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Article

The impact of the degree of entrepreneurial manifestation in the society, at the level of the romanian rural area

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Abstract: The economic activities in the romanian rural areas have started to know new horizons with Romania's accession to the European Community. The rural society was and is focused on the level of entrepreneurial behavior strictly on agriculture, with all its derivatives. At present there is a variety of sectors of activity that are found in the rural society, which are waiting to know new dimensions. The higher the number of entrepreneurs, the more job vacancies will be created across different fields of activity. In these circumstances, the number of jobs will increase, and the society in the romanian rural area can enjoy a diversity of the population determined by the various professions of people, but also by the new dimension offered by the entrepreneurial area. This way, it will be done later the repopulation of the Romanian countryside, a national interest issue, after the great majority of the population went to work in the countries of the European Community, having to be forced by the poverty of the romanian rural area, determined by the lack of jobs to ensure a decent standard of living.

Keywords: entrepreneurship, employees, romanian rural area, development.

1. Introduction

Entrepreneurship in romanian rural areas can be said to have its origins since ancient times. This is an innovative process that requires the involvement of several categories of people with a quality-oriented vision, a realistic reward system, individual, allied responsibility with a difficult environment. The three major Romanian countries, Wallachia, Moldovia and Transylvania, for about nine centuries (1000-1850), have followed partly different paths of development, due to geographical placement, historical peculiarities, local traditions, or influence brought by the surrounding peoples. Wallachia, that is, Muntenia and Oltenia, as well as Moldavia, including Bessarabia and Bukovina, were disadvantaged from the outset in the face of otoman and tatar torrages, protected only under fictitious by the rivers , so borders remained open and unprotected. Moreover, western influences have been weakened in these areas, oriental and asian culture being predominant. Social organization, based on the existence of village obsts, and subsequently on the typical feudal vasality relationships, will be fully found up to the 19th century. Furthermore, the degree of urbanization is extremely low due to the lack of a large-scale trade-based industry, which in time makes it impossible to encompass both quantitative and qualitative elements in national wealth. In other words, the two romanian principalities have stagnated in social and economic terms, thus forming agrarian legal entities, which registered a subsistence economy and two social classes, just as immobile and conservative: the peasantry and the boierness.

On a diplomatic and military level, Wallachia and Moldovia managed to remain independant, or at least autonomous, until 1850, but their economic and social life has suffered a lot, although they did obtain notable achievements and even amazing (the monasteries in the north of Moldovia are an example that complete the rule: they could be lifted, resisting due to their protected position). In short, Moldovia and Wallachia failed to overcome the level of exporting areas of cheap agricultural products and raw materials, but neither area of importing finished products of high value and low volume. Transylvania, being defended by mountains to the southeast, has experienced a whole invasion of populations coming from the west of Europe. The technical, cultural influences, the values of the various ethnic groups in the transylvanian area, as well as the multitude of religions in the area, have led to both an acceptance society of the other principles and values and increased mobility. The main and also positive contribution to this

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area is found in economic, social and cultural areas, which belonged to the german peoples of Saxony, Flanders, Rhine and Suabia. They have brought a range of values characteristic of northern Europe, which were practically unknown in the south and east of the continent, such as professionalism in the usual activity, seriousness, daily behavior, inclination to highly skilled occupations (including agricultural production), awareness of a lifelong learning process during life, cluster in urban communities (where individual freedom and well-being were put on the same footing as community ones). With the transition to a system based on the existence of a liberal city, where the main activities were trade and craft, from the production of quality goods, the level of entrepreneurship has started to make its presence known since that time. The feudal-agrar system became self-sufficient and intensively practiced in Wallachia and Moldovia, so that Transylvania managed to customize the activities of this principality with the influence of the german peoples who managed to indisputably transmit a factor of innovation and progress, both for the local romanians, but even more so for the hungarians who came to this area between the 8th and 12th centuries.

From the point of view of the subject of analysis and discussion, entrepreneurship was introduced by economists in the 18th century and subsequently continued to capture the attention and interest of economists in the 19th century. Regarding the list of information on the work and qualities that drive the results of entrepreneurs who have carried out many and various studies, it can be concluded that all successful entrepreneurs had the following qualities: internal control, planning and schematic capacity, risk-taking and thus failure, innovation, feedback request and application, decision-making in borderline situations, independence.All this list represents only a small part of the values of an entrepreneur, as this type of activity is a whole ongoing improvement process by adding new features.

