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# The impact of entrepreneurship education on entrepreneurial intentions and competencies of students in Moldova

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#### ABSTRACT

This paper focuses on questions of entrepreneurial education's (1) perceived usefulness, (2) effect on developing entrepreneurial competence and (3) potential to increase entrepreneurial intention. The aim of this study is to assess the impact of entrepreneurship education on the development of students' entrepreneurial competences and career plans in the Republic of Moldova. In order to explore this subject, a survey was conducted among young citizens, mainly university students and students of vocational secondary schools, who have studied entrepreneurship-related subjects. The questionnairies were completed by 289 students from 20 educational institutions in the Republic of Moldova. The statistical analysis of their answers allowed conclusions to be drawn about the positive relationship between entrepreneurship education, the development of entrepreneurial competences and the students' entrepreneurial intentions. Entrepreneurial studies are perceived to be useful by students not only in the context of starting a new business, but also for a career as an employee, and even in various social and political situations. Some gender-specific differences were also revealed concerning perceptions of competence development and their usefulness which can be important inputs for further development of entrepreneurship education.

#### **KEYWORDS**

entrepreneurship education, entrepreneurial competencies, entrepreneurial intention, Republic of Moldova

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#### 1. INTRODUCTION

Entrepreneurship is an important and integral part of the modern market economy, without which a country's economy cannot exist or grow. In developed economies, entrepreneurs not only play an important economic role, but also form the basis of the middle class, which is a key component of political and social stability (Aculai et al. 2018; Novac - Maier 2020). In his 1986 work, Drucker stated that he disagreed with the then widespread attitude that entrepreneurship was a sacrament, a gift, a talent or a 'flash of genius', and highlighted that entrepreneurship could be learned through systematic education and work. The world has changed a lot since then. Teaching and learning entrepreneurial competences have been included in official EU regulations since 2006. A Recommendation of the European Parliament and the Council (2006) identified eight key competences for personal fulfilment, active citizenship, social cohesion and employability in the knowledge society and one of them is the 'initiative and entrepreneurship', which refers to an individual's ability to translate ideas into action through creativity, innovation and risk-taking, and to the ability to plan and manage projects to achieve goals. Policies to support entrepreneurship include a wide range of measures, among which entrepreneurial education plays an important role.

Today, in the European Union, entrepreneurial education for young people is more relevant than ever. The Entrepreneurship 2020 Action Plan identifies four areas for immediate intervention to support entrepreneurship and one of them is to 'improve entrepreneurial education and training to support growth and business creation' and the other is to 'promote entrepreneurial culture in Europe and training the next generation of entrepreneurs'. According to the European Commission (2012; 2014; 2015; 2016), entrepreneurship education should develop the skills and competences directly related to entrepreneurship, by teaching the theoretical and practical aspects of setting up and running a business (registering a business, obtaining a licence, paying taxes, concluding contracts, etc.). From a broader perspective, education should also include the development of other, transversal entrepreneurial competences such as initiative and creativity. Therefore, entrepreneurship education should equip students not only with entrepreneurial knowledge but also competences that help them to achieve their goals and become successful entrepreneurs.

As in the EU, encouraging entrepreneurship is a priority in Moldova, and entrepreneurship education is an important step in this process. The Education Code of the Republic of Moldova identifies entrepreneurship and initiative as one of the key competencies targeted by education (Parliament of the Republic of Moldova 2014). The Education Development Strategy for 2014–2020 named 'Education-2020' mentions that one of the main problems of the education system is that promoting entrepreneurship is insufficient (Government of the Republic of Moldova 2014). With the expiry of the 'Education-2020' Strategy, the 'Education 2030' Strategy programme has started addressing the development of the entrepreneurial culture especially among the young generation (Ministry of Education and Research of the Republic of Moldova 2021). The Law on Small and Medium Enterprises stipulates that entrepreneurship education should develop entrepreneurship and it should be compulsorily integrated into the curriculum and training at all levels (Parliament of the Republic of Moldova 2016). Also, the SME sector development strategy for 2012–2020 includes as one of its main objectives the development of human capital through the improvement of



entrepreneurial competences and entrepreneurial culture (Government of the Republic of Moldova 2012). The public policy interventions proposed to promote entrepreneurship include educating entrepreneurship, encouraging the creation of small and medium enterprises and developing their competitiveness (State Chancellery of the Republic of Moldova 2021).

These legislative and policy measures all underline the importance of entrepreneurial education in Moldova, also suggesting that a comprehensive analysis of the current state and effectiveness of entrepreneurship education in the country is an important input to the development process.

