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GENDER DIFFERENCES IN ENTREPRENEURIAL EDUCATION AND ENTREPRENEURIAL ACTIVITY IN PART OF THE DANUBE REGION

The paper describes gender differences in entrepreneurial attitudes and activity in 8 countries of the Danube region. The research results indicate that in all the countries analyzed fewer women than men believe that promising business opportunities exist in their environment; fewer women are confident in their entrepreneurial skills, knowledge, and experiences; and more women indicate the fear of failure, which would prevent them from starting a business. In all the countries analyzed, women are also less entrepreneurially active than men. When analyzing entrepreneurial education and training in 8 countries of the Danube region, the research results suggest that those who received formal and/or informal entrepreneurial education and training are on average more likely to start a business; this holds true for both genders. On average, 1 in 5 adult men and 1 in 8 adult women received formal entrepreneurship education and training. Meanwhile, on average, 1 in 7 men and 1 in 10 women received some informal training for entrepreneurship. Gender differences are significant.

Keywords: early-stage entrepreneurial activity; entrepreneurship education and training; Danube region.

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ГЕНДЕРНІ ВІДМІННОСТІ В ПІДПРИЄМНИЦЬКІЙ ОСВІТІ І ПІДПРИЄМНИЦЬКІЙ ДІЯЛЬНОСТІ В ЧАСТИНІ ПРИДУНАЙСЬКОГО РЕГІОНУ

У статті описано гендерні відмінності в підприємницькому підході і діяльності у 8 країнах Придунайського регіону Сербії. У всіх проаналізованих країнах менша кількість жінок, ніж чоловіків, упевнена в наявності широких можливостей для бізнесу в їх середовищі; менше жінок упевнені у власних підприємницьких здібностях, знаннях і досвіді. Жінки менш активні як підприємці. Ті, хто отримав формальну або неформальну підприємницьку освіту і практику, з більшою ймовірністю відкриють свій бізнес. Це правило застосовно для обох статей. В середньому, 1 з 5 чоловіків і 1 з 8 жінок здобули формальну, 1 з 7 чоловіків і 1 з 10 жінок — неформальну підприємницьку освіту. У цьому гендерні відмінності значні.

Ключові слова: підприємницька діяльність ранньої стадії; підприємницька освіта і практика; Придунайський регіон.

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ГЕНДЕРНЫЕ РАЗЛИЧИЯ В ПРЕДПРИНИМАТЕЛЬСКОМ ОБРАЗОВАНИИ И ПРЕДПРИНИМАТЕЛЬСКОЙ ДЕЯТЕЛЬНОСТИ В ЧАСТИ ПРИДУНАЙСКОГО РЕГИОНА

В статье описаны гендерные различия в предпринимательском подходе и деятельности в 8 странах Придунайского региона Сербии. Во всех проанализированных странах меньшее количество женщин, чем мужчин, уверены в наличии широких возможностей для бизнеса в их среде; меньше женщин уверено в своих предпринимательских способностях, знаниях и опыте. Женщины менее активны как

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предприниматели. Те, кто получил формальное или неформальное предпринимательское образование и практику, с большей вероятностью откроют свой бизнес. Это правило применимо для обоих полов. В среднем, 1 из 5 мужчин и 1 из 8 женщин получили формальное, 1 из 7 мужчин и 1 из 10 женщин получили неформальное предпринимательское образование. В этом гендерные различия значительны.

Ключевые слова: предпринимательская деятельность ранней стадии; предпринимательское образование и практика, Придунайский регион.

1. Introduction. A theoretical dispute no longer exists to suggest that the developed entrepreneurship sector has a critical effect on economic growth and the success of national economies. Two basic drivers of economic growth through entrepreneurship can be distinguished: the existence of major established firms and the entrepreneurial process taking place in new and growing enterprises (early-stage entrepreneurship) (Reynolds et al., 2002). In this paper, we focus on the early-stage entrepreneurial activity.

Our research is based on the Global Entrepreneurship Monitor (GEM), a cross-national research program aimed at describing and analysing the entrepreneurial process at early stages within a wide range of countries. It started in 1998 and has since created a very rich database. Early-stage entrepreneurs are identified as those individuals who are personally involved in creation of a new venture and are at the same time employed as owners/managers of a new firm that is less than 3,5 years old. The two main reasons these individuals become involved in entrepreneurship are opportunity and necessity. Necessity-based early-stage entrepreneurs are those who are engaged in setting up a new business out of necessity because they had no better choices for work, whereas opportunity-based entrepreneurs are those who are involved in entrepreneurship because they wanted to exploit an opportunity to increase their income or have more freedom at work.

