tirgu-Mures)), Romania. Our selection was limited to final year students, considering that these could be characterized as ready to launch into their professional careers and express their own choices, “as at this stage of life entrepreneurial conscience and attitude towards entrepreneurial career are formed” [14] (p. 387). Data for this study were collected using a non-random sampling technique, on quotas, according to the fields of study.

According to the records of the Faculties of Engineering and Economic Sciences of the university and the two targeted high schools, there were 880 students enrolled in the final years. Of these, we obtained valid questionnaires from 617 subjects, the sample (N) representing over 70% of the total number of young people in the last year of study, of the mentioned faculties (bachelor level) and of the two high schools. This fact indicates the representativeness of the sample.

From the total of 617 respondents, 57.9% were university students, 58.3% were female, and 17.8% had one or both parents self-employed or entrepreneurs. A total of 46.5% of students studied economics, and 74.7% of students considered that EE was included in their programmes of study (Table 1).

**Table 1.** Sample description (N = 617).

Respondents' Characteristics	Absolute Frequencies (N)	Absolute Frequencies (%)
<b>Gender:</b>		
Male	257	41.7
Female	360	58.3
<b>Field of study:</b>		
Economics students	287	46.5
Non-economics students	330	53.5
<b>Level of study:</b>		
High school	260	42.1
University	357	57.9
<b>Students whose parents are self-employed or entrepreneurs (EFB)</b>	110	17.8
<b>Students' participation in entrepreneurship education (PEE)</b>	461	74.7

#### 3.2. Measures

##### 3.2.1. Dependent Variables

To identify students' entrepreneurial intentions (EIs)—a dependent variable—we adapted two items from Sieger et al. [26] and EC [70]. Thus, respondents were asked the two following questions linked to: self-employment choice (If you could choose between different kinds of jobs after graduation, which would you prefer? employee = 0; self-employed = 1) and intention to become an entrepreneur (Do you want to become an entrepreneur or to start a business after graduation? yes = 1; no = 0). EI was assessed by averaging the individual mean of each question.

### 3.2.2. Independent Variables

In order to measure the students' EFB—Entrepreneurial family background—based on prior studies [13,26], we took into consideration the occupational status of the respondents' parents (employees or other category = 0; self-employed or entrepreneur = 1).

We assessed effectiveness of EE (EEE) using a four-item score (according to [70]) based on the self-assessment of the following statements by students (Education: has helped me to develop my sense of initiative; has helped me to better understand the role of entrepreneurs in society; has given me the skills and know-how to enable me to run a business; has made me interested in becoming an entrepreneur). In this study, EE was defined according to the EU report [71] as an education that equips individuals with key entrepreneurial competences, including entrepreneurial attitude, entrepreneurial skills, and entrepreneurship knowledge. Each response was given on a Likert scale from 1 (totally disagree) to 4 (totally agree). We calculated the total EEE score by taking the average of the four items.

The entrepreneurial personality traits (EPTs) of students were measured subjectively (from a student perspective) using five statements (according to [70]) concerning assertions linked to: innovativeness (I am an inventive person who has ideas), the risk-taking propensity (In general, I am willing to take risks), sense of self-confidence (Generally, when facing difficult tasks, I am certain that I will accomplish them), willingness to compete with others (I like situations in which I compete with others), and optimism (I am optimistic about my future). For the answers, a 4-point Likert scale was provided, where 1 = "completely disagree" and 4 = "completely agree". The final EPT score was calculated by averaging the scores of the five statements. Cronbach's alpha for EEE (of 0.68) and EPT (of 0.72) were above the acceptable threshold by 0.6, according to Aiken and West [72], a fact that proved the internal reliability of EEE and EPT.

### 3.2.3. Control Variables

We used a total of five control variables (Table 1) that potentially influenced the results of this research: participation in EE, field of study (non-economics = 0 and economics = 1), level of study (high school = 0 and university = 1), the student perception of the entrepreneurship's image in society and gender (male = 0 and female = 1). We assessed the students' participation in EE (PEE) based on the responses to the question: "Are there courses in the curricula which might be considered a form of entrepreneurship education?" (yes = 1; no = 0). The student perception of the image of entrepreneurs in society (positive entrepreneurship image—PEI) was assessed based on the self-assessment of two positive statements: "Entrepreneurs are job creators"; "Entrepreneurs create new products and services and benefit us all" (according to [70]) on a Likert scale that ranged from 1 = totally disagree to 4 = totally agree.