## 2. LITERATURE REVIEW

As previously outlined, there are several main areas of policy actions in the field of supporting entrepreneurship through education – in our investigation we focus on the following four. As a first step, the entrepreneurship discipline itself should appear at most of the levels of education. Secondly, the aim of education should be more than improving theoretical knowledge of the students but also to develop their entrepreneurial competences. Thirdly, the improvement of the entrepreneur culture should be set as a goal, and finally the intention of starting a business should increase through the improvement of education and culture. It is clear that currently in economically developed countries entrepreneurship education is widely available (Lackéus 2015). Moreover, the development of entrepreneurial competences is an important area at all levels of education. On the other hand, the impact of entrepreneurial education has been widely debated by researchers without reaching consensus. This is why in this chapter we focus on the introduction of key concepts and research findings regarding entrepreneurial competences and entrepreneurial intention.

Drucker (1986) argued that entrepreneurial competences are not endowments and therefore can be taught, however research has also shown that personality traits or competences can have a strong influence on an individual's entrepreneurial spirit (i.e. Yang – Ai 2019; Holland 1997). For example, leadership skills, good adaptation skills and a strong ability to shape social relations are among the personality traits of successful entrepreneurs identified by Karcsics and Szakács (2010). The importance of developing cognitive skills in entrepreneurship education was already highlighted around 2010 (Raposo - Do Paco 2011; Mitchelmore - Rowley 2010) and has become a widely researched issue (Robles Zárraga-Rodríguez 2015; Pérez-López et al. 2016). Lackeus (2015) distinguished between cognitive and non-cognitive entrepreneurial competences, in that both can be developed in entrepreneurship education using different methods. Cognitive competences are based on intellectual skills that are easy to study and assess, while non-cognitive counterparts require learning from personal experience and therefore these are more difficult to learn and assess. They stated that education and programs should focus on changing non-cognitive entrepreneurial competences, i.e. personal attitudes and skills, rather than knowledge, as the non-cognitive skills may have a greater impact on overcoming perceived barriers to entrepreneurial success. Amini et al. (2018) in their meta-analysis identify 57 entrepreneurial competences and propose a general framework for them. Ndou et al. (2018) studied entrepreneurship education including in-curricular and extra-curricular elements across Europe,



addressing the extent to which the development of entrepreneurial competences was included. Do Paco et al. (2011) in Portugal and Van der Sluis and Van Praag (2007) and Van der Sluis et al. (2006) in the USA found that entrepreneurial education can develop the skills needed for entrepreneurial success. Popa (2021) analysed the content of university entrepreneurship courses and concluded that they support the development of entrepreneurial competences of future professionals and help to acquire complex entrepreneurial skills readily applicable in different situations. Regarding the applicability of the acquired competencies, a study by Karlan and Valdivia (2011) found that students who have acquired the knowledge from the entrepreneur program are more successful in applying for microfinance when they start their own business, and that education helps young people to obtain start-up capital for their businesses. From other geographical areas, studies with a similar focus were published, particularly in Java by Sutanto et al. (2021), who analysed the impact of competency-based training on entrepreneurial skills and the change in students' entrepreneurial mentality, and in Kazakhstan by Kosmaganbetova et al. (2022) by studying the impact of the educator on the development of competences and how entrepreneurial competences can be developed through modern teaching methods.

Lackeus (2015) stated that educational programs should focus on supporting the development of an entrepreneurial culture, thus fostering entrepreneurial intentions. Thompson (2009) defined entrepreneurial intention as the self-conscious belief of the individual mind about the possibility of starting a new business, with a sincere and committed plan to do so at a certain point in time. Most studies in the field reported a positive correlation between entrepreneurship education and the development of entrepreneurial intentions (see for example S. Gubik 2021). Peterman and Kennedy (2003) revealed that entrepreneurship education programs can significantly change the entrepreneurial intentions of participants. Do Paco et al. (2011) found that the development of entrepreneurial intentions induced by education was more pronounced in male students. On the other hand, Oosterbeek et al. (2008) found a significant negative relationship between entrepreneurship education and entrepreneurial intentions, which was hypothesised to be caused by a more realistic self-perception of students. This finding is especially interesting as other studies suggest that a more positive attitude towards failure needs to be taught to support new business creation (Könczöl 2004). It can be seen that while education might have a positive effect on perceived desirability and perceived feasibility of starting a business (both influencing entrepreneurial intentions - see Sánchez-Cañizares et al. 2014), this effect can also be negative. Also, Nowiński et al. (2019) argue that programs focusing on knowledge sharing and competence building might not be sufficient to increase entrepreneurial intentions, and some studies highlight the role of extracurricular activities in encouraging entrepreneurship (Maresch et al. 2016; Premand et al. 2016). Others concluded that work experience might complement entrepreneurial education not only by providing a chance to practice and strengthen the knowledge and skills acquired in formal education, but also by serving as an additional motivator regarding entrepreneurial intention (Kim et al. 2006). All this suggests that there is still room to further explore the existence, causality and logic of the relationship between entrepreneurship education and entrepreneurial intentions.