The dynamic, opportunity-driven entrepreneurship sector is crucial for economic growth, regardless the stage of economic development, although entrepreneurial characteristics as well as characteristics of the impact vary. A great deal of evidence has emerged regarding the importance of female entrepreneurs for economic development of a country, since they contribute to job creation and economic growth as well as to the diversity of economy (Carter et al., 1997, Verheul and Thurik, 2001, Kelley et al., 2011). However, women are generally less likely to be entrepreneurially active than men in the majority of the world economies; moreover, female entrepreneurs often have very different attitudes to entrepreneurship and aspirations for growth of their businesses (Kelley et al., 2011). The latest GEM research results (Bosma et al., 2012) show that very few economies (only 8 out of 54 countries included in the research in 2011) have rates of female early-stage entrepreneurship comparable to those of male. These countries are from various global regions and represent every phase of economic development; the only European country in this group is Switzerland.

Much has been written on the factors influencing individual decisions to become entrepreneurs (Arenius and Minniti, 2005; Sirec and Mocnik, 2012 etc.). Among these factors, education and self-confidence in knowledge, skills and experience to start a business have been recognized as important drivers. Research results suggest

that the likelihood of becoming an entrepreneur increases steadily as individuals acquire higher levels of education. Similarly, those who perceive themselves as possessing necessary skills are much more likely to become entrepreneurs than those who do not believe they have the necessary skills (Arenius and Minniti, 2005). Within this context, entrepreneurship education and training are identified as a specific entrepreneurial framework condition affecting individuals' entrepreneurial attitudes, activity and growth aspirations, which holds true, especially for wealthier economies (Kyro, 2006; Sorgman and Parkison, 2008).

In this paper, the research focuses on several countries within the Danube Region that were also participating in the GEM research. In 2010, the European Commission prepared the EU strategy for the Danube Region¹. This is a macro-regional strategy that encourages long-term cooperation to tackle a wide range of local problems and boost economic development within the Danube Region countries (i.e., Germany, Austria, Hungary, the Czech Republic, the Slovak Republic, Slovenia, Bulgaria, Romania, Croatia, Serbia, Bosnia and Herzegovina, Montenegro, Moldavia and Ukraine), as well as their neighbouring countries. The strategy outlines 4 pillars divided into 11 priority areas. The third pillar—building prosperity in the Danube region consists of 3 complex actions (to develop a knowledge society in research, education, ICT; to support the competitiveness of enterprises; to invest in people and skills), where knowledge and education, skills and experiences are key sources for improvement of the well-being of people in this macroregion of Europe.

This paper intends to make two main contributions: (i) to present gender differences in entrepreneurial attitudes and activity and (ii) to analyze gender differences in entrepreneurial education and training in the countries of the Danube region.

2. Gender differences in entrepreneurial activity in the Danube region². The decision to start a business is the decision of an individual who enters entrepreneurship based on perceived business opportunities; confidence in possessing the skills, knowledge and experience for entrepreneurship; and an understanding that the fear of failure is associated with the fight against uncertainty that is assumed to be the part of entrepreneurship (Eckhardt and Shane, 2003; Shane and Venkataraman, 2000). Figure 1 presents the share of men and women in the countries of the Danube region who:

- believe that there are opportunities to start a business in the area in which they live;
- believe that they possess knowledge, skills, and experiences to start a business;
- are afraid of business failure.