In the opinion of the representatives of the Behaviorist School (Green, C.D., 1913), those who paid the greatest attention to the elements that characterized entrepreneurs in the first half of the 20th century consider the main issues that are allocated to the entrepreneur, as the following: *creators, tenacious, energetic, innovators, leaders, risk-taking, independant, flexible, results orientation, materialistic, original or optimistic*. Progress, in both addressing and depth the content of work and the characteristics of entrepreneurship according to recent studies by researcher Jacques Fillon, based on an integrated, useful and interesting approach to the characteristics and activities of entrepreneurs.

Figure 1. Characteristics of the entrepreneur

Source: Author's own conceptualization.

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Over time, more characteristics have been given to the entrepreneur in all its forms. The most important aspects of this are: *determination and perseverance* (the most important factor is commitment to success as the entrepreneur has the capacity to overcome its obstacles; perseverance and strong determination can turn an entrepreneur into a real shield against any difficulties that other people might consider insurmountable); *a desire to win* (entrepreneurs examine an opotunity, assess how they can increase their chances to make an additional profit and move on; in terms of results, risks are considered high by ordinary people but entrepreneurs have the capacity to manage such situations); *searching for feedback* (efficient entrepreneurs are often described as having the capacity to easily retain useful information and the desire to know how best to do it and how to maximize its results; feedback is an important element because the entrepreneur needs to learn from both mistakes and experiences he has had in the past); *resolving persistent problems* (entrepreneurs do not become intimidated by difficult situations, but confidence in themselves and optimism at the general level make them notice the impossible as something that just takes more time to be resolved,simple and banal situations are boring them, entrepreneurs are extremely persistent, but they become realistic in assessing what they can and cannot manage and to the same extent honest where they feel they need help to clarify complicated but unavoidable problems); *responsibility and initiative* (entrepreneurs have always been considered as it is dynamic and independant persons, seeking and taking the initiative, always in situations where they are personally responsible for the failure or possible success of the operation; they prefer to be involved in various problems from which the impact can be quantified; when they decide to take action, they do so in an organized manner, trying to do everything to achieve a favorable win-win situation, but avoiding unnecessary risk-taking); *tolerance for failure* (entrepreneurs use failure as an experience from which they can learn something; it is the most effective category that expects difficulties and does not become disappointed, discouraged or depressed following a failure); *self-confidence and optimism* (although entrepreneurs often encounter major obstacles, confidence in their skills drives them to face and at the same time become a model for others); *making visions* (entrepreneurs know where they want to go; they have a concept or vision of their own business, which they want to achieve; for example, Steve jobs wanted his company to create microcomputers that later could be used by all categories, from primary grade children to the most appreciated business, something that has been accomplished). (Collins, J., 2004).

2. Materials and Methods

The study is conducted on the basis of data on the number of entrepreneurs, the average number of employees and the turnover, broken down into the eight development regions of the country (Bucharest-Ilfov, Center, North-East, North-West, South-East, Muntenia, Oltenia and West). These are the total related to all areas of activity and thus to the sub-areas existing in the counties belonging to these regions, at rural level. This will quantify the degree of entrepreneurial behavior in rural areas by local entrepreneurs, so that the impact of the growth of each development region can be determined by a minimum of one entrepreneur.

The entrepreneurial impact in rural areas can be determined by the types of activities found under the NRC's CAEN classification (National Trade Register Office), allocated for each development region. The aim is to analyze the impact that the number of entrepreneurs (independant variable) has on the number of employees and turnover (dependant variables), both at national and regional level. In this respect, the EViews7 statistical program was used, where simple regressions were estimated on the basis of the data set, of the type panel including cross-section series (42 counties at national level) and a period of time (2013-2017).

In this process, the effects appropriate to the model presented were tested and concluded to use fixed cross-section effects and time-level effects (the only exception being the model developed for the Northwest Region where fixed effects were used for both dimensions). The tests carried out in this respect and their assumptions are as follows:

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• Hausman test for Random-Effects (as shown in Appendix 1):

H0: The appropriate model is random-effects;

H1: The appropriate model is fixed-effects.

Conclusion : Probability > 0.05 => the appropriate model is random-effects at the time level.

The Error components Model determines the intercept as the sum of the average extracted from the probability distribution and the error term incorporating the lack of complete model information, as well as the differences between individual and population interceptions.

Likelihood ratio for fixed-effects (as shown in Appendix 1):

H0: Fixed-effects are redundant;

H1: Fixed-effects are appropriate.

Conclusion: Probability 0.05 => fixed effects are suitable for cross-section.