In Moldova, improving the entrepreneurial attitude of young people is a priority for politicians. The underlying problem and the possible solution have been addressed in a number of studies. Pogorevici (2019) takes a macro-level perspective on the challenges of entrepreneurship



in Moldova and makes recommendations for policy makers. All of this helps to explore how education can help the younger generation to have the courage to start their own business. Novac and Vinogradova (2021) drew attention to the problem that the young generation cannot find a decent job in Moldova therefore they become unemployed or go abroad in accordance with Pérez-López et al. (2016) regarding Spain. The authors proposed the involvement of young people in entrepreneurship as a solution, which would also have positive macroeconomic effects. In this respect, the authors draw attention to the importance of entrepreneurship education as a first step. Bulgaru et al. (2021) highlighted the importance of SMEs in Moldova, stressing that the development of entrepreneurial education is a priority with EU support. The research focused on the textile and leather industry. On the other hand, the concept of competences in education, including entrepreneurial competences, has been used in the Republic of Moldova since 2014. Therefore, competence development is also the subject of several studies in the Moldovan context. According to Suleanschi et al. (2013), the education system in Moldova is based on competency-based curricula, mainly in the framework of courses dedicated to economics and entrepreneurship. Vinogradova (2020) concludes that entrepreneurship education in Moldova is currently based on the development of a wide range of qualities and competences that form the basis of an entrepreneurial character and personality, i.e. a competency-based approach. Finally, several studies investigate whether education increases entrepreneurship among young people. Aculai and Deliu (2019) analysed different aspects affecting entrepreneurship among young people in Moldova. They found that young people are interested in entrepreneurship and that acquiring basic entrepreneurial skills is a significant motivator to start their business. Along with Paco et al. (2011), Nicoară (2020) found that the entrepreneurial spirit of Moldavian women is reduced.

Overall, it was found that entrepreneurship education in Moldova is competency-based according to curriculum-based research, and the importance of this issue has been highlighted by Moldovan research too. Oosterbeek et al. (2008) suggest that more information leads to a better perception of the dangers of entrepreneurship, which discourages youth from entrepreneurship, while other studies listed here contradict this. The research gap is that no one in Moldova has yet investigated how useful the students perceive the entrepreneurial discipline and the competences studied, and whether these programs increase the intention of students to start their own businesses.

# 3. RESEARCH QUESTIONS

Several studies have found that entrepreneurship education in Moldova takes different forms, at various all levels of school education. It is established that entrepreneurship courses are available in more than ten universities in Moldova, and are usually studied in the economics faculties of higher education institutions, but practically only as part of general business or economics studies. However, some non-economics courses also teach 'Business Basics' or other related disciplines. In some cases, these subjects are offered as electives, such as 'Engineering and Management in Agriculture' and 'Agronomy' at Comrat State University, or at some faculties of Nicolae Testemitanu State University of Medicine and Pharmacy. In other cases, subjects aiming at entrepreneurship are compulsory for some specialisations ('Engineering and Management' at



the Technical University of Moldova, for example). Research also supports the view that the development of competences is an important outcome of education. There is evidence that the development of entrepreneurial competences is an important educational outcome, and that increasing the number of young people starting their own business is a macroeconomic objective. Thus, this article aims to answer three research questions:

- RQ1: To what extent is the entrepreneurial discipline embedded in education **useful** for students?
- RQ2: What is the impact of entrepreneurship education on the formation of **entrepreneurial competencies** of students?
- RQ3: How do entrepreneurial education and competencies influence the **student's intention to start** their own businesses in the future?

## 4. METHODOLOGY AND DATABASE

In order to assess the utility and impact of the entrepreneurship discipline for Moldavan students, a questionnaire-based survey was carried out among students of different levels of professional education in Moldova. The questionnaire covered the following sections: (1) general demographic information about the respondent, (2) the characteristics of the entrepreneurship discipline embedded in their studies, (3) formation of entrepreneurial intent and entrepreneurial competencies, (4) the effect of entrepreneurial studies on their career plans, especially on starting their own business.

