
CHARACTERISTICS OF AGRIPRENEURS IN SOUTHEAST EUROPE: GEM DATA ANALYSIS

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ARTICLE INFO

Original Article

Received: 16 March 2023

Accepted: 20 April 2023

doi:10.59267/ekoPolj2303711M

UDC 338.431(4-12)

Keywords:

*Agripreneurs, intention,
motivation, internationalization*

JEL: L26, M13

ABSTRACT

This paper focuses on the factors that decisively influence the practice of agro-entrepreneurship in the early stages of the entrepreneur's development (demographic, motivational and internationalization factors). The results showed that people who have left their studies are more inclined to start entrepreneurial ventures in the agro-sector than those who are employed full-time or part-time and those who are currently unemployed. It has been proven that older people are more likely to start a venture in this sector. The size of the household proved to be a statistically significant determinant, in the sense that a larger number of household members increases the chances that a person will start a venture. Motives of necessity proved to be key motives for agro-entrepreneurs in the early stages of their development. It has been confirmed that entrepreneurs in the agro-sector in the early stages of development do their business predominantly within the borders of the national economy.

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Introduction

Common to most definitions of entrepreneurship is that it implies the process of creating new jobs and seeking new opportunities (Kirzner, 1979; Garther, 1985; Reynolds et al, 2004). A better understanding of entrepreneurship and the entrepreneurial process requires a review of a specific sector (Arafat & Saleem, 2017). The agro-industrial sector consists of a series of activities through which agriculture is connected to other sectors on both sides of the supply chain (Rossi et al 2014). Agro-processing refers to a set of technological and economic activities, which are undertaken on an agricultural product with the aim of turning it into a usable thing, such as food, fiber, fuel or industrial material (Thindisa, 2014). Agripreneurs are not only critical to the economy for the provision of food, but are agents of economic development and the dynamic nature of the agro-economy. Based on previous researches we accepted term “agripreneurs” as they are identified as an entrepreneurial people in agriculture and allied sector who either create or run either formal or informal agriventures (Yoganandan *et al.*, 2022). Farmers and those who perform agri-related activities are entrepreneurs in that they run businesses (McElwee, 2008).

Thompson (2009) talks about the fact that agro-entrepreneurial activity is determined by cognitive abilities and exogenous factors available to small farmers. Cognitive abilities include the origin of the farmer, level of education, previous experience, while exogenous factors are institutional support and socio-economic dynamics. Understanding the involvement of small entrepreneurs in agricultural activity implies understanding the factors that decisively influence their choice. Based on the analyzed literature, the authors arrive at three groups of determinants that influence the career choice of agro-entrepreneurs: demographic factors (Arenius & Minniti, 2005; Savić, 2022; Arafat et al, 2017; Ilić et al., 2022; Daviddson & Hoing, 2003), motivational factors (Ionescu et al., 2018; Florea et al., 2019; Pantić et al., 2022; Thephavanh et al., 2022) and internationalization factors (Leković & Petrović, 2020).

The paper aims to identify determinants that characterize agripreneurs in Southeast Europe. Early entrepreneurial activity in the agricultural sector was put in the center of attention. The methodology of the work is based on the Global Entrepreneurship Monitor (GEM) database and theoretical analysis of the available literature. The task included determining the common characteristics of agro-entrepreneurs from Greece, Bulgaria, Croatia, Slovenia and Bosnia and Herzegovina. In accordance with related research and theory in this field, it is based on demographic factors (work status, gender, age and household size), motivational factors, and internationalization. The research sample includes a group of nascent and entrepreneurial enterprises whose ventures is in the incubation period (up to 42 months old), which according to the GEM methodology represent Total Entrepreneurial Activity (TEA).

The work is organized as follows. As part of the theoretical background, the relevant literature in this field was consulted. The influence of demographic factors on the career choice of agro-entrepreneurs was analyzed. After that, the importance of motivational

factors was considered, within which two groups of motives and their influence on the agro-entrepreneurial activity of the individual are considered. Finally, the impact of internationalization as an entrepreneurial aspiration on agripreneurial activity was also discussed. Also, the methodology and results of statistical research using the logistic regression method are presented. This is followed by a discussion of the results, concluding remarks of the work with a list of contributions and limitations, and recommendations for further research.