The fixed effects model or the LCDS (Least Squares Dummy Variable) implies assigning a dummy variable to allow the intercepted to vary over time and between individual observations. Also defined as N-1 and T-1, dummy variables to avoid perfect coliniarity (Dummy Variable Trap).

The estimation of the regression has checked whether the parameters are significant by interpreting the probabilities of the independant variable and the validity of the data probabilities model (F-statistic). The assumptions considered are as follows:

• The Meaning of the parameters:

H0: $\beta\_j=0$ => the parameter is not significant;

H1: $\beta\_j\neq0$ => the parameter is significant.

Conclusion: Probability 0.05 => parameters are significant.

• Validity of the model:

H0: $\beta\_1,\beta\_2,\ldots,\beta\_n=0$ => model not valid;

H1: $(\exists)\beta\_j\neq0$=> model is valid.

Conclusion: Probability 0.05 => model is valid.

In the Bucharest-Ilfov Region, only Ilfov county was included, at rural level, there was only a series of time, constituting a particular case where simple regressions were estimated by the OLS method (Ordinary Least Squares). Following this process, the residue normality has been tested and homoskedasticity of the residual variables (constant variant) has been checked, as well as the fact that they are not self-corelated. As a result, all assumptions necessary for a linear regression have been validated, with no problems identified.

• Normality Hypotheses (Jarque-Bera):

B0: JB=0 => the residues are normally distributed (S=0, K=3);

H1: JB ≠ 0 => the residues are not normally distributed.

Conclusion : Probability > 0.05 => the residues are normally distributed.

• Homoskedasticity (White Test) Hypotheses:

H0: $\alpha2=\alpha3=0$ => homoskedasticity;

H1: $(\exists)\ \alpha i\neq 0$ => heterokedasticity.

Conclusion : Sample. F(2,35) and Sample. CH-Square(2) > 0.05 => homoskedasticity.

• Auto-Correlation Hypotheses (Breusch-Godfrey Serial Correlation Lm Test):

H0: $\varrho1=\varrho2=0$ => there is no auto-adjustment;

H1: $(\exists)\ \varrho i\neq 0$ => there is auto-adjustment.

Conclusion : F(2,32) and Of The Sample. CH-Square(2 > 0.05) => there is no auto-adjustment.

Probabilities, found in outputs under the notation Prob., are interpretate for accept or reject one of the assumptions presented above taking into account a materiality level of 95 % (α = 5 %) as follows:

Prob. > 0.05 => null hypothesis (H0) is accepted;

Prob. < 0.05 => null hypothesis rejected and accepted alternative hypothesis (H1).

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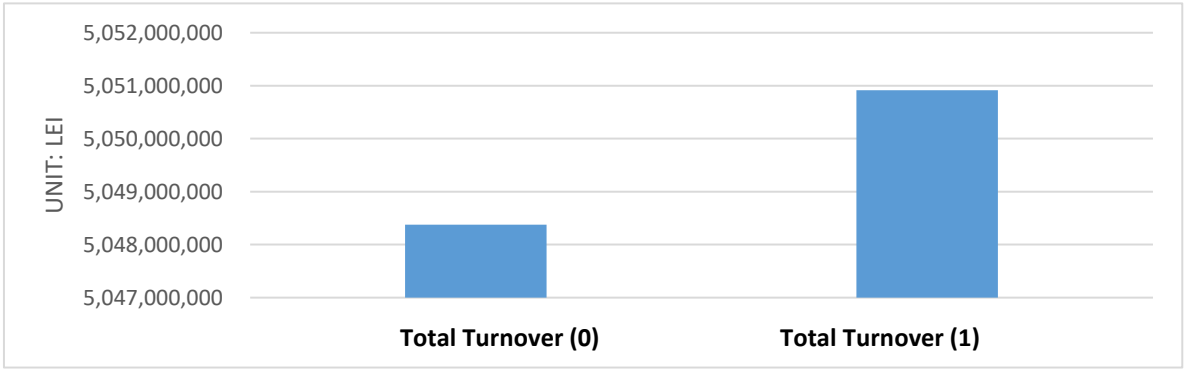
Also, in order to verify the initial assumption that the number of entrepreneurs has a fairly strong positive impact on dependant variables, the correlation coefficients from the analysis of the co-variance have been analyzed. As can be seen in Appendix 1, the variables have a strong positive relationship (as measured by the mark of the correlation coefficient and values higher than 0.8), which confirms the presumption performed.