In total, nine higher education institutions (universities and academies), four Centres of Excellence, three colleges, three vocational schools, one high school and one grammar school from the capital Chişinău and in the regions (the cities of Comrat, Cahul and Bălți) were involved in the survey. Researchers from the National Institute for Economic Research, teachers and PhD students from four universities (State University of Moldova, Academy of Economic Studies of Moldova, State University of Comrat, State Agrarian University of Moldova), as well as partners from the Non-Governmental Centre for Entrepreneurial Education and Business Support, which actively cooperates with technical vocational education institutions, acted as interviewers. Data was collected in one-on-one interviews or in small groups. The survey took place in 2019 as part of the research project 'Improving the possibilities of involving young people in entrepreneurial activities in the Republic of Moldova' (executing organization: National Institute for Economic Research of Moldova), with a sample size of 289 (Novac 2019; Vinogradova 2019).

The analysis of the database was based on relevant statistical tools that fit the measurement level of the observed variables. Most of the survey items concerning the usefulness and impact of entrepreneurship education, its element and the respondents career plans were measured on a nominal, categorical scale. In addition to descriptive statistics and relative frequencies, we could analyse answer distributions with a chi-square test. Also, chi-square tests were applied where we tested the effect of different demographic or control variables (e.g. level of education, gender) on the examined subject. Additionally, in case of the usefulness of the different entrepreneurial knowledge areas, hierarchical cluster analysis was also applied to explore the patterns in student perceptions.



# 5. RESULTS

### 5.1. Sample characteristics

The characteristics of the sample are summarized in Table 1. Here we highlight some of the most important features:

- The average age of the respondents was 22 years, with a median age of 21 years. The most mature respondent was 46 years old while the youngest was 17.
- Among those surveyed, 58.2% were female, 41.8% were male.

Table 1. Sample Characteristics

	Frequency	Relative frequency	
Number of respondents	286-289		
Gender:	•		
Male	120	41.8%	
Female	167	58.2%	
Age:			
Mean	21		
Educational Institution:	•		
Academy of Economic Studies of Moldova	43	15.0%	
State University of Moldova	40	14.0%	
Technical University of Moldova	40	14.0%	
State University of Cahul "B.P.Hasdeu"	35	12.2%	
State Agrarian University of Moldova	35	12.2%	
State University of Comrat	30	10.5%	
Other higher education institutions	5	1.7%	
Professional schools	34	11.9%	
Centres of excellence	13	4.5%	
Colleges	11	3.8%	
Level of education:	•		
Doctorate	6	2.1%	
Masters	53	18.3%	
Bachelor	167	57.8%	
Technical vocational education/colleges	60	20.8%	
Lyceum	1	0.3%	
Grammar school	1	0.3%	

Source: authors.



- The survey covered students from 20 Moldovan educational institutions, of whom 79.6% were from higher education institutions, 11.9% from professional schools, and the rest from centres of excellence, colleges, or grammar schools.
- Most (57.8%) of the respondents were bachelor students, while the sample contained a significant number of students of technical vocational education colleges (20.8%), and master level students (18.3%).

This sample composition and the relatively large sample size can provide a thorough and reliable picture about young adult Moldavian students.

## 5.2. Assessment of the extent and usefulness of the entrepreneurship discipline

Most respondents (281 persons, 98.6%) mentioned that within the educational institution where they study there is an entrepreneurship discipline. In different educational institutions and at different levels of the education system, the entrepreneurship discipline is given different titles. The most frequently mentioned titles were 'Basics of Entrepreneurship', 'Entrepreneurship and Leadership'. Also, a relatively smaller number of respondents mentioned the following titles of discipline: 'Management' (7.0% of respondents), 'Small Business Management' (6.0%), 'Business Law' (4.9%), 'Founding and Developing a Business' (4.2%), 'Business principles' (3.9%), 'Business planning' (3.2%) and others. The majority of respondents indicated that these subjects were compulsory, core subjects in their educational institutions (90.4% of respondents, or 253 persons) and only 9.6% mentioned that they were optional.