Theoretical background

The success of entrepreneurs in performing entrepreneurial activities is largely determined by their demographic characteristics. Arafat et al. (2017) claim that entrepreneurial intention can be explained by demographic variables. Demographic characteristics of entrepreneurs include age, gender, education, work status, household size. Demographic characteristics are often responsible for the entrepreneur's orientation and ability to search for new opportunities (Javalgi & Grossman, 2016). Their influence can be both positive and negative on the creation of new entrepreneurs (Startiene & Remeikiene, 2009). Younger people are more energetic, they are familiar with available technologies, they have an adventurous spirit and what is most important, and they have not yet realized their limits and ultimate ranges.

The assumption is that older people have more knowledge and skills, better access to information, developed business networks and other resources necessary for starting an entrepreneurial venture. Older people, unlike younger people, can have a greater dose of responsibility. Age is generally observed in a negative correlation with the initiation of entrepreneurial ventures, which means that the intention to initiate entrepreneurial ventures decreases with age (Brixy & Hessels, 2010). However, when looking at starting new ventures in the agro-sector, the agripreneur is more likely to be an older person (Pindado Tapia & Sánchez García, 2017; Zagata & Sutherland, 2015; Yilmaz, 2018). Just as there is an ingrained imagination of an entrepreneur as a person who does everything by himself, the very mention of the word entrepreneur awakens in us the dominant perception that it is primarily a male person. For any national economy, inclusiveness in entrepreneurship is a necessary condition. If one group of people does not initiate business ventures at the level of another group or if there is a large discrepancy between the observed groups, it can in some way lead to restrictions on the creation of new jobs, new products and services, the development of innovations, economic growth and development.

According to the mentioned study, in most national economies there is also a higher probability of men starting ventures. Observed from the aspect of gender, women entrepreneurs are mostly in the minority. The literature says that men prefer to start new ventures (Arenius & Minniti, 2005; Markussen & Røed, 2017; Vossenbergh, 2013). Pindado Tapia & Sánchez García (2017) come to the conclusion that more educated and entrepreneurs with previous work experience prefer to choose another sector that is more profitable than the agro-sector. Arafat et al (2020) come to a different

conclusion. According to their research, a higher level of education means a greater chance of starting a venture in the agro-sector. The same authors also talk about work status as a factor influencing agro-entrepreneurs. The category of the unemployed is the most inclined to start new ventures in the agricultural sector. Other authors agree with this (Startiene & Remeikiene, 2009; Yilmaz, 2018). Household size is often cited as important for entrepreneurial aspirations. A larger number of household members increases the probability of starting entrepreneurial ventures (Raijman, 2001). Based on the analysis, the first hypothesis was set:

H1: Demographic characteristics (age, gender, number of household members, work status) influence on agripreneurial activity in the Southeast European countries.

Motives as determinants of human behavior or motivational factors as determinants of individual behavior are the basic reasons why someone is ready to change and direct their attitudes, actions and activities, which in any case also applies when it comes to entrepreneurs. Every social behavior of an individual as an individual is basically motivated by certain motives. Motivation, as a result of the action of internal or external factors affecting the individual, results in the investment of effort and energy to undertake activities and actions aimed at achieving set goals. It represents the behavior of individuals based on their abilities, environmental support and the attractiveness of rewards for satisfying perceived needs. Man's needs, such as recognition, achieving success, monetary rewards and the like, create certain unrest and disharmony in man's personality in the form of tensions, the action of which results in the motivation to undertake a certain type of behavior in order to satisfy certain needs. Encouraging people to use the opportunities of agro-entrepreneurship requires an understanding of the phenomena that can motivate them to enter the waters of agro-entrepreneurship in relation to other careers (Thephavanh et al, 2022). The explanation of entrepreneurial intentions is often seen through looking at the motives for starting entrepreneurial ventures. Taking into account the motive for starting an entrepreneurial venture, we distinguish between two basic types of entrepreneurs, "necessity and opportunity", i.e., forced and chance-driven entrepreneurs. This concept was supported by numerous researchers in the field of entrepreneurship (Gurtoo and Williams, 2009, Issa et al., 2022; Hessels et al., 2008).