3. Results

Ensuring the sustainability of the number of people in rural areas is first and foremost the possibility of employment allowing decent living. Natural capital, the prospects offered by each area, are also aspects that every citizen must consider. A major problem for the past 25-30 years, in Romania is the decrease in the number of people living in rural areas. In order to create conditions for living in these areas, the degree of entrepreneurship must be developed first.

To this end, the impact of an entrepreneur growth on the average number of employees and turnover will be observed at a later stage. These variables contribute to the socio-economic situation in rural areas, which represents a potential for increasing population levels and reducing migration to urban areas or other EU Member States.

Figure 2: The situation regarding the level of turnover and the average number of employees, in the case of entrepreneurial activity in rural areas at national level



Source: Data processed in EViews

Both the level of turnover and the average number of employees indicate an increase if the entrepreneurial behavior of the countryside increases its size with an entrepreneur. This is compared to the average of each development region (covering all areas of activity) in 2017 (time 0).

In addition, were found coefficients on the extent of entrepreneurship resulting from individual national regression as well as individual regions analyzed (as shown in Appendix 10). It is also noted that their biggest impact on turnover is recorded in the South-Muntenia Region, where the increase in the number of entrepreneurs with one unit will result in an increase in turnover by 3.897.520 lei. The region also has the highest increase at level the average number of employees (5.50) as a result of the entry into the business area of a new entrepreneur.

At the same time, the following regions favored by their increase in terms of turnover are the Western Region (3.730.521 lei) and the Center Region (3.259.920 lei). In addition, in terms of the number of employees, however, the highest contribution is recorded in the western part of the country (5.36) and in the Bucharest-Ilfov Region (5.19). Therefore, the area where the independant variable has the lowest impact on the two selected dependant variables is the South-East Region, where a new entrepreneur can generate a surplus of only 824.946 lei in the turnover of this area, while the average of employed people

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will grow by less than 2 people. It can therefore be seen that most regions have a level above the national average in terms of the contribution of the level of entrepreneurship to the two dimensions.

Tablel 1: The status of the level of turnover and average number of employees, in the case of entrepreneurial activity in rural areas, in the Bucharest-Ilfov Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
38.970.588.169	38.973.800.416	73.043	73.048

Source: Data processed in EViews

The value of the coefficients obtained in the individual regressions at the level of each county and for each region shows an upward trend. This was found by comparing the average of each county (covering all areas of activity) in 2017 (time 0). It is also noted that the level of turnover will increase by 3.212.247 lei, while the average number of employees will increase with 5 units. At the same time, both the level of turnover and the average number of employees indicate a development of the business area in rural areas, which will increase its size with an entrepreneur.

Table 2: The status of the level of turnover and the average number of employees, in the case of growth with an entrepreuner of the degree of entrepreneurial manifestation in the rural area, in the Center Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
4.260.708.859	4.263.968.779	15.667	15.671

Source: Data processed in EViews

The level of coefficients obtained in individual regression for each county and region shows an upward trend. This is seen in comparison to the average of each county (covering all areas of activity) in 2017 (time 0). It is thus noted that the level of turnover will increase by 3.259.920 lei, while the average number of employees will increase with 5 units. At the same time, both the level of turnover and the average number of employees indicate an increase in entrepreneurship in rural areas, with an increase by one unit in the number of entrepreneurs.

Table 3: The status of the level of turnover and the average number of employees, in the case of growth with an entrepreuner of the degree of entrepreneurial manifestation in the rural area, in the Northeast Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
3.852.128.789	3.853.932.487	14.272	14.276

Source: Data processed in EViews

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The value of the coefficients obtained in the individual regressions at the level of each county and for each region shows an upward trend. This was found by comparing the average of each county (covering all areas of activity) in 2017 (time 0). It is also noted that the level of turnover will increase by 1.803.698 lei, while the average number of employees will increase with 4 units. At the same time, both the level of turnover and the average number of employees indicate a development of the business area in rural areas, which will increase its size by an entrepreneur.

Table 4: The status of the level of turnover and the average number of employees, in the case of growth with an entrepreuner of the degree of entrepreneurial manifestation in the rural area, in the Northwest Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
4.865.052.782	4.865.956.332	18.381	18.384

Source: Data processed in EViews

The level of coefficients obtained in individual regression for each county and region shows an upward trend. This is seen in comparison to the average of each county (covering all areas of activity) in 2017 (time 0). It is thus noted that the level of turnover will increase by 903.551 lei, while the average number of employees will increase with 3 units. Both the level of turnover and the average number of employees also indicate an increase in entrepreneurship in rural areas, so that it will increase its size by an entrepreneur.