Respondents in general had a high opinion about the entrepreneurship discipline (92.6%): most indicated that the discipline was interesting (51.2%) or very interesting (41.4%). As shown in Fig. 1, the discipline was found 'very useful' by a relatively large number of respondents, considering the use of knowledge for professional career development (51.9%) and setting up/developing their own business (with staff employment) (49.3%). Slightly fewer respondents perceived the discipline as 'very useful' for self-employment (without hiring staff) (35.7%) and other forms of self-realization (39.2%). Between 40.3% and 43.5% of respondents indicated that the discipline was 'useful' for professional career development, self-employment (without hiring



Fig. 1. Perceived degrees of usefulness of the entrepreneurship discipline for different careers, percentage of respondents

Source: authors



staff), other forms of self-realization. It seems that entrepreneurial studies are perceived to be valuable for all possible future career paths. Interestingly the highest proportion of 'not useful' answers was received concerning the self-employment career path, this counter-intuitive feedback shall be explored deeper in the future and used to develop more useful curricula.

Most respondents indicated that the themes/topics within the entrepreneurship discipline were very useful for their future careers (see Table 2). Based on the two-sided chi-square tests (P < 0.05), the distribution of answers to the hypotheses that the answer categories occur with equal probabilities can be rejected for all themes/topics – so the visible shift of answers towards the very useful category (see Table 2) is statistically significant. 91.6–94.8% of respondents indicated that the topics of human resources management, basic concepts of entrepreneurship, performance measurement, business planning, starting-up and registering a business and operations management were very useful or useful. The other topics were also highly rated by respondents (77.2%–89.9% useful and very useful answers).

Based on hierarchical cluster analysis (see also in the last column of Table 2) and the evaluation of the usefulness of the different themes/topics, the following 4 clusters can be identified:

- Cluster 1: Ideation and establishment of the enterprise (topics such as the search and formulation of the business idea; the elaboration of the business plan). Students are interested in the practical issues, steps and requirements of starting a business. Related to this, respondents also indicated that they would be interested in gaining additional knowledge, mainly concerning starting up and establishing a business.
- Cluster 2: Organization of the current activity of the enterprise (financial management, marketing, sales). The practicalities of operating a business are also deemed very useful by the student respondents.
- Cluster 3: Entrepreneurial environment. This means that young people perceive it is useful to
  be aware of the unpredictability and even hostility of the business environment of
  Moldova.
- Cluster 4: Securing investment and broader value concepts. The evaluation of the usefulness of financing, investing and social entrepreneurship topics seem to show similar patterns.

While the topics of cluster 1 and 2 are perceived to be very useful, which is also true for the investment financing elements of cluster 4 – the environmental factors of cluster 3 seem to be of secondary usefulness only.

# 5.3. Impact of the studied discipline on the formation of entrepreneurial competencies

In the opinion of over two-thirds of the respondents (69.7%), their entrepreneurship studies influenced the formation of their entrepreneurial competencies. These results – although based on perceived measures – indicate a rather high efficiency and usefulness of the entrepreneurship discipline for students. At the same time, a rather high share of respondents (19.2%) who found it difficult to answer may indicate that students are not sufficiently aware of the essence of the concept of 'entrepreneurial competencies'.

Depending on the level of education, respondents were relatively more frequently aware of the competence building influence of the entrepreneurship discipline if they were studying for their



**Table 2.** The degree of usefulness of the themes/topics within the entrepreneurship discipline for the career, percentage of respondents

Themes/topics within the	The degree of utility for the respondent				
entrepreneurship discipline	Very useful	Useful	Useless	Was not studied	Cluster
Business planning, structure, and stages of drawing up the business plan, its presentation	65.3	26.7	1.4	6.7	1
Business idea, stages of starting up and registering a business	62.3	29.4	1.4	6.9	1
Finance management, calculation, and analysis of financial indicators	59.8	30.1	2.8	7.3	2
Marketing, marketing research, sales, advertising	57.5	31.2	3.2	8.1	2
Entrepreneurial risks, their types, insurance, and overcoming	57.0	32.0	2.8	8.1	1
Indicators of the efficiency of the entrepreneurial activity (result, expenses, efficiency, etc.)	55.6	36.4	3.5	4.5	2
The concept of entrepreneurship, its forms, career opportunities	53.3	39.4	1.7	5.6	1
Taxation, types, and rates of taxes	52.4	31.8	4.9	10.8	2
The qualities of the successful entrepreneur; identifying business skills	51.0	37.1	4.9	7.0	1
Human resources management, recruitment, motivation, and evaluation of labor resources	48.6	46.2	2.4	2.8	2
Accounting and reporting	47.9	38.2	5.9	8.0	2
The danger of bankruptcy, recovery, crisis management	46.5	32.0	3.2	18.3	3
Management of production process, product description, and technological process	45.6	46.0	3.5	4.9	2
Business financing possibilities, credit interest, loan repayment schedule	45.0	40.4	3.9	10.6	4
Investments; investment activity; investment project	44.2	36.8	9.8	9.1	4
State support of small enterprises: legislation, target programs	38.9	36.8	8.0	16.3	3