It is necessary to distinguish between entrepreneurs who are dissatisfied with their current position or have no other option, and are therefore pushed into entrepreneurial activity, from those who want to take advantage of an opportunity that attracts them to engage in this business (Minniti et al. 2006). The decision of people who were employed before starting an entrepreneurial venture is explained in the literature through the opportunity motive (Caliendo & Kririkos. 2019). Kirkwood (2009) includes autonomy, profit and wealth, challenge, recognition and status as opportunity motives. In developed countries, these motives are dominant for starting entrepreneurial ventures (Hessels et al. 2008). Persons who started an entrepreneurial venture from the status of unemployed are characterized as necessary entrepreneurs (Caliendo & Kririkos, 2019). Kirkwood (2009) cites unemployment, job dissatisfaction, lack of support at

work, changing working conditions, family existence as the main motives of necessity. This type of entrepreneur has much less growth intentions (Reynolds et al, 2002). For agripreneurs in the literature, it is generally considered that their entrepreneurial activity is based on motives of necessity (Nikolaev et al, 2018). Thephavanh et al (2022) come to the conclusion that the need for independence, escape from poverty and financial pressures fit better into the concept of motives that drive agro-entrepreneurs. Based on the previously analyzed views, the authors propose the following hypothesis:

H2: Entrepreneurial motivation based on necessity (necessity-driven) has a direct positive impact on agripreneurial activity in the Southeast European countries.

Entrepreneurs as an initiators of the entrepreneurial process, based on the observation and profitable exploitation of identified opportunities, often find opportunities for the growth of their enterprise outside the borders of their country. Entrepreneurs see their chance for success in appearing on other markets. Expanding business beyond the borders of the national economy is one of the steps that a large number of entrepreneurs decide on. Looking for opportunities to expand business in a foreign market, can make significant benefits to entrepreneurs. Innovative products/services and new technologies are responsible for entrepreneurs being able to internationalize their business. The company's internal strengths, which include: accumulated knowledge, organizational capabilities, financial, human and material resources, are the basis for realizing the internationalization of business. The personal characteristics of entrepreneurs are used to explain the intentions of entrepreneurs to do business abroad. Foreign education, foreign work experience, travel experience, knowledge of languages, knowledge of business practices abroad, laws and regulations are responsible for the development of personal characteristics that support the process of internationalization (Zucchella et al, 2007). Agripreneurs are not expected to internationalize their business (Bertolini & Giovannetti, 2006). Leković & Petrović (2020) say that the absence of international orientation is a characteristic of agro-sector entrepreneurs. Most agripreneurs show difficulties when operating in a competitive environment, and that a better position can only be achieved by joining forces (Rossi et al 2014). Carraresi (2012) reveals that small and medium-sized agro-enterprises benefit from sales at the national level or within the territory of one region. In accordance with the analyzed literature, the authors propose the following hypothesis:

H3: The internationalization of business has a direct negative impact on entrepreneurial intentions in the agricultural sector in the countries of the Southeast Europe.

Methodology

The aim of the work is to identify the determinants that influence people in Southeast Europe to make a decision to engage in agropreneurship. For research purposes, the Global Entrepreneurship Monitor (GEM) database from 2017 was used. The main source of data for the analyzed factors (variables) in this study are the results of the GEM survey (Global Entrepreneurship Monitor) from 2017. GEM represents the

world's leading research consortium dedicated to understanding the relationship and impact of entrepreneurship on national economic development. The research conducted in 2017 covered 54 countries, which accounted for 64.7% of the world's population and 86% of the world's GDP. GEM represents the most relevant database when it comes to the academic discipline of entrepreneurship. Answers from Greece, Bulgaria, Croatia, Slovenia and Bosnia and Herzegovina were filtered from the database, which makes a total of 10,047 entrepreneurs, of which 69 are agro-entrepreneurs. GEM represents one of two available international comparative datasets related to entrepreneurship (Estrin et al., 2013). The second is the "Entrepreneurship Survey" of the World Bank focused on registered companies, while the GEM covers all entrepreneurial activities at the national level (Acs et al., 2008). The authors decided to use global data at the national level from 2017, because the GEM research methodology, from the aspect of conceptuality and comprehensiveness, leads to research results that in this intensity do not lose their significance with the passage of time, since it is a matter of national research.