In terms of gender differences, there are studies [23,26] which showed that men have a stronger preference for self-employment than women. Moreover, statistical data report that women are less likely to be involved in entrepreneurial activity than men [1,6]. Block et al. [73] showed that the higher the level of education, the more likely the possibility of starting a business. There are significant differences in EI according to field of study [4,26,53], EI being higher among business students than among other students (engineering sciences and social sciences students). On the contrary, other empirical research [9] proved that science students have higher EI than students from other majors based on a higher risk-taking propensity, which was explained by the advantage created by their technical skills generating a higher sense of self-efficacy. As regards students' participation in EE, the EU report [71], based on a large sample of 2582 students from different European higher education institutions, found that entrepreneurship alumni had a higher preference for being self-employed than those who did not participate in EE. Moreover, we used the image of entrepreneurs in society as a control variable, taking into account that the favourable cultural attitudes of society towards entrepreneurship may also influence entrepreneurial intentions [6,25].

### 3.3. Methods for Data Analysis

From a methodological point of view, we used descriptive statistics, correlations, and a hierarchical analysis of multiple regression.

To find out if there were or were not significant differences between students in relation to the EI, t-test statistics (independent samples t-test for equality of means) were used. The intensity of the relationship between variables was analysed based on Pearson correlation coefficient ( $r$ ).

To identify the functional relationship between the independent variable (EI) and the dependent and control variables, we used hierarchical multiple linear regression analysis ( $Y = \alpha + \beta_1 \times X_1 + \beta_2 \times X_2 + \dots + \beta_n \times X_n + \varepsilon$ ;  $Y$ —dependent variable,  $X$ —explanatory variables,  $\alpha$  and  $\beta$ —regression coefficients, and  $\varepsilon$ —residual error). The regression coefficients were estimated based on the least-squares method [74]. We chose to use the hierarchical multiple linear regression analysis in this research, taking into account that, in recent years, this statistical analysis method was widely applied to empirical research [12,14,23,48] in order to analyse the influence of various factors (such as perceived family support, perceived educational support, entrepreneurial self-efficacy, EE, risk propensity, etc.) on entrepreneurial intentions. The hierarchical multiple regression analysis was conducted in three steps. Firstly, the control variables were regressed on student entrepreneurial intention (Model 1). Secondly, the direct effects of EFB, EEE, and EPT were added to regression (Models 2–5). Finally, we added the interaction effect between EFB and EEE to investigate the moderator effect of EFB on the EEE–EI link (Models 6–7). Significant interaction was probed with the simple effects approach [75], and was plotted by using a moderator variable (EFB) and one standard deviation above and one below the mean of the predictor (EEE). Fisher Snedecor ( $F$ ) statistics was used to assess the validity of the models. For checking if the results were affected by multicollinearity, the variance inflation factors (VIFs) were tested. To avoid multicollinearity, according to Aiken and West [72], all independent variables were centred (the mean subtracted). We also examined multicollinearity by calculating the variance inflation factor (VIF) for the explanatory variables in multiple regressions. According to Hair et al. [76], there is a high multicollinearity if the VIF has a value which is higher than 10. The data were analysed with SPSS 18.0.

## 4. Results and Discussions

Our results showed a high level of student EI (60.5% of students intended to become entrepreneurs or self-employed). For Romania, this finding was in line with [6], according to which, on average, two-thirds of the adult population in the efficiency-driven economies (including Romania) consider starting a business a good career choice. This unexpected high level of student EI showed the desire for self-employment more than the feasibility of self-employment. Thus, according to the most recent EC Report [77], there is significant difference between the desire for and the feasibility of self-employment among Romanian young respondents (58% against 31%, respectively). Also, statistical data [1] show that in Romania in 2018, young self-employment accounted for only 11.4% of the employed persons aged between 20 and 24, and 10.08% of the employed persons aged between 25 and 29. There were large gaps in self-employment in the 25–29 age group among EU countries. Thus, developed countries like Germany (3.42%), Ireland (3.92%), Sweden (3.96%), and Ireland (3.96%) had the lowest values, while some CEE countries (Slovakia—11%; Czechia—10.9%; Poland—10.8%), as well as Italy (14.6%) and Greece (14.06%), showed the highest percentages of young self-employed among employed persons. These data should be viewed in a national context, taking into account the socioeconomic situation of each country, the size of the public and private sectors, the type of self-employment, etc. For example, in the case of Romania, the higher value of young self-employed (10.08%) can be partially explained by a high propensity for necessity-driven entrepreneurship [78], as young people choose self-employment out of necessity in the absence of other employment opportunities. In addition, Romania still has a high share of the self-employed population in agriculture, and this economic aspect is not at all in favour of a predominantly productive entrepreneurship [78].