(continued)



Table 2. Continued

Themes/topics within the	The degree of utility for the respondent				
entrepreneurship discipline	Very useful	Useful	Useless	Was not studied	Cluster
Development indicators for small and medium-sized enterprises; their contribution; statistical data	38.5	44.1	6.9	10.4	3
Business culture, ethics, social entrepreneurship	36.4	42.7	11.5	9.4	4
Innovations, their types; the importance of innovations for competitiveness; intellectual property	36.0	41.0	5.7	17.3	_*
Cooperation and association of entrepreneurs, its advantages	35.4	41.8	8.4	14.4	3

Source: authors.

doctorate (83.3%) or at technical vocational colleges (83.3%). This perception was relatively (although not statistically significantly) less common at the bachelor's (65.7% yes, 12.0% no) and master's degree levels (63.5% yes, 17.3% no).

Depending on the gender of the respondent, based on a chi-square test (P < 0.05), male respondents noticed the influence of entrepreneurship discipline on the formation of entrepreneurial competencies significantly more frequently than females (76.3% compared to 64.7% of the respondents, respectively). But since this result is based on the self-assessment of the students surveyed, an adjustment might be necessary for some gender-specific behavioural characteristic – for example, Moldavian women are often perceived as less ambitious, their entrepreneurial spirit reduced (Nicoară, 2020) or they are less inclined to 'hold their own' in discussions with their peers (Hesse-Biber 1985).

Among other disciplines studied, which influenced the formation of entrepreneurial spirit, initiative and leadership qualities of respondents, half of the students (50.9%) also indicated economic and law disciplines, such as management, marketing, business law, economics, business psychology, civic education, managerial accounting, analysis of economic and financial activity of the enterprise, etc. (see Fig. 2).

As previously mentioned, the concept of entrepreneurial competencies was quite new or vague for many of the students surveyed. That is probably why not all respondents considered entrepreneurial competencies to be equally useful in other areas of life outside of entrepreneurship. According to the respondents, entrepreneurial competencies will be more useful for them in areas such as leadership development (70.7% very useful, 27.6% useful), in the labour market (as an employee; 55.5% very useful, 40.3% useful) and in social relations (36.4% very useful, 49.3% useful). The respondents attribute lower levels of utility to entrepreneurship studies in the case of politics (25.0% very useful, 44.9% useful) and the family sphere (23.9% very useful, 46.0% useful; see Fig. 3).



<sup>\*:</sup> identified as an outlier based on hierarchical cluster analysis.

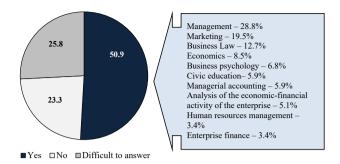


Fig. 2. The influence of other studied disciplines on the formation of entrepreneurial competencies, percentage (based on respondents' self-assessment)

Source: authors

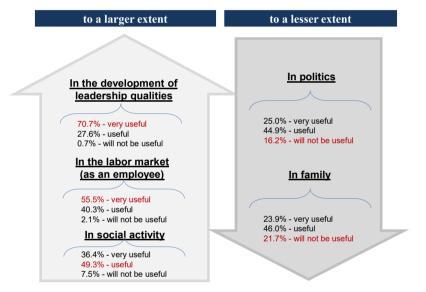


Fig. 3. The usefulness of entrepreneurial competences in areas of activity other than business, percentages

Source: authors

Thus it has been demonstrated that many students do not fully grasp the full breadth of the concept of entrepreneurial competencies and do not realize their usefulness in areas seemingly remote from socio-economic activity, such as politics and family relations.

For respondents of *different levels of education*, the usefulness of entrepreneurial competencies in various spheres was slightly different. The following particularities can be pointed out: at doctoral level, all respondents were aware of the usefulness of entrepreneurial skills in all areas indicated. Regarding politics, entrepreneurial skills are significantly less valued by technical



vocational education students than others, while at the same time finding it very useful more frequently than master and bachelor students for family life (chi-square test, P < 0.05).