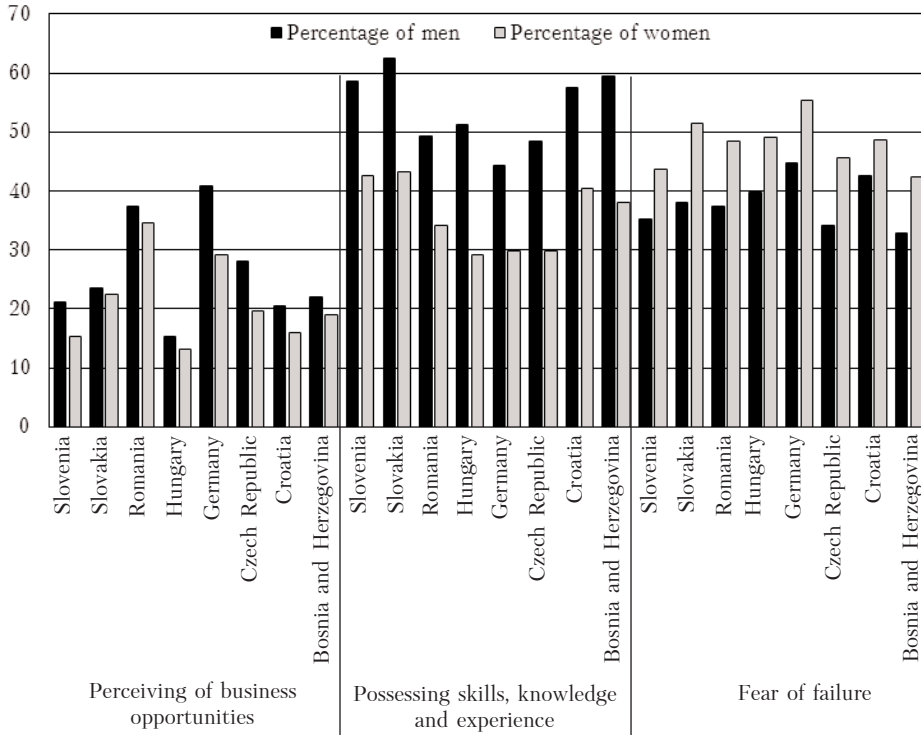
Meanwhile, entrepreneurial attitudes are also culturally embedded and historically specific. Cultural and social norms in society have important impact on one's decision to start a business, which is why fostering entrepreneurial awareness and positive attitudes toward entrepreneurship are high on the policy agenda of many

¹ European Union Strategy for Danube Region (Available May 5, 2012)

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0715:EN:NOT>

² Countries of the Danube Region included in this part of the research (data for 2011) are Germany, Hungary, Slovenia, Romania, Croatia, Bosnia and Herzegovina, the Czech Republic and Slovakia; these countries participated in the GEM

economies (Bosma et al., 2012). However, the cultural context, which was already discussed for some Danube countries by Tominc and Rebernik (2007), is not the focus of this paper.



Source: GEM and authors' calculations.

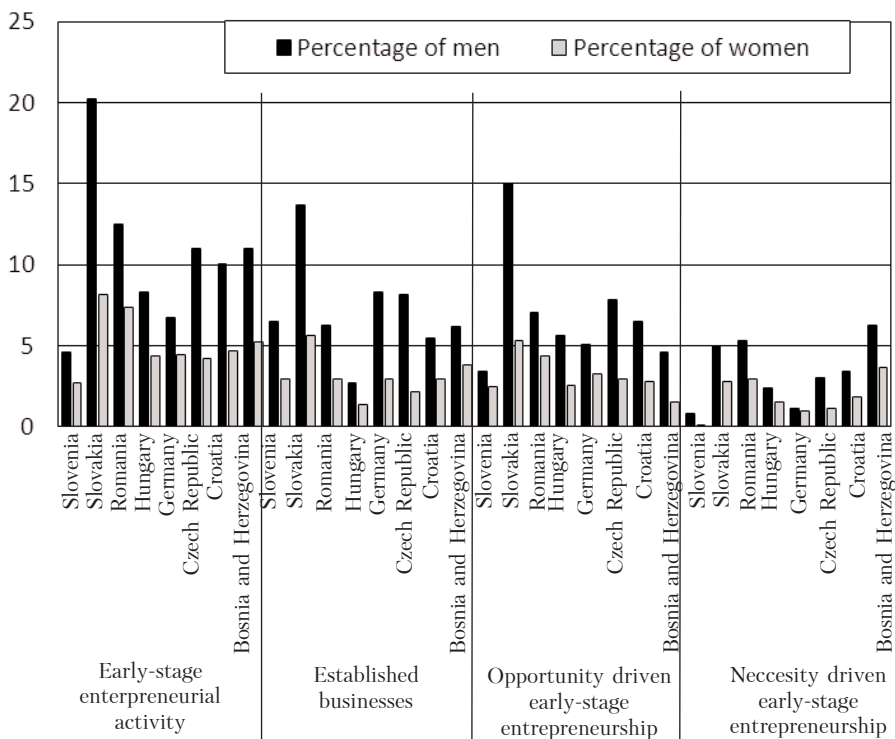
Figure 1. Gender differences regarding individual entrepreneurial attitudes and fear of failure across 8 countries of the Danube region, 2011

As Figure 1 indicates, in all the countries analyzed, fewer women than men believe that promising business opportunities exist in their environment and are confident that they possess entrepreneurial skills, knowledge and experiences necessary; meanwhile, more women have a fear of failure that would prevent them from starting a business. Although fewer women perceive opportunities and believe they have the capabilities needed to start a business, more women are influenced by the fear of failure than men. Therefore, not all the analyzed factors are in favour of women.