For the analysed variables, the Pearson ( $r$ ) correlations shown in Table 2 reflected low values, even if they were significant. The correlation results indicated that EI is positively low correlated with the field of study ( $r = 0.096$ ), EFB ( $r = 0.145$ ), EEE ( $r = 0.142$ ), and EPT ( $r = 0.201$ ), and is negatively

correlated with the level of study. EFB is negatively correlated with PEE ( $r = -0.099$ ) and EEE ( $r = -0.115$ ).

**Table 2.** Correlations<sup>1</sup> matrix of dependent variables and independent variables ( $n = 617$ ).

Variables	1	2	3	4	5	6	7	8	9
1. EI	1.00	0.016	0.096 *	-0.091 *	0.029	-0.017	0.145 **	0.142 **	0.201 **
2. PEE		1.00	0.288 **	-0.089 *	0.083 *	0.076	-0.099 *	0.311 **	0.079
3. Field of study			1.00	-0.106 **	0.094 *	0.056	-0.069	0.443 **	-0.009
4. Level of study				1.00	-0.003	-0.109 **	-0.048	0.072	0.016
5. PEI					1.00	0.023	0.007	0.145 **	0.064
6. Gender						1.00	-0.019	0.035	-0.099 *
7. EFB							1.00	-0.115 **	0.041
8. EEE								1.00	0.230 **
9. EPT									1.00

Note: <sup>1</sup> Pearson correlations ( $r$ ); \*  $p < 0.05$  (2-tailed); \*\*  $p < 0.01$  (2-tailed); EI = Entrepreneurial intention; PEE = Participation in EE; PEI = Positive entrepreneurship image; EEE = Effectiveness of EE; EFB = Entrepreneurial family background; EPT = Entrepreneurial personality trait.

A positive correlation ( $r = 0.311$ ,  $p < 0.01$ ) was identified between effectiveness of EE (with an average score of 2.725) and participation in EE, which emphasizes that the students who participate in EE access a higher level of the effectiveness of EE and vice versa. Also, EEE was positively associated with the field of study (economics vs. non-economics students) and students' positive perceptions of the image of entrepreneurs in society (the average score of PEI is 3.2), which suggests that students who have a high positive entrepreneurship image and are economics students report a high effectiveness of EE.

Our results showed that 74.7% of students appreciated that there were courses in the curricula that might be considered forms of entrepreneurship education. This very high percentage was surprising, taking into account that only 46.5% of respondents were economics students whose curricula contained entrepreneurship courses or entrepreneurship-related courses. However, this can be explained by the existence of economics or management courses in the curriculum of non-economics university students that might develop some entrepreneurship skills. Although, entrepreneurship education should not be confused with general business and economic studies [79]. We have to mention that in Romania, "Entrepreneurship education" is included in the high school curricula as elective courses in the second or third year of study, no matter the high school profile, and the subjects probably considered those hours as an equivalent of entrepreneurship education.

All significant correlations between the independent variables were modest and ranged from 0.115 to 0.443, showing a low probability that multicollinearity would affect the regression analysis.

Table 3 summarizes the results of the independent t-tests of the samples, from which it appeared that there was a positive difference in EI between students with an EFB and students without an EFB ( $t(615) = -3.864$ ;  $p = 0.000$ ). This implies that the inclination to choose an entrepreneurial career by students whose parents are self-employed is greater than among students whose parents are employees or other categories (73.6% against 57.6%). These results confirm hypothesis H1a.

