

## EXPLORAREA ORIENTĂRILOR ANTREPRENORIALE LA ADOLESCENȚI EXPLORING ENTREPRENEURIAL ORIENTATIONS IN ADOLESCENTS

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### Rezumat

*Antreprenoriatul este recunoscut un factor esențial al dezvoltării economice și sociale. Cercetarea de față investighează diferențele de gen a orientărilor antreprenoriale relevante la adolescenți, vizând dimensiuni precum autoeficacitatea, nevoia de reușită și abilitățile antreprenoriale, precum și intențiile de a iniția o afacere. Eșantionul a inclus 196 de elevi de liceu (100 fete și 96 băieți) din România. Rezultatele au arătat diferențe semnificative în favoarea băieților în ceea ce privește autoeficacitatea ( $\Delta M=0,16$ ,  $p=0,02$ ), nevoia de reușită ( $\Delta M=0,32$ ,  $p=0,02$ ) și intențiile antreprenoriale ( $\Delta M=0,26$ ,  $p=0,03$ ), în timp ce nu au fost identificate diferențe notabile pentru abilitățile antreprenoriale. Valorile se situează în zona sub medie a scalelor, ceea ce sugerează un nivel relativ redus a intențiilor și orientărilor antreprenoriale în ambele grupuri, cu niveluri chiar mai scăzute în rândul fetelor.*

**Cuvinte-cheie:** autoeficacitate, nevoia de reușită, intenții antreprenoriale, diferențe de gen.

### Abstract

*Entrepreneurship is recognized as an essential factor of economic and social development. The present research investigates gender differences in relevant entrepreneurial orientations in adolescents, targeting dimensions such as self-efficacy, need for success and entrepreneurial skills, as well as intentions to start a business. The sample included 196 high school students (100 girls and 96 boys) from Romania. The results showed significant differences in favour of boys in self-efficacy ( $\Delta M=0.16$ ,  $p=0.02$ ), need for achievement ( $\Delta M=0.32$ ,  $p=0.02$ ) and entrepreneurial intentions ( $\Delta M=0.26$ ,  $p=0.03$ ), while no notable differences were identified for the entrepreneurial skills. The values are located in the sub-average area of the scales, which suggests a relatively diminished entrepreneurial intentions and orientations in both groups, with even lower levels among girls.*

**Keywords:** self-efficacy, need for achievement, entrepreneurial intentions, gender differences.

**INTRODUCTION** In recent decades, entrepreneurship has become a central theme in economic and social development, being widely recognized as a mechanism for innovation and adaptation to labour market dynamics. Interest in the

psychosocial dimensions associated with entrepreneurship has increased significantly, as they are predictive factors for both entrepreneurial intentions and actual entrepreneurial behaviours. Variables such as self-efficacy, the need for achievement,

entrepreneurial intentions, and various specific competencies or skills provide clues about how individuals perceive opportunities, evaluate their resources, and decide to engage in entrepreneurial activities. At the same time, the absence of high levels of these variables may limit the availability for initiative and persistence when facing obstacles.

Entrepreneurial orientations can be defined as a set of cognitive, emotional, and behavioural dispositions that facilitate involvement in entrepreneurial initiatives and predispose the individual to assume calculated opportunities and risks [12]. They reflect both beliefs about one's own capabilities and the motivation to succeed, as well as intentions, and skills needed to capitalize on innovation. In the current era of globalization and digitalization, these orientations are essential not only for business success, but also for effective integration into the labour market and the ability to adapt to rapid change [3]. Recent research shows that entrepreneurial orientations predict both effective entrepreneurial behaviours and cognitive flexibility and resilience in the face of uncertainty [24].

Self-efficacy, conceptualized by Bandura [2], is a self-referential belief about one's capacity to mobilize resources when performing complex tasks. In adolescence, the level of self-efficacy directly influences school performance, as well as the willingness to explore new opportunities. The need for success, described in McClelland's theory [14], reflects the intrinsic desire to progress and excel. Entrepreneurial intentions, placed at the centre of the theory of planned behaviour model [1], are the best predictor of future entrepreneurial behaviour. Studies show that boys report higher levels of self-efficacy, motivation to succeed, and entrepreneurial intentions [8, 9]. These discrepancies are explained by differential socialization mechanisms, cultural stereotypes that associate entrepreneurship with perceived

masculine traits, and girls' reduced access to relevant role models and resources [25]. In contrast, for variables such as innovativeness, perceptions of one's own abilities, and general attitudes toward entrepreneurship, the literature indicates minor or absent differences, especially when education and learning context are similar for both groups [20].

European and Romanian data provide an empirical framework for understanding this issue. According to the Global Entrepreneurship Monitor for Romania [6], the early entrepreneurship rate was estimated at 6.8% among men and 4.9% among women, highlighting a notable difference in participation in business initiation. The World Bank [26] also reported that female entrepreneurs in Romania face increased difficulties in accessing resources and encounter cultural barriers related to traditional gender roles. More recently, the Women's Entrepreneurship Index reported that approximately 38% of entrepreneurs in Romania are women, but only 25% of firms are fully owned by women, placing the country below the European Union average in terms of institutional support and societal acceptance of female entrepreneurship [23]. These data suggest the existence of structural constraints that add to the psychosocial differences.