Depending on the gender of the respondent, some differences in assessing the usefulness of entrepreneurial competencies were as follows: male respondents rated entrepreneurial competencies the least frequently very useful for the family, while the same is true of females concerning politics. Also, the lack of usefulness of entrepreneurial competencies in social activity was indicated by male respondents three times more frequently than by female respondents (12.1% of males and 4.3% of females, significant difference at P < 0.05). We believe that these effects might not necessarily be driven by the perception of entrepreneurial skills, but probably by aspirations and values concerning family and politics. Traditionally, women in Moldovan society have to combine professional duties with housekeeping and family responsibilities, which initially makes female students consider these areas of life as equally important (Nicoară 2020).

## 5.4. Respondents' plans after graduation

Answering the question about plans after graduation, the respondents demonstrated a desire for self-realization through starting their own business with hiring staff (37.3% of respondents), organizing activities as a self-employed person (32.0% of respondents) or working in their specialty as an employee (26.8% of respondents). A smaller proportion of respondents (14.1%) are motivated by higher wages and working as an employee in any profession that will offer that.

Also, many of the respondents (over a fourth) plan to leave the country after graduation; 13.7% plan to go abroad temporarily in search of work, and 12.0% plan to emigrate for permanent residence. 4.9% of respondents noted other options for future plans, most of which relate to professional development: continuing education, participating in international projects, or freelancing (see Fig. 4).

Depending on the level of education, respondents studying at doctoral (66.7%) or master level (32.7%) were significantly more likely (chi-square test, P < 0.05) to have plans for working as

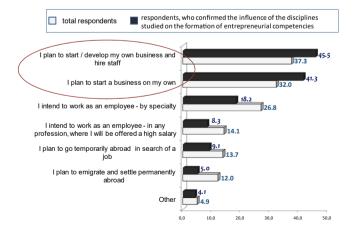


Fig. 4. Plans after completion of studies, percentages of respondents

Note: respondents were able to choose more than one option

Source: authors



employees than those studying in technical vocational education (11.9%). In parallel, respondents of technical vocational colleges had more frequently plans to set up their own business – on their own (35.6%) or with the employment of staff (44.1%) – or to leave the country, at least temporarily (20.3%, significantly more than other groups; chi-square test, P < 0.05).

Depending on the gender of the respondent, male students planned relatively more frequently to set up their own business with employment of staff (44.3% of male respondents compared to 32.3% of female respondents), while female students relatively more often planned to set up a business on their own (32.9% women compared to 30.4% men) – although these slight differences are not statistically significant. An approximately equal share of respondents of both genders had plans to move abroad (24.4% of males compared to 27.0% of females), but males more frequently planned to go abroad temporarily (15.7% of males compared to 12.6% of female respondents), while female respondents were more likely to have plans to settle abroad permanently (14.4% of females compared to 8.7% of males).

At the same time, among the students who have previously confirmed their entrepreneurial competencies in relation to the studied entrepreneurship discipline, the intention to start a business was more pronounced, and the distribution of the answers were statistically different compared to other respondents in the whole sample (chi-square test, P < 0.05). This difference is illustrated in Fig. 5. Among the whole surveyed student population, 55.4% planned to be engaged in entrepreneurship (with the involvement of hired personnel or as self-employed), and in the group of respondents who confirmed that studying the entrepreneurship discipline influenced the formation of their entrepreneurial competencies, this ratio was 66.9%. This significant increase in entrepreneurial intention confirms that the entrepreneurial competencies acquired by students as a result of entrepreneurship education contributes to an entrepreneurial career.

The questionnaire also provided data on the motivational sources and available support of the respondents who have plans to set up their own business. In answering the question

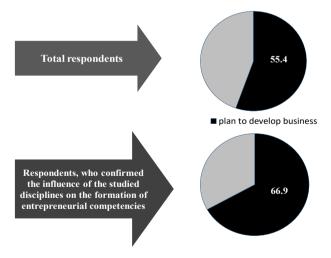


Fig. 5. Influence of entrepreneurial competencies on business development planning, percentage of respondents

Source: authors



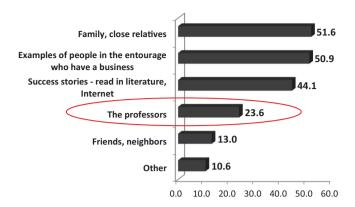


Fig. 6. Sources of motivation for starting a business for respondents who plan to set up/develop their own business, % of respondents

Note: respondents were able to choose more than one option Source: authors

What events, people or institutions motivated you to start a business?', 51.6% of the respondents indicated that they were motivated by family and/or close relatives, 50.9% were inspired by the examples of entrepreneurs they know, 44.1% was motivated by success stories read in the literature or the internet. While these seem to be the most common inspirational sources, it is important to highlight that almost a quarter (23.6%) of the respondents mentioned their professors as a source of motivation (see Fig. 6). This further supports our conclusion regarding the positive effect of entrepreneurial education on entrepreneurial intentions and career plans. This issue has also been explored by the questionnaire via a direct question concerning the respondents' own perception, and 69.7% of the students who plan to start a business answered that the entrepreneurship discipline (as part of their education) has also significantly contributed to their entrepreneurial desire (see Fig. 7).