**Table 3.** Results of independent samples t-test: EFB group vs. non-EFB group.

Variables	Mean		Levene's Test <sup>1</sup>		t-Test <sup>2</sup>	
	Non-EFB (N = 507)	EFB (N = 110)	F	Sig.	t	Sig. <sup>3</sup>
EI	0.576	0.736	4.716	0.030	-3.864	0.000
EEE	2.763	2.550	0.176	0.675	2.859	0.004
EPT	3.317	3.367	0.003	0.958	-1.012	0.312

Note: <sup>1</sup> Levene's test for equality of variances delivered a significance value higher than 0.05 for all the variables except EI, for which the "equal variances not assumed" option was used;  $df = 615$ ; <sup>2</sup> t-test for equality of means; <sup>3</sup> 2-tailed; EI—entrepreneurial intention; EEE—effectiveness of EE; EPT—entrepreneurial personality trait.

Additionally, results pointed out that EEE differed significantly according to EFB ( $t(615) = 2.859$ ;  $p = 0.004$ ), which means that students with an EFB have a lower EEE score than students who do not have prior entrepreneurial family exposure (2.55 against 2.76). Thus, students who have entrepreneurial experience in the family context (EFB) consider that they already have entrepreneurial competences acquired from home and, therefore, EE in university and in high school is less effective. It means that the education offered by the education system helps them less to develop their sense of initiative, better understand the role of entrepreneurs in society, gain the necessary skills and knowledge to run a business, or arouse their interest in becoming an entrepreneur.

Regarding EPTs of students (with an average score of 3.326), no significant differences were identified between the two groups of subjects ( $t(615) = -1.012$ ;  $p = 0.312$ ).

Results obtained from the hierarchical regression analysis are presented in Table 4. In the first step, the control variables PEE, field of study, level of study, students' positive perception of the image of entrepreneurs in society (PEI), and gender were entered into the prediction model and two of them emerged as significant predictors. This baseline control variable model (Model 1) was significant at the 0.1 level ( $F(5, 611) = 2.18$ ,  $p < 0.1$ ). The level of study (high school vs. university) and field of study (economics vs. non-economics) significantly influenced students' EI. Therefore, those students from the field of economics ( $\beta = 0.091$ ,  $p < 0.05$ ) and at high school level ( $\beta = -0.087$ ,  $p < 0.05$ ) reported a higher EI. Our results do not support research findings [73], which indicated a positive link between level of education and the possibility of starting a business. However, there is an inconsistency regarding this link. For instance, another research finding [80] showed, for a Romanian sample, that the level of education does not influence significantly the perceived desirability of self-employment.

**Table 4.** Results of hierarchical multiple regression analysis for students' entrepreneurial intentions.

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6 <sup>1</sup>	Model 7 <sup>1</sup>
	Controls	Direct Effects			Interaction Effects		
PEE <sup>a</sup>	-0.018	-0.004	-0.036	-0.023	-0.043	-0.037	
Field of study <sup>a</sup>	0.091 *	0.099 *	0.036	0.105 *	0.061	0.035	
Level of study <sup>a</sup>	-0.087 *	-0.077 +	-0.098 *	-0.080 *	-0.094 *	-0.098 *	
PEI <sup>a</sup>	0.022	0.019	0.004	0.007	-0.002	0.007	
Gender <sup>a</sup>	-0.030	-0.028	-0.029	-0.007	-0.011	-0.029	
EFB <sup>a</sup>		0.147 **	0.157 **	0.138 **	0.146 **	0.151 **	0.158 **
EEE <sup>a</sup>			0.163 **		0.113 *	0.164 **	0.162 **
EPT <sup>a</sup>				0.198 **	0.173 **		
EEE*EFB <sup>a</sup>						-0.031	-0.041 +
Intercept	0.587	0.546	0.375	-0.010	-0.059	0.663	0.603
R <sup>2</sup>	0.018	0.039	0.058	0.077	0.086	0.059	0.047
Adjusted R <sup>2</sup>	0.009	0.029	0.047	0.066	0.074	0.047	0.043
R <sup>2</sup> Change	0.018	0.021	0.020	0.038	0.027	0.001	
Sig. F Change	0.055 +	0.000	0.000	0.000	0.000	0.438	
F value	2.180	4.096	5.381	7.248	7.120	4.781	10.144

Note: Dependent Variable: EI; <sup>a</sup> Standardized  $\beta$ -regression coefficients; +  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.001$ ;

<sup>1</sup> Moderator: EFB.