Early-stage entrepreneurial activity includes those adults who are in the process of starting a business or already running a business that is less than 3,5 years old, while established entrepreneurs run a business that is older. Early-stage entrepreneurial activity (in general) declines with increasing levels of GDP per capita-up to a point. The decline follows the increasing availability of job opportunities as economies progress and develop institutions accordingly (Bosma et al., 2012). This relationship is to some extent evident in Figure 2, where the lowest rates are noticeable in Slovenia and Germany. The extremely high early-stage activity in Slovakia warrants further

explanation; however, no single opinion exists on this issue. It seems that Slovaks' commitment to starting their own business and becoming independent is partly related to the high level of unemployment rate and that people try to find options to earn income through, for example, self-employment. On the other hand, part of this high percentage of adults in early-stage entrepreneurship may also be explained by "artificial entrepreneurship", which means that some employers force employees to change their status to self-employed in order to decrease their social allowances and similar costs (Pilkova and Holienka, 2012).

As expected, in all the countries analyzed, women are less entrepreneurially active than men, ranging from 2.6 men for every woman in early-stage entrepreneurship in the Czech Republic to 1.5 in Germany. In established entrepreneurship, this share varies from 3.8 in the Czech Republic to 1.6 in Bosnia and Herzegovina. For all the countries analyzed, more men and women cited opportunity rather than necessity as their primary motivation to start a business. The early-stage necessity-driven entrepreneurship varies from 6.28% of the working male population and 3.67% of the working female population in Bosnia and Herzegovina to 0.77% and 0.09% in Slovenia, respectively.



Source: GEM and authors' calculations.

Figure 2. Gender differences regarding entrepreneurial activity across 8 countries of the Danube region, 2011

³Countries of the Danube Region included in this part of the research (data for 2008, when the special topic on entrepreneurship education and training was included into the GEM research) are Germany, Hungary, Slovenia, Serbia, Romania, Croatia, and Bosnia and Herzegovina.

3. Gender differences in entrepreneurial education and training in the Danube region³.

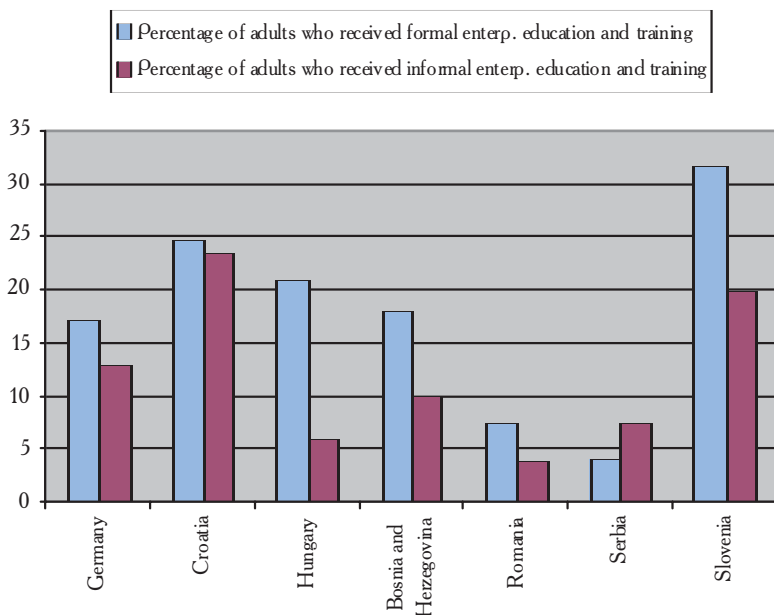
3.1 Hypotheses. As reported by the latest GEM research on entrepreneurship education and training (Coduras Martinez et al., 2010), numerous research reports on entrepreneurial education and training exist in the literature, and several of them analyze the impact of entrepreneurial education and training on individuals' entrepreneurial activity. Some studies found a positive link between entrepreneurial education and training and entrepreneurial attitudes (Hegarty, 2006; Souitaris et al., 2007) while others reported a decrease in entrepreneurial intentions after entrepreneurship education programs (Oosterbeek et al., 2010; Weber et al., 2009).