Table 5: The status of the level of turnover and the average number of employees, in the case of growth with an entrepreuner of the degree of entrepreneurial manifestation in the rural area, in the South West Oltenia Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
2.500.721.162	2.501.546.108	9.962	9.963

Source: Data processed in Eviews

The value of the coefficients obtained in the individual regressions at the level of each county and for each region shows an upward trend. This was found by comparing the average of each county (covering all areas of activity) in 2017 (time 0). It is also noted that the level of turnover will increase by 824.946 lei, while the average number of employees will increase with 2 units. As a result, both the level of turnover and the average number of employees indicate a development of the business area in rural areas, which will increase its size by an entrepreneur.

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Table 6: The status of the level of turnover and the average number of employees, in the case of growth with an entrepreuner of the degree of entrepreneurial manifestation in the rural area, in the South-Muntenia Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
6.094.594.151	6.098.491.671	18.290	18.296

Source: Data processed in EViews

The level of coefficients obtained in individual regression for each county and region shows an upward trend. This is seen in comparison to the average of each county (covering all areas of activity) in 2017 (time 0). It is thus noted that the level of turnover will increase by 3.897.520 lei, while the average number of employees will increase with 6 units. Both the level of turnover and the average number of employees also indicate an increase in entrepreneurship in rural areas, so that it will increase its size by an entrepreneur.

Table 7: The status of the level of turnover and the average number of employees, in the case of growth with an entrepreuner of the degree of entrepreneurial manifestation in the rural area, in the Southeast-Oltenia Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
1.882.908.396	1.884.404.185	8.474	8.478

Source: Data processed in EViews

The value of the coefficients obtained in the individual regressions at the level of each county and for each region shows an upward trend. This was found by comparing the average of each county (covering all areas of activity) in 2017 (time 0). At the same time, it is noted that the level of turnover will increase by 1.495.789 lei, while the average number of employees will face a unit increase of 4 units. Both the level of turnover and the average number of employees also indicate a development of the business area in rural areas, which will increase its size by an entrepreneur.

Table 8: The status of the level of turnover and the average number of employees, in the case of growth with an entrepreuner of the degree of entrepreneurial manifestation in the rural area, in the West Region

Total Turnover (0)	**Total Turnover (1)**	**Average number of employees (0)**	**Average number of employees (1)**
UNIT: lei		**UNIT: persons**	
5.766.130.629	5.769.861.150	19.125	19.130

Source: Data processed in EViews

The level of coefficients obtained in individual regression for each county and region shows an upward trend. This is seen in comparison to the average of each county (covering all areas of activity) in 2017 (time 0). It is thus noted that the level of turnover will increase by 3.730.521 lei, while the average number of employees will face an increase of 5 units. At the same time, both the level of turnover and the

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average number of employees indicate an increase in entrepreneurship in rural areas, so that it will increase its size by an entrepreneur.

3. Discussion

As for the analysis of the impact of the increase with an entrepreneur in the romanian rural area, it was found that at national level there would be an increase in turnover of 19.128.191 lei and the prospects for job vacancies would amount to 32 units. These new jobs represent a gradual increase that could be achieved both at county, regional and but also at national level. The most important aspect of the indicators used is that it is considered the impact on the repopulation of the romanian rural area, which is of national interest, after the great majority of the population has gone to work in the EU countries, due to the poverty of the romanian rural area,determined by the lack of jobs which to ensure a decent standard of living.

At national level, the highest impact on turnover, due to the increase of entrepreneurial activity by an entrepreneur, is recorded in the South-Muntenia Region, where an increase of 3.895.520 lei is expected. The regions which have a similar value to the one mentioned above are West, Bucharest-Ilfov and Center. This shows that there is a diversity in the sectors of activity in these areas of the country and the increase in the number of entrepreneurs is practically leading to the expansion of all areas, regardless of the form of legal entity, public or private. On the other hand, the region that would have the lowest turnover level in the expansion of the number of entrepreneurs with a unit would be South West Oltenia, where there would be an increase of the indicator analyzed by 824.946 lei. At the same time, an approximately similar result is recorded in the Northwest Region, which shows that there is a discrepancy between the western part of the country regarding the sectors of activity existing in the rural area.