We found that gender and the students' positive perception of image entrepreneurship in society had no significant effect on EI. Thus, our sample could not confirm the widespread belief that men have a higher propensity for an entrepreneurial career than women, but it confirmed the results of other studies [7].

Based on this model (Model 1), we added step by step independent variables for testing hypotheses H1b–H3: EFB (Model 2), EEE (Model 3), EPT (Model 4) and all three together (Model 5). As compared with the base model, R<sup>2</sup> improved to 3.9% (Model 2), 5.8% (Model 3), 7.7% (Model 4), and 8.6% (Model 5). These models were significant at the 0.01 level. Also, VIF scores (values ranged between 1.03 and 1.45) suggested that these models were not distorted by multicollinearity. As for the control variables, the level of study exhibited a negative relation to EI in the case of Models 2–5, while the field

of study revealed a positive effect on EI, but only in the case of Model 2 and Model 4. For the other control variables, an insignificant effect was found in all models.

Table 4 shows that Model 2 was statistically significant ( $F(6, 610) = 4.096, p < 0.01$ ), representing 3.9% of the EI variation ( $R^2 = 0.039$ , adjusted  $R^2 = 0.029$ ), the change of  $R^2$  was 0.021. By analysing beta ( $\beta$ ) weights, it was found that EFB had a positive influence on EI ( $\beta = 0.147, p < 0.001$ ). Therefore, H1b is supported. These aspects noted by us are consistent with the results of other studies [12,21,24], which revealed a positive direct influence of the entrepreneurial parental role model on the EI of the students. For instance, according to Carr and Sequeira [11], from an intergenerational point of view, children's experiences within business families have a great influence on entrepreneurial intention. This experience is an essential element in meeting informational and behavioural requirements as skills necessary for independent activities, regardless of whether this exposure happens within the family's existing business or not.

The results of Model 3 indicated that a higher level of EEE is predicted to be positively associated with a higher likelihood that the young people will choose an entrepreneurial career ( $\beta = 0.163, p < 0.001$ ). Thus, hypothesis H2 is supported, confirmed by [11,23,53,81], which highlights the positive and direct effect of effectiveness of EE, as formal education, on students' entrepreneurial intentions.

In Model 4, EPT was identified as a significant determinant of EI ( $\beta = 0.163, p < 0.001$ ). In the case of Model 5, all three independent variables, which were added at the same time, were statistically significant ( $p < 0.01$ ), having a positive influence on EI. EPT received the strongest weight in the model ( $\beta = 0.173, p < 0.01$ ), followed by EFB ( $\beta = 0.146, p < 0.01$ ), and EEE ( $\beta = 0.113, p < 0.05$ ), implying that EPT has a greater impact on EI. Thus, hypothesis H3 is confirmed and supported by the findings of other authors [47,64,65,80], hence entrepreneurial personality traits such as innovativeness, risk-taking propensity, sense of self-confidence, optimism, and competitiveness positively influence entrepreneurial career intentions.

We continued adding the interaction effect between EFB and EEE to verify hypothesis H4. (Model 6). This model did not improve significantly in comparison with the direct effect model (Model 3) according to its  $R^2$  of 5.9% (Model 6:  $R^2$  change = 0.001,  $p = 0.438$ ), indicating that the interaction variable explained only a very small percentage of EI variation. The moderator variables EFB ( $\beta = 0.151, p < 0.01$ ) and EEE ( $\beta = 0.164, p < 0.01$ ) were significantly positively associated with the EI, as can be seen in Table 4 (Model 6). Also, we found an insignificant negative interaction effect between EFB and EEE ( $\beta = -0.031, p = 0.438$ , Model 6). Taking these results into account, in order to better identify the interaction effect between EFB and EEE on EI, the impact of the EFB moderator on the EEE–EI relationship was retested by adding the interaction term between EEE and EFB in the model without the control variables (Model 7). Model 7 was statistically significant ( $F(3613) = 10.144, p < 0.001$ ) and accounted for over 4% of the variance of EI ( $R^2 = 0.047$ , Adjusted  $R^2 = 0.043$ ). EEE received the strongest weight in the model ( $\beta = 0.162, p < 0.01$ ), followed by EFB ( $\beta = 0.158, p < 0.01$ ), which suggests that EEE influences EI positively and its influence is stronger than the EFB of students. In this model, the interaction effect between EFB and EEE was significantly negative, but marginal ( $\beta = -0.041, p < 0.10$ , Model 7). Moreover, based on the unstandardized coefficients of the regression model (Model 7), according to Preacher et al. [75], the moderating effect of EFB on the EEE–EI relationship is plotted in Figure 2. EI is on the y-axis of the dependent variable and EEE is plotted on the x-axis of the independent variable, representing low EEE (one standard deviation below mean) vs. high EEE (one standard deviation above mean).