## MATERIALS AND METHODS

Considering this context, the present **research objective** is to study gender differences of the relevant entrepreneurial orientations in adolescents, targeting dimensions such as self-efficacy, need for success and entrepreneurial skills, as well as intentions to start a business. If high levels of self-efficacy and a positive perception of entrepreneurship are outlined at this stage, there are increased chances that these traits will be maintained and they will facilitate concrete initiatives in adulthood, whereas low levels of motivation or intention may lead to reduced participation in innovative economic activities.

This research contributes to a deeper understanding the relationship between gender and psychosocial variables associated with entrepreneurial orientation, and provides validation of international theoretical models. The results will inform interventions aimed at equalizing opportunities and capitalizing on the entrepreneurial potential of adolescents, aligning with European priorities regarding the promotion of gender equality and the preparation of the next generation of entrepreneurs.

**Research hypothesis:** we assume that there are significant gender differences in entrepreneurial orientations in adolescents, targeting dimensions such as self-efficacy, need for achievement and entrepreneurial skills, as well as intentions to start a business.

The **research sample** consists of 196 students from grades 11 and 12, enrolled in a high school in Brașov. In terms of gender distribution, the group includes 100 girls and 96 boys. The participants are in the final stage of upper secondary education, which implies a relatively advanced level of cognitive and motivational development, as well as exposure to critical formative decisions regarding educational and professional orientation. The choice of this group is justified by its relevance for the analysis of entrepreneurial intentions, as the students are in a moment of transition towards university education or the labour market.

The instruments used in this research cover the main psychological and attitudinal variables associated with entrepreneurial intention. Self-efficacy was measured with the General Self-Efficacy Scale [19], composed of 10 items rated on a Likert scale from 1 to 4. The scale demonstrated high internal consistency, with Cronbach  $\alpha$  coefficients ranging from 0.76 to 0.94 in multicultural studies [7, 13, 27]. The need for achievement was measured with the Need for Achievement Scale developed by McClelland [14] with

reliable internal consistency, obtaining  $\alpha$  values between 0.74 and 0.85 [5, 10]. The variables regarding the entrepreneurial skills and entrepreneurial intentions were assessed with the instrument developed by Liñán and Chen [11], using items on a Likert scale from 1 to 7. The reported internal consistency remains high between 0.79 and 0.92 for all subscales [11, 18].

## RESULTS AND DISCUSSIONS

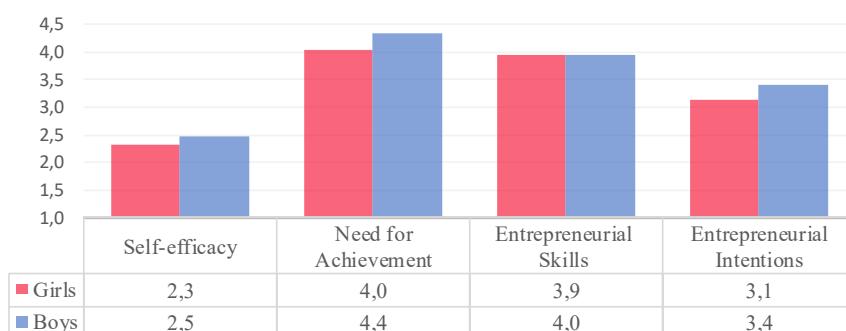
For *Self-efficacy*, the results of the t-test, using the equal variance variant (Lavene  $F=1.32$ ,  $p=0.25$ ), indicate a significant mean difference  $\Delta M=-0.16$ , with  $t(194)=-2.28$ ,  $p=0.02$ . The hypothesis is confirmed by identifying a significant statistical difference between the two groups on the gender criterion, and with a 95% confidence we will find the mean on the interval [-0.30; -0.02]. Descriptive statistics indicate for girls a mean  $M=2.31$ ,  $SD=0.52$ , and for boys a mean  $M=2.47$ ,  $SD=0.48$ , on a scale ranging from 1 to 4, boys reporting a higher level of self-efficacy than girls, with greater confidence in the ability to mobilize personal resources and overcome difficulties. This can be explained by gender socialization differences, namely that boys tend to be more frequently encouraged to explore challenges and thus develop greater resilience. The hypothesis was partially confirmed, revealing a significant, but still small, difference between the two groups.

The variances between the groups are equal for the level of the variable *Need for Achievement*, with  $F=2.94$ ,  $p=0.09$ . The results of the t-test confirm that the difference in means  $\Delta M=-0.32$  is statistically significant with  $t(194)=-2.44$ ,  $p=0.02$ , and the 95% confidence interval for the difference in means is between [-0.57; -0.06]. From the descriptive analysis, girls present  $M=4.04$  ( $SD=0.80$ ) while boys  $M=4.35$  ( $SD=1.00$ ), with values that are located in the median area of the scale, suggesting a general motivation for performance in both groups, but with a somewhat higher

intensity in boys. According to the results obtained, boys present a more pronounced need for success, with an orientation towards success and performance. In the context where motivation theories [14] place this variable at the centre of explaining task-oriented behaviour, the gender differences identified here reflect both social and cultural pressures [22] and educational mechanisms that encourage boys to more visibly express their aspirations for success.