In terms of employment growth in rural areas, it is shown that the entire region of South-Muntenia has the highest value, realizing at market level the opportunity to hire 6 people. It can also be said that there is symmetry about the impact of the increase in entrepreneurial behavior, as West and Bucharest-Ilfov regions have a similar value to that of the southern part of the country. On the other hand, as regards the development of the business area within the South West Oltenia Region, there would be only one vacancy for employment, in the event of a new entrepreneur emerging in the rural area.It is interesting that the South-East and Central regions, although they would have an increase of turnover of about 1.649.743 lei regarding the impact analyzed, offer 4 new jobs to the rural society. At the same time, the Northwest Region offers 3 jobs for employment, although the turnover level would bear an increase of 903.550 lei, at the level of the increase of the number of entrepreneurs with one unit. This proves that in the last three regions listed there are different types of entrepreneurial activities that allow for the creation of new jobs in small and SME-type entities.

The complexity of the business of entrepreneurs in rural areas is a problem which draws general attention and symbolizes a concern for decision-makers. The subject tends to gain political importance in times of economic difficulties.

The need to encourage entrepreneurship is to understand that it creates profitable businesses with increased adaptability to the needs of the economy. Entrepreneurship is a major driver of economic growth, innovation, competitiveness, employment and social integration, and has been supported at European level for long periods of time. At present, the promotion and development of entrepreneurship is one of the main strands of the Europe Strategy 2020, which aims to create more jobs and ensure a decent living for the people of the European Community.

At the same time, the promotion and strengthening of entrepreneurship symbolizes one of the most important ways of tackling the economic problems of rural communities and a solution to the current economic downturn perceived in many Member States of the European Union and, unfortunately, with a disadvantaged level for Romania. Among the problems facing the area of rural entrepreneurship in Romania, we can list:

- the success of rural entrepreneurs is dependant on their skills, their ability to conduct a business, their creativity, and the availability of business risk-taking;

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• rural entrepreneurs, both present and potential, require additional support for the stabilization and development of businesses, even if they have the skills to run/start a business, in order to avoid possible failures that may occur, especially when is implemented a business;

• main target groups to strengthen entrepreneurship in the countryside is: young people, women and small farmers, subsistence and semi-subsistence farms, who fear failure, especially given the fact that they can lose the budget they make available;

• agriculture and processing of agricultural products are target sectors for strengthening rural entrepreneurship, so focus on other areas is reduced, especially in non-agricultural areas (such as education, tourism, health, leisure activities, etc.);

• the rural area helps the emergence of new businesses, but it is a vulnerable entrepreneurial environment, which depends on external factors (local infrastructure, social environment, economic environment, cultural environment, traditions, etc.), as well as internal factors (capacity, skills and competences of the entrepreneur), as well, this prevents potential investors from manifest their entrepreneurial impact.

Another aspect facing rural entrepreneurship is the section on identifying needs. Building on the idea of supporting rural entrepreneurship and the creation of a diverse range of businesses in rural areas, a number of needs have been identified, such as *the needs of potential or existing entrepreneurs in rural areas* and *the needs of rural entrepreneurship*.

The first category is characterized in various aspects, such as the provision of business management training courses, innovation training courses, change management, risk management and the development of the creativity and entrepreneurial capacity of individuals, in particular young people and women, the training of networks of entrepreneurs focused mainly on knowledge transfer and exchange of best practices, but also the provision of technical support represented by a series of initiatives developed around specific projects in agriculture, manufacturing, tourism, basic services and leisure activities.

The needs of entrepreneurship in rural areas are characterized in different ways, such as facilitating access to finance at local level, i.e. as close as possible to the area where economic activity takes place, in order to better and more efficiently respond to the needs of the business environment; cutting red tape, simplifying procedures for accessing grants for rural development, and thus improving relations between authorities involved in rural development programs and applicants; changing the attitude of capital market institutions, especially financial and banking institutions, which involves a high degree of risk for the majority of rural entrepreneurs,young entrepreneurs, young farmers, small farmers, especially start-ups; the need to develop specialized credit products for young rural entrepreneurs, complementing the sustained financial effort from national and european funds; building on local knowledge in the development and implementation of rural development policies and programs; synchronization of acceptance of financing contracts, documentation endorsement
and the payment of projects, based on a business schedule through projects;achieve a climate of understanding among local communities of the problems faced by rural entrepreneurs, as well as support for entrepreneurial initiatives by local authorities; more effective communication between national, regional and local actors on the needs of rural entrepreneurs.
There is a difference between the two types of needs mentioned above, so that both existing and future entrepreneurs wish to develop professionally and then exchange good practice irrespective of their field of activity in order to increase the return of their own company, while rural entrepreneurship requires a foundation to enable entrepreneurs to capture their focus strictly on the development of their own business. Another obstacle is the infrastructure gap between urban entrepreneurship and rural entrepreneurship, which brings potential entrepreneurs closer to big cities.