In Figure 2, we can see that the link between EEE and EI was more pronounced for students who had no previous family entrepreneurial exposure than for students who had prior family entrepreneurial exposure, supporting hypothesis H4. Thus, the intensity of the impact of EEE on EI depends on the students' EFB being stronger for students without prior entrepreneurial family exposure. These results are in line with previous studies [24,51] that suggested that individuals coming from entrepreneurial families are already exposed to informal entrepreneurship learning (learning by doing and learning by example or modeling), providing an important opportunity for the acquisition

of human capital related to running a successful business. As Carr and Sequeira [11] (p. 67) pointed out, family business can be seen as a “business incubator for future business”.

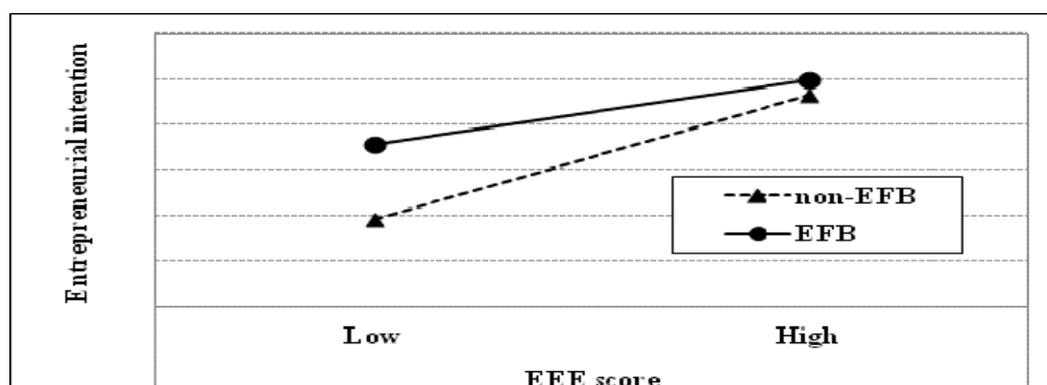


Figure 2. Interaction between EFB and EEE (Model 7).

Our study revealed other challenges faced by Romanian young people who aim to become entrepreneurs. Some of the most important are the lack of financial resources and the unfavourable business conditions in Romania. Thus, our results pointed out that the first reason why Romanian students do not want to become entrepreneurs is the lack of financial resources, whereas the second reason is the unfavourable business conditions in Romania. These results are in line with data provided by World Bank’s Doing Business 2020 report [82], which showed that according to the Ease of doing business ranking, Romania ranked 55th out of 190 countries, after other CEE countries such as Poland (40th), Czechia (41st), Slovakia (45th), and Hungary (52nd). The place occupied by Romania is an argument that, in this country, the institutional environment represents a significant barrier to entrepreneurship.

Although students gave EEE a high score (2.73 out of 4), the lack of entrepreneurship knowledge was reported as the third reason why they do not want to become entrepreneurs. These results highlighted, once again, the need to increase the impact of primary, secondary, and tertiary education on entrepreneurship. Consequently, a strategic approach is highly needed, at both national and European levels. We emphasize that Romania is included among those EU countries that do not have a specific EE national strategy, although it has a broader strategy related to EE, especially economic development strategy [83].

## 5. Conclusions and Main Implications

In the current economic and social environment, the acquisition and development of the relevant skills in entrepreneurship is a real challenge for youth. These skills can offer them the path to an entrepreneurial career as a viable and sustainable alternative for them to successfully integrate into the labour market. In this context, the paper highlights the influence of the main social factors on entrepreneurial career intention by focusing on the impact of the EFB of students, aiming to improve their entrepreneurial intentions and to consider entrepreneurship as a desirable employment choice.