The hypothesis was confirmed, thus observing that the male predisposition towards success aligns with other results indicating the presence of this pattern [17, 21]. Applying the t-test for equal variances ( $F=3.13$ ,  $p=0.08$ ), the difference in means is  $\Delta M=-0.01$ , with  $t(194)=-0.15$ ,  $p=0.88$ ,

for the *Entrepreneurial Skills* variable. The results show that there is no statistically significant difference between girls ( $M=3.94$ ,  $SD=0.77$ ) and boys ( $M=3.96$ ,  $SD=0.64$ ) in terms of the perception of entrepreneurial skills. The gender difference hypothesis was not confirmed, which is consistent with the literature showing that perceptions of entrepreneurial skills are often determined by social and educational capital [4, 25], being influenced to a greater extent by educational experiences and training opportunities than by gender. It can thus be concluded that the development of entrepreneurial skills is a relatively uniform process, conditioned more by exposure and contextual support than by gender differences.



**Figura 1. Averages of variables relevant to entrepreneurial orientation analysed by gender**

The results for the *Entrepreneurial Intentions* dimension indicate the existence of a statistically significant difference, with  $t(194)=-2.21$ ,  $p=0.03$ , with boys obtaining higher scores than girls. Descriptive statistics reveal that girls obtained  $M=3.15$ , and boys  $M=3.41$ , with a mean difference  $\Delta M=-0.26$  which is found in the interval  $[-0.49; -0.03]$  with a confidence of 95%. The values are located in the sub-average area of the scale, which suggests a relatively diminished entrepreneurial intention in both groups, but still

more pronounced among boys. According to the results obtained, boys manifest more pronounced entrepreneurial intentions than girls, suggesting a greater psychological and motivational availability to start a business. This pattern is consistent with several studies that highlight similar trends, attributing differences to both cultural and social factors and gender role representations [20, 11]. According to the theory of planned behaviour [1], it can be argued that entrepreneurial intentions are shaped by the perception of opportunities

and social norms, but the higher level reported by boys reflects the persistence of gender stereotypes that more frequently legitimise male involvement in entrepreneurship [8].

For self-efficacy, need for achievement and entrepreneurial intentions, clear differences were highlighted, with boys reporting higher values than girls. In the case of self-efficacy, these findings indicate that boys express greater confidence in their ability to mobilize resources and overcome obstacles, which is consistent with previous evidence suggesting that gender differences in self-efficacy stem from socialization processes and role expectations [2, 9]. Regarding the need for achievement, boys were found to be more strongly performance- and standard-oriented, aligning McClelland's theory [14] and subsequent research that emphasizes the association of this variable with entrepreneurial orientation [17]. For entrepreneurial intentions, the higher scores reported by boys support prior international research indicating that gender is a robust predictor of entrepreneurial intentions, largely mediated by cultural norms and persistent stereotypes [11, 8].

Overall, the results suggest that gender differences are more pronounced in motivational and intentional dimensions—self-efficacy, need for achievement, and entrepreneurial intentions—where boys consistently reported higher levels. From the perspective of the theory of planned behaviour [1], intentions are shaped by attitudes, perceived norms, and perceived behavioural control, which implies that differences in these psychosocial dimensions contribute directly to the gender gap in entrepreneurial orientation. This configuration highlights the importance of educational interventions aimed at enhancing girls' self-efficacy and motivation for achievement, thereby reducing disparities in entrepreneurial intentions. Empirical

evidence indicates that educational programs incorporating experiential learning, mentorship, and exposure to female role models are effective strategies to diminish gender gaps and stimulate greater entrepreneurial engagement among girls [16, 15]. Such approaches not only promote equality of opportunity but also help to broaden the entrepreneurial potential within younger generations.

**CONCLUSIONS** The analysis of gender differences on the investigated variables have confirmed a pattern partially consistent with the international literature. The fact that boys reported higher levels of self-efficacy, need for achievement and entrepreneurial intentions suggests that girls may require additional support to strengthen self-confidence and develop stronger, performance-oriented motivations. However, these differences should not be interpreted in isolation, but in relation to the general finding that all students, regardless of gender, show only moderate levels of self-efficacy and entrepreneurial intentions, as well as entrepreneurial skills that are still in development.

The **implications** of this study will be integrated into the design of an educational plan that will form the basis of the next stage of the research, namely the formative experiment. This plan will take into account both the gender differences highlighted in the level of self-efficacy, need for success and entrepreneurial intentions, as well as the general characteristics of the sample, which recorded only moderate levels of self-efficacy and entrepreneurial intentions, along with other entrepreneurial skills that are still under development. The emphasis will be placed on strengthening psychosocial resources and stimulating confidence in one's own capabilities in all students, regardless of gender or entrepreneurial aspirations, thereby providing a formative intervention capable of reducing gaps and strengthening the adaptive psychosocial profile of adolescents.

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