Table 1. Variable description

Description	Variable	Answers
Demographic	GEMWORK3. GEM harmonized work status: 3 categories	Work (1), Not working (2), Retired students
	What is your gender?	Male (1), Female (2)
	What is your current age (in years)?	Continuous variable
	How many members make up your permanent household, including you?	Continuous variable
Motivation	Motive for people involved in TEA	Purely opportunity motive (1), Partly opportunity motive (2), Necessity motive (3)
Internationalization	TEA: strong international orientation (more than 25% of revenue from outside country)	No (0). Yes (1)

Source: Author's analysis

For the purposes of statistical data analysis, the software package SPSS 18 was used. TEA: Industry ISIC version 4, 1-digit code, which reflects the industrial sector of the entrepreneurial venture, was chosen as the dependent variable. The research sample includes entrepreneurs who are in the early stages of entrepreneurial activity (TEA). The payment of wages in a period of three months (to the workers or the owner himself) is considered a key event for determining the date of "birth" of a business venture. Entrepreneurs who have invested significant resources (human, financial, material) but have not reached the stage of salary payment within a time interval of three months are considered entrepreneurs in the process of establishment or nascent entrepreneurs. Entrepreneurs who have paid salaries for more than 3 months and less than 42 months are considered owners - managers of new companies. Together these two groups of entrepreneurs. For the purposes of the research, the variable was recoded with the

intention of creating a categorical type variable. Respondents engaged in agribusiness are separated into one group, while respondents from all other activities are in the second group. Independent variables are grouped into three categories of factors: Demographic factors: Work status, Gender, Age, Number of household members; Motivational factors: Type of motive (opportunity/necessity); International factors: Strong international orientation (more than 25% of revenue is generated from abroad). An overview of the variables used in the research can be found in Table 1.

Results and discussion

Binary logistic regression was used to examine the influence of determinants on the decision to engage in agribusiness. Omnibus Tests of Model Coefficients takes into account the independent variables and based on the data (Sig.=0.000), ($p < 0.0005$) better predicts the results, than in a situation where it is predicted that all students seriously considered the option of starting an entrepreneurial venture. The chi-square indicator is 39,306 with 8 degrees of freedom. According to the Hosmer-Lemesh test, the chi-square is 11.668 with a significance of 0.167, which shows that the model is supported. Nagelkerke R Square is a modification of Cox & Snell R Square, so in this research we report on Nagelkerke R Square. Therefore, the model explained 15.7% of the variance in students' intentions to start entrepreneurial ventures, and correctly classified 89.0% of cases. The conclusion is that the sensitivity of the model is 99.8%, which means that the model correctly recognized this percentage of entrepreneurs who do not engage in agribusiness. The certainty of the model is 5.6%, which means that the model recognized exactly this percentage of agro-entrepreneurs.

Table 2. Variables in the Equation

		Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1a	Demographic Factors								
	GEMWORK3. GEM harmonized work status: 3 categories			10.3	2	0.006			
	GEMWORK3. GEM harmonized work status: 3 categories (1)	0.91	0.44	4.29	1	0.038	2.484	1.05	5.88
	GEMWORK3. GEM harmonized work status: 3 categories (2)	1.56	0.59	7.01	1	0.008	4.765	1.5	15.1
	A. What is your gender?	-0.4	0.34	1.46	1	0.226	0.665	0.344	1.29

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
								Lower	Upper
Step 1a	B. What is your current age (in years)?	0.03	0.01	7.31	1	0.007	1.034	1.009	1.06
	E. How many members make up your permanent household, including you?	0.3	0.09	11.9	1	0.001	1.351	1.139	1.6
	Motivation Factors								
	Motive for people involved in TEA			8.03	2	0.018			
	Motive for people involved in TEA (1)	0.17	0.43	0.15	1	0.695	1.182	0.512	2.73
	Motive for people involved in TEA (2)	0.97	0.37	7.07	1	0.008	2.644	1.291	5.42
	International Factors								
	TEA: strong international orientation (more than 25% of revenue from outside country) (1)	-0.9	0.37	5.8	1	0.016	0.408	0.196	0.85
Constant	-4.3	0.87	24.6	1	0.000	0.01			

a Variable(s) entered on step 1: GEMWORK3. GEM harmonized work status: 3 categories, A. What is your gender? B. What is your current age (in years)? E. How many members make up your permanent household, including you? Motive for people involved in TEA, TEA: strong international orientation (more than 25% of revenue from outside country).