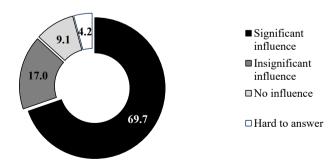


Fig. 7. Influence of the entrepreneurship discipline on respondents' desire to start a business, percentage of respondents planning to start a business

Source: author



Depending on the level of education, the entrepreneurship discipline influenced the respondents' desire to start a business to the greatest extent for the respondents who were in doctoral studies (100.0% of doctoral students have indicated that the discipline had a significant influence, but n=3) and in technical vocational education/colleges (89.5% of the respondents who study at this level indicated that the discipline had a significant influence). Depending on the gender of the respondent, the results show no significant differences concerning the perceived influence of entrepreneurship education on the desire to start a business.

#### 6. CONCLUSION

Furthering economic growth and increasing the number of businesses is a global policy priority, which is promoted by both the EU and national governments through a variety of measures. Many of these policies and measures build heavily on entrepreneurship education, but also highlight the need to transfer not only knowledge but also entrepreneurial competences. Another important goal is to promote an entrepreneurial culture, which can be fostered through policy measures (such as a supportive legal and fiscal environment) but also through educational institutions, which have the means to make the entrepreneurial career track attractive. Researchers are investigating the fulfilment of these goals from several aspects almost everywhere in the world, including in Moldova. The idea that entrepreneurs can and should be educated seems to be accepted, and nowadays research is focused more on the methods and the impact of entrepreneurship education. This paper focused on the questions of entrepreneurial education's (1) perceived usefulness, (2) effect on developing entrepreneurial competence and (3) potential to increase entrepreneurial intention.

We concluded that young Moldavans at different levels of education found entrepreneurial studies a very useful and interesting element of their education. Especially two groups of topics were highly valued by students: the ones related to the act of starting a business and the ones focusing on the practicalities of operating a business. Further educational development efforts might focus more on these themes.

Concerning the effect of education on entrepreneurial competences, the majority of the students can explicitly confirm a positive effect, but interestingly male respondents were more confident in this regard than females. Students also believed that they would profit from the acquired entrepreneurial competences as an employee or in leadership roles, and in social settings. These competencies were perceived as less useful in politics by females and less useful for family life by males. Some of these explored phenomena might have cultural roots reflecting gender stereotypes, thereby suggesting that this should be further explored and targeted by future educational efforts, with the aim of eliminating them.

Around one third of respondents had plans toward starting some kind of business in the future. But the students who reported positive effects of education on their entrepreneurial competences, were less likely to plan a career as an employee, and somewhat more likely to have entrepreneurial plans. This result confirms the positive relationship between perceived entrepreneurial competencies and entrepreneurial intentions – with probably perceived feasibility of starting a business being the link between the two.

Based on the analysis we can formulate some recommendations to improve entrepreneurship education and entrepreneurship competences development. We strongly recommend that



entrepreneurship should be studied not in the first year, but after students have a basic knowledge of economics and management. Our other recommendation is, that if it is not possible to provide a specific subject like 'Basics of Entrepreneurship', the topic could be embedded in other subjects, for example as a small project like defining or describing a business idea. As regards the development of students' entrepreneurial competences in the framework of life-long learning, we propose to provide opportunities for further education, either in an educational institution or in institutions supporting entrepreneurship. While entrepreneurs could also be more actively involved in the teaching and learning process in schools and universities, educational institutions could be more active in organising seminars or conferences where visiting entrepreneurs share their entrepreneurial experiences with students to inspire and motivate them in their future career choices.

While we believe that our research is a valuable extension of the entrepreneurship research in a unique geographic area, and the survey-based study complements well the earlier curriculum-based analyses, we are also aware of some limitations. The measurement scales used in the survey did not support more elaborate statistical analysis, especially regarding complex relationships between the variables. More importantly, our research was based on individual perceptions instead of measuring actual activities or competences – this provides future research opportunities to apply more robust data collection methods.

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