The impact of entrepreneurship education and training on individuals' propensity for entrepreneurial attitudes and behaviour is found to be the most effective in Western European countries with low rates of early-stage entrepreneurial activity (Coduras Martinez et al., 2010), while gender differences are not reported. The Danube region includes countries with high GDP per capita (according to Porter's classification, these are the innovation-driven economies of Germany and Slovenia; Porter et al., 2002) as well as countries with lower GDP per capita (efficiency-driven economies, such as Croatia, Hungary, Bosnia and Herzegovina, Romania and Serbia). Figure 3 indicates that the number of adults who received any kind of formal and/or informal entrepreneurship education and training varies across countries. Since the type of entrepreneurship is on average different in innovation-driven economies than in efficiency-driven economies, it may be expected that the nature of entrepreneurship education and training and its contribution to the entrepreneurial activity across different stages of development also vary. On average, a significant correlation between entrepreneurial education and training and one's decision to enter entrepreneurship is expected in the countries analyzed. Thus, the following hypothesis is formed:

H1: A significant correlation exists between one's entrepreneurial education and training and early-stage entrepreneurial activity in the Danube region for both genders.

The OECD report on female entrepreneurship (OECD, 2004) stresses some important features regarding individuals' knowledge, skills, and experiences. Knowledge is acquired through each individual's own experiences, occupation, on-the-job routines, social networks and everyday life. Women differ from men in their experience because they hold different occupations (often less appropriate for self-employment and entrepreneurship) and have different on-the-job routines, social relationships and everyday lives; they also identify business opportunities differently and try to exploit them differently (Tominc and Rebernik, 2007). In the majority of European countries, women represent a majority of students and university graduates (European Commission, EACEA, 2010). It could be expected that formal entrepreneurial education and training are distributed evenly across the two genders. However, as it is pointed out in Figure 1, women are less confident than men in their knowledge, skills and experiences needed for a successful entrepreneurial career, which may also be influenced by less informal entrepreneurship education for women. Therefore, two hypotheses are formed:

H2: No significant gender difference exists in formal entrepreneurial education and training on average in the Danube region.



Source: GEM and authors' calculations.

Figure 3. Share of adults who received entrepreneurial education and training (formal and/or informal) across 7 countries of the Danube region, 2008

H3: A significant gender difference exists in informal entrepreneurial education and training on average in the Danube region.

3.2 Methodology. The main data source for this research consists of the sample of $N = 18,298$ respondents from the 7 analyzed countries in the Danube region in 2008. The following variables are included in the analysis:

Early-stage entrepreneurial activity: measured by the share of adults (18 to 65 years old) who are personally involved in the creation of a new venture and are at the same time employed as owners/managers of a new firm that is less than 3,5 years old.

Entrepreneurship education and training: formal and informal education and training defined as follows:

Formal training is received as a part of formal education (i) at the primary and/or secondary level, (ii) at the tertiary level, as a part of diploma or degree programs, or (iii) both.

Informal education refers to several other types of training. Our research focused on informal entrepreneurship education and training at (i) faculties or universities, (ii) local business organizations (for example, a chamber of commerce), (iii) government agencies, (iv) via employer initiatives, (v) self-education (for example, by observing an entrepreneur), and (vi) all other informal types.

SPSS 19.0 was used for the analysis. To test H1, the correlation coefficients were calculated. To test H2 and H3, statistical tests for differences in the proportions of genders were used. The null hypotheses were rejected at the 5% significance level.

3.2 Research results. In the analyzed countries of the Danube region, the share of both women and men who received entrepreneurship education and training was

much higher among entrepreneurs than among those who are not included in early-stage entrepreneurship, as presented in Table 1. Although the levels of formal and informal training vary across countries, those individuals who received formal and/or informal entrepreneurship education and training are much more likely to be involved in the early-stage entrepreneurship than those who did not.