Source: Author's analysis

The contribution and importance of each independent variable was analyzed. Primarily, the variables that are statistically significant for the model are considered. These are the factors that decisively influence whether a person will engage in agribusiness. In the case of demographic factors, these are: work status, age and number of household members, while gender is not significant and does not influence the decision to engage in agribusiness. The observed motivational and international factors are statistically significant for the decision to engage in agribusiness.

The probability that a person engages in agribusiness is 2,484 times higher for entrepreneurs who are unemployed compared to those who are employed full-time or part-time, when all other factors are equal. It was confirmed that the category of

unemployed has the greatest chances for an agro-entrepreneurial career, which is in line with previous research (Startiene & Remeikiene, 2009; Yilmaz, 2018). The probability that a person engages in agribusiness is 4,675 times higher for entrepreneurs who left their studies compared to those who are employed full-time or part-time, when all other factors are equal. More educated and experienced people from the business world will direct their knowledge to some other more profitable sector. The students' decision to engage in agropreneurship was encouraged by an external aspect. The role of family, friends, teachers, the state is critical for attracting and motivating a career in the agricultural sector (Che Nawi et al, 2022). The result itself can be partially explained by the fact that the countries of the Southeast Europe are predominantly rural, which means that dropping out of studies mostly means returning home to the countryside, and therefore engaging in agriculture as the most represented activity. The probability that a person engages in agribusiness is 1,034 times higher for entrepreneurs who are older, when all other factors are equal. The age of the entrepreneur increases the chances that the entrepreneurial venture he starts will be within the agro-sector. Brixy & Hessels, (2010), Leković & Petrović, (2020) reach identical conclusions, which is mainly explained through risk. Old age increases risk aversion, and investments in agriculture do not involve large infrastructure investments and unknown circumstances, so they are therefore less uncertain. In the regions of the Southeast Europe suitable for farming, the elderly population predominately lives, so in accordance with this, the chances of entrepreneurial ventures in this sector being started by the elderly are much higher. The probability that a person engages in agribusiness is 1,351 times higher for entrepreneurs who have a larger number of household members, when all other factors are equal. This also means that if the number of household members increases by one unit, the probability that they will engage in agribusiness increases by 1,351. The result proves that a larger number of members of the entrepreneur's household increases his chances of starting an agro-entrepreneurial venture, which is in agreement with other literature (Rajiman, 2001). A larger number of household members, on the one hand, can mean more sources of family financing, and with that, greater freedom for individual members to engage in entrepreneurship. On the other hand, it can also mean more hands that will be employed, contribute and help the family agricultural business. Since in the countries of the Southeast Europe, in its rural areas, the coexistence of several generations within the same household is represented, they influence the fact that a larger number of household members represents one of the statistically significant variables and their positive impact on agro-entrepreneurial activity. H1 hypothesis was partially confirmed, since there was no statistical significance in the case of the gender variable.

The probability that a person engages in agribusiness is 1,182 times higher for entrepreneurs who are motivated partially by opportunistic motives compared to those who are driven by opportunistic motives in full, when all other factors are equal. The probability that a person engages in agribusiness is 2,644 times higher for entrepreneurs who are motivated by motives of necessity compared to those who are motivated entirely by opportunistic motives, when all other factors are equal. For entrepreneurs

who are motivated by necessity motives, it has been shown that they have the highest probability of starting business in the agro-sector. Financial pressures and escape from poverty push people into this sector. The existence of a certain infrastructure, such as family property, inheritance, gives the possibility that farming is the first choice. In this way, it is not necessary to have large investments at the start, which brings with it a lower risk, so the decision is fully justified. We find confirmation of this in the work of Thephavanh et al (2022). Based on the results, it can be concluded that hypothesis H2 is fully confirmed.