Romania's experience shows that one of the weak links in accessing rural development grants is poor information and poor preparation of applicants for investment planning. The most common problems and mistakes encountered arise as a consequence of the way the applicant approaches the idea of carrying out a project.

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In general, it is assumed that "If money is given, I must also take funds!". Subsequently, when the decision to start the business with non-repayable funds is taken, the issue of ensuring the financial resources needed to run the project is ignored, as well as the question of the full involvement of the beneficiary in the project.

4. Conclusions

Entrepreneurship in romanian rural areas can be said to have its origins as early as possible. That is an innovative process that requires the involvement of several categories of people with a quality-oriented vision, a realistic reward system, individual, allied responsibility with a difficult environment. The three major Romanian countries, Wallachia, Moldovia and Transylvania, for about nine centuries (1000-1850), have followed partly different paths of development, due to geographical placement, historical peculiarities, local traditions, or influence brought by the surrounding peoples.

From the point of view of the subject of analysis and discussion, entrepreneurship was introduced by economists in the 18th century and subsequently continued to capture the attention and interest of economists in the 19th century.

On regard to the list of information on the work and qualities that drive the results of entrepreneurs who have carried out many and various studies, it can be concluded that all successful entrepreneurs had the following qualities: internal control, planning and schematic capacity, risk-taking and thus failure, innovation, feedback request and application, decision-making in borderline situations, independence. All this list represents only a small part of the values of an entrepreneur, as this type of activity is a whole ongoing improvement process by adding new features.

Ensuring the sustainability of the number of people in rural areas is first and foremost the possibility of employment allowing decent living. Natural capital, the prospects offered by each area, are also other aspects that each citizen takes into account. A major problem for the past 25-30 years, in Romania is the decrease in the number of people living in rural areas. In order to create conditions for living in these areas, the degree of entrepreneurship must be developed first.

To this end, a case study has been carried out which determines the impact of an enterprise's growth on the average number of employees and turnover. These variables contribute to the socio-economic situation in rural areas, which represents a potential for increasing population levels and reducing migration to urban areas or other European Union member states.

Both the level of turnover and the average number of employees indicate an increase if the entrepreneurial behavior of the countryside increases its size by an entrepreneur. This is compared to the average of each development region (covering all areas of activity) in 2017 (time 0). In addition, coefficients were found on the extent of entrepreneurship resulting from individual national regression, but also for each region concerned (as shown in Appendix 10). It was also noted that their biggest impact on turnover is recorded in the South-Muntenia Region, where the increase in the number of entrepreneurs with one unit will lead to an increase in turnover by 3.897.520 lei. In addition, there is the highest increase in the average number of employees in the region (5.50) as a result of the entry into the business area of a new entrepreneur. At the same time, the following regions favored by their increase in terms of turnover are the Western region (3.730.521 lei) and the Center Region (3.259.920 lei). In addition, in terms of the number of employees, however, the highest contribution is recorded in the western part of the country (5.36) and in the Bucharest-Ilfov Region (5.19). Therefore, the area where the independant variable has the lowest impact on the two selected dependant variables is the South-East Region, where a new entrepreneur can generate a surplus of only 824.946 lei in the turnover of this area, while the average of employed people will grow by less than 2 people. It was therefore noted that most regions have a level above the national average in terms of the contribution of the level of entrepreneurship to the two dimensions.

As for the analysis of the impact of the increase with a entrepreneurs in the romanian rural area, it was found that at national level there would be an increase in turnover of 19.128.191 lei and the prospects

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for job vacancies would amount to 32 units. These new jobs represent a gradual increase that could be achieved both at county, regional and national level.

The most important aspect of the indicators used is that it is considered the impact on the repopulation of the romanian rural area, which is of national interest, after the great majority of the population has gone to work in the EU countries, due to the poverty of the romanian rural area, determined by the lack of jobs to ensure a decent standard of living.

Appendix 1: Interpretation of data using the statistical program Eviews, at national level

The correlation coefficient indicates a strong positive relationship (> 0.8) between the variables

Covariance Analysis: Ordinary

Sample: 2013 2017

Included observations: 205

Correlation	Total turnover	Number of entrepreneurs
Total turnover	1.000000	
Number of entrepreneurs	0.881393	1.000000

Covariance Analysis: Ordinary

Sample: 2013 2017

Included observations: 205

Correlation	Average number of employees	Number of entrepreneurs
Average number of employees	1.000000	
Number of entrepreneurs	0.946755	1.000000

Simple regression on panel data with fixed effect, cross-section and random effect during the analyzed period