Following the completion of an exploratory research, which used a sample of 617 final year undergraduate Romanian students, the results highlight, on the one hand, a high level of Romanian students’ entrepreneurial intentions, and, on the other hand, significant differences between the desire for and feasibility of self-employment, accompanied by a low number of young people actually being self-employed. Consequently, more attention needs to be paid in order to “improve the entrepreneurship key competence so that the desire for an entrepreneurial career turns into a real career choice” [4] (p. 320). Moreover, the research findings support the hypothesis that the students who have an entrepreneurial family background benefit from this informal education and exhibit a higher entrepreneurial intention than students without such a background.

Surprisingly, the effect of the level of study (high school vs. university) on EI is negative, university students having lower EI than high school students. These results can be explained, according to Oosterbeek et al. [57], by the fact that university education provides students with a more realistic perspective on the feasibility of entrepreneurship, creating an awareness of the risks associated with an entrepreneurial career path. Moreover, the research results prove that economics students have a higher propensity for an entrepreneurial career than non-economics students. This fact shows that entrepreneurship education, especially in the non-economic field, is necessary and must be ensured in order to meet the specific needs of students and thus improve the integration of young people into the labour market.

The hierarchical multiple regression analysis results show that students' entrepreneurial intentions are directly and positively influenced by EFB and EEE. These findings point out that the informal and formal education received by the students from their entrepreneur parents and from school improved their entrepreneurship key competence and enhanced entrepreneurial career intentions. The research results also prove that entrepreneurial personality traits positively influence the entrepreneurial intentions of students, highlighting the fact that high levels of innovativeness, risk-taking propensity, sense of self-confidence, optimism, and competitiveness increase the likelihood that young people will choose an entrepreneurial career.

By corroborating informal and formal education, our results, based on the moderator effect, show that the influence of EEE on students' entrepreneurial intentions is marginally negatively affected by the EFB. Thus, for our sample the greater the prior entrepreneurial family exposure, the lower the impact of the EEE on students' EI. Therefore, in order to foster and nurture entrepreneurial intentions among students with an EFB for a higher level of effectiveness of EE, education institutions, especially those with a large proportion of students with an entrepreneurial family background, should include special courses promoting the interests of students in their family business and not only in the curricula.

We consider that both formal and informal entrepreneurship education must act together, complementing each other, in order to increase the propensity of young people for choosing an entrepreneurial career, taking into account that "Europe needs more entrepreneurs" [3], including Romania, which, as an EU member state, must generate inclusive economic growth and more and better jobs.

The students pointed out some unfavourable barriers to starting a business in Romania, such as the lack of financial resources and the rather difficult access to them, an institutional framework that requires a lot of bureaucracy, and even insufficient knowledge in the entrepreneurial field. These barriers have negative consequences for young people's desires to start a business.

Therefore, in order to turn entrepreneurial intentions into a real motivation to start a business and become an entrepreneur, there are at least three issues that policy makers need to address for their practical implications. First, an improvement in the "Ease of Doing Business" context regarding the resources (such as easier access to credit, lower minimum capital to start a business) is needed. Second, at the level of bureaucracy, a shorter time for registering a firm, simpler procedures, and an online system for filing and paying taxes are necessary [82]. Finally, at the educational level, a specific EE national strategy must be developed.

The findings from our research have implications for those who pursue actual or potential entrepreneurship, the teaching staff who teach entrepreneurship, and the decision makers responsible for improving and sustaining entrepreneurship.

We recognize as a limitation of this study the fact that it focuses on intentionality, expressing an intention to pursue an entrepreneurial career, and not on the actual behaviour of entrepreneurs. Taking into account that intentions may not turn into actual behaviour in the future, even if some respondents expressed a high entrepreneurial intention in the survey, their career paths in the future can be completely different. Therefore, future longitudinal studies would be appropriate to find out to what extent the intentions of students with prior exposure to formal and informal education actually

evolve into action. Another limitation is the fact that our findings represent only a partial picture of the issues related to the influence of an EFB on students' entrepreneurial intentions. In this context, further research should focus on a deeper analysis of the impact of an EFB on EI in order to find out if the EI is due to the transfer of human capital (entrepreneurial skills) and/or financial and/or social capital from self-employed parents to their children. Moreover, an interesting aspect to be further explored is to what extent parental economic success can influence the choice of an entrepreneurial career by young people.

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