The share of men who received formal training varies from as low as 7.0% of entrepreneurs in Serbia to 47.8% in Croatia and more than 50.0% in Slovenia. Only in Serbia and Croatia are male entrepreneurs more likely to receive informal than formal entrepreneurship education and training (11.1% of male entrepreneurs in Serbia and 49.5% in Croatia).

The share among female entrepreneurs who received formal education ranged from 6.3% in Serbia to almost 40.0% in Croatia and more than 40% in Slovenia. Female entrepreneurs in Germany, Serbia and Croatia are on average more likely to receive informal than formal entrepreneurship education and training; the difference is highest in Serbia, where on average 21.3% of female entrepreneurs were included in one or more informal types of training.

Table 1. Entrepreneurship education and training among non-entrepreneurs and early-stage entrepreneurs, by gender

	Formal entrep. education and training				Informal entrep. education and training			
	% of non-entrepreneurs		% of early-stage entrepreneurs		% of non-entrepreneurs		% of early-stage entrepreneurs	
	Men	Women	Men	Women	Men	Women	Men	Women
Hungary	18.1	21.8	26.9	37.7	5.1	5.4	12.8	15.1
Romania	8.7	5.8	30.6	38.9	3.2	2.6	22.4	35.3
Germany	20.0	12.3	44.4	27.5	15.1	9.1	27.3	32.5
Serbia	3.8	3.7	7.8	6.3	7.2	6.2	11.1	21.3
Croatia	28.2	17.7	47.8	39.5	26.2	17.0	49.5	47.3
Slovenia	30.5	29.8	52.6	48.3	19.6	16.8	45.9	43.3
Bosnia and Herzegovina	17.7	16.0	24.7	29.1	10.0	7.4	22.7	20.4

Source: Authors' calculations.

As expected, a positive correlation was found between entrepreneurial education and training (formal and informal) and early-stage entrepreneurial activity in the Danube region for both genders. Those who are entrepreneurially active are significantly more likely to receive formal education and vice versa (correlation coefficient (male) = 0.101, $p < 0.01$; correlation coefficient (female) = 0.086, $p < 0.01$) as well as informal education (correlation coefficient (male) = 0.123, $p < 0.01$; correlation coefficient (female) = 0.0135, $p < 0.01$), although the correlations are not very strong. Therefore, hypothesis H1 can be confirmed.

When testing H2 and H3, the share of men and women in the population who received entrepreneurship education and training was analyzed. Although non-significant gender differences regarding formal education were expected, the results suggest that women are less frequently involved in formal entrepreneurship education and training ($p < 0.01$). Therefore, hypothesis H2 is rejected. Meanwhile, as expected, gender differences regarding informal training are also significant ($p < 0.01$). In the Danube region, men are on average much more likely

to receive informal education and training than women. Thus, hypothesis H3 is confirmed.

4. Conclusions. On average fewer women than men participate in entrepreneurial activity; this holds true for all the countries of the Danube region analysed in this paper. Although the majority of policymakers and researchers agree that "entrepreneurship is a catalyst for economic growth and national competitiveness" (Kelley et al., 2011, p. 5), it is obvious that not all social groups are equally included in this entrepreneurial endeavour. Women, who do not participate as equally as men in entrepreneurship, represent an unexploited resource for new products, services, income and job creation. Policymakers must therefore incorporate an entrepreneurial dimension for women when considering small and mid-sized enterprises and growth policies.

Although in more developed economies lower rates of female entrepreneurship could exist because women have other options that are better suited to their needs and their confidence related to what they are able to do and not able to do (OECD, 2004), it is still important that a higher share of female entrepreneurs could have a greater impact on the economy in regard to both the number of small firms they are able to create and the number of them able to create growing firms.

These research results suggest that those who received formal and informal entrepreneurial education and training are on average more likely to start a business; this holds true for both genders. In the Danube region, an average 1 in 5 adult men and 1 in 8 adult women receive formal entrepreneurship education and training; meanwhile, 1 in 7 men and 1 in 10 women receive some informal training for entrepreneurship. As both formal and informal education is an important source of entrepreneurial knowledge and skills, policymakers as well as educators should very carefully select and incorporate skills that would-be entrepreneurs need when designing curricula, including real-life entrepreneurial experiences.

Women in the Danube region undoubtedly represent an unexploited resource for entrepreneurial ideas. Given that entrepreneurs contribute to economic growth, job creation, innovation and promotion of enterprises, women also represent an unexploited resource when building prosperity in the Danube region.

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