The probability that a person will engage in agribusiness is 2,451 times lower for entrepreneurs who generate more than 25% of their income from abroad, when all other factors are equal. The third hypothesis was fully confirmed, which means that the characteristic of agro-entrepreneurial firms is business within the national economy. If a company generates more than 25% of its revenue from the foreign market, it is unlikely that it comes from the agro-sector. The theoretical basis that can support these results can be found in the works written by Bertolini & Giovannetti (2006). Agricultural entrepreneurs market their products within the borders of the national economy and it is unlikely that they will launch their ventures in order to expand to foreign markets. Entrepreneurs in the agro-sector are mostly small producers, who enter the market through family farms, which means they also enter within the borders of one country. The export of agricultural products implies simultaneous quality and quantity, in terms of satisfying the refined demands of foreign customers on the one hand, while on the other hand it implies continuous deliveries. These specific requirements can hardly be fulfilled by all agribusinesses. Since the analyzed sample is aimed at entrepreneurs in the early stages of the life cycle, ventures that are in the incubation period, since they do not have a high-growth rate, they are expected to be focused on the development of the venture within the limits in the initial stages national economies.

Conclusion

Agropreneurship plays an important role when it comes to the development of a country. This study was carried out in order to determine the current situation and draw attention to entrepreneurship in this sector. The goal of the research was to determine the determinants that decisively influence the intentions of early agro-entrepreneurs. The Global Entrepreneurship Monitor (GEM) database was used for the research, within which 10,047 entrepreneurs from the countries of the Southeast Europe were singled out, of which 69 are agro-entrepreneurs.

The analysis highlighted three groups of factors. The first group includes demographic factors in which work status, gender, age and number of household members were considered. Differences in gender did not prove to be statistically significant for agro-entrepreneurial intentions, while other demographic factors were significant. The result showed that unemployed people most often start these ventures. In addition, it has been proven that older people are more likely to make a decision to engage in agro-entrepreneurship. A larger number of members of the entrepreneur's household

increases the chances that his entrepreneurial venture is within the agro-sector. The second group consists of motivational factors. It has been shown that necessity motives drive agro-entrepreneurs, which means that they are pushed into this activity for certain reasons. As for the internationalization of business, the results lead to the fact that entrepreneurs in the agro-sector mainly conduct their business within the borders of the national economy.

The contribution of the work is reflected in the increase of literature in the field of agro-entrepreneurship in this area. It should serve researchers as a guideline for further research in this area. It provides an overview of the factors that are key to engaging in this activity. In addition, it shows the situation and attitude towards this sector of entrepreneurship in the Southeast Europe. The research results should serve as a sign to policy makers that it is necessary to work on making agro-entrepreneurship a more attractive occupation.

The work includes several limitations. Within the limitations of the research, it is emphasized that it does not include all the countries of the Southeast Europe. The sample includes only Greece, Bulgaria, Croatia, Slovenia and Bosnia and Herzegovina. These are the countries that participated in the 2017 GEM survey. As the next limitation, the authors state that the research did not include the creation of a questionnaire and directing the research directly to entrepreneurs in the agricultural sector. The GEM database was used for the research, from which responses of agro-entrepreneurs were filtered. If the research had been purposefully created and focused on agro-entrepreneurs, some other determinants might have been identified. In addition, the determinants were observed on the basis of a database that includes the results for 2017, which may reflect the current situation specific to that time instance. Creating a time series and covering a time period of several years, creating longitudinal data, creating panel data and increasing the number of observations, would lead to more reliable results for interpretation.

Future research could be focused on the creation of a questionnaire that is fully adapted to examining the determinants of agro-entrepreneurs and that is conducted only on them. Furthermore, subsequent research could include a review of the results for several years, in order to see whether the significance of the determinants that influence the choice of an agro-entrepreneurial career changes over time. It would be good to do comparative analyzes and review the determinants of developing countries and developed countries. New technologies, the development of mechanization, government subsidies, access to the market, certainly make a difference in the attractiveness of agro-entrepreneurship in developed and developing countries. Looking for specific recommendations from agro-entrepreneurs, which can contribute to increasing the attractiveness of this career, could also be the direction of future research.

Conflict of Interests

The author declares no conflict of interest.

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