Regression at the level of turnover

Dependent Variable: Total turnover

Method: Panel EGLS (Period random effects)

Sample: 2013 2017

Periods included: 5

Cross-sections included: 41

Total panel (balanced) observations: 205

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.83E+09	4.87E+08	-9.918384	0.0000
Number of entrepreneurs	2535830.	137219.7	18.48008	0.0000
	Effects Specification			
			S.D.	Rho

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Cross-section fixed (dummy variables)		
Period random	0.000000	0.0000
Idiosyncratic random	7.69E+08	1.0000

Weighted Statistics			
R-squared	0.983189	Mean dependent var	4.11E+09
Adjusted R-squared	0.978961	S.D. dependent var	5.25E+09
S.E. of regression	7.61E+08	Sum squared resid	9.44E+19
F-statistic	232.5185	Durbin-Watson stat	0.735878
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.983189	Mean dependent var	4.11E+09
Sum squared resid	9.44E+19	Durbin-Watson stat	0.735878

Hausman test for random effects

Correlated Random Effects - Hausman Test
Equation: RCA
Test period random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	0.189863	1	0.6630

** WARNING: estimated period random effects variance is zero.

Period random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
Number of entrepreneurs	2587705.2329	2535830.3503	14173370019.7553	0.6630

Period random effects test equation:
Dependent Variable: Total turnover
Method: Panel Least Squares
Sample: 2013 2017
Periods included: 5
Cross-sections included: 41
Total panel (balanced) observations: 205

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.01E+09	6.42E+08	-7.795986	0.0000
Number of entrepreneurs	2587705.	181666.2	14.24429	0.0000

Effects Specification
Cross-section fixed (dummy variables)
Period fixed (dummy variables)

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R-squared	0.983243	Mean dependent var	4.11E+09
Adjusted R-squared	0.978500	S.D. dependent var	5.25E+09
S.E. of regression	7.69E+08	Akaike info criterion	43.95406
Sum squared resid	9.41E+19	Schwarz criterion	44.69971
Log likelihood	-4459.291	Hannan-Quinn criter.	44.25565
F-statistic	207.3180	Durbin-Watson stat	0.733480
Prob(F-statistic)	0.000000		

Fixed Effect Likelihood test for fixed effects

Redundant Fixed Effects Tests
Equation: RCA
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	50.017033	(40,163)	0.0000

Cross-section fixed effects test equation:
Dependent Variable: Total turnover
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 41
Total panel (balanced) observations: 205
Use pre-specified random component estimates
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.33E+09	1.02E+08	-32.67214	0.0000
Number of entrepreneurs	2111966.	24599.30	85.85471	0.0000

	Effects Specification		
		S.D.	Rho
Period random		0.000000	0.0000
Idiosyncratic random		7.69E+08	1.0000

	Weighted Statistics		
R-squared	0.776854	Mean dependent var	4.11E+09
Adjusted R-squared	0.775755	S.D. dependent var	5.25E+09
S.E. of regression	2.48E+09	Sum squared resid	1.25E+21
F-statistic	706.7182	Durbin-Watson stat	0.055962
Prob(F-statistic)	0.000000		

	Unweighted Statistics		
R-squared	0.776854	Mean dependent var	4.11E+09
Sum squared resid	1.25E+21	Durbin-Watson stat	0.055962

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Regression to the average wage level

Dependent Variable: Average number of employees

Method: Panel EGLS (Period random effects)

Sample: 2013 2017

Periods included: 5

Cross-sections included: 41

Total panel (balanced) observations: 205

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2102.340	687.5105	3.057903	0.0026
Number of entrepreneurs	3.682130	0.194324	18.94841	0.0000

	Effects Specification		
		S.D.	Rho
Cross-section fixed (dummy variables)			
Period random		308.7190	0.1115
Idiosyncratic random		871.6523	0.8885

	Weighted Statistics		
R-squared	0.996051	Mean dependent var	15078.40
Adjusted R-squared	0.995057	S.D. dependent var	12376.97
S.E. of regression	870.1667	Sum squared resid	1.23E+08
F-statistic	1002.655	Durbin-Watson stat	1.120868
Prob(F-statistic)	0.000000		

	Unweighted Statistics		
R-squared	0.995653	Mean dependent var	15078.40
Sum squared resid	1.37E+08	Durbin-Watson stat	1.208582

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Appendix 2: Interpretation of data using the Eviews statistical program, at the Center Region level

Regression at the level of turnover

Dependent Variable: Total turnover
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.28E+09	6.84E+08	-9.193250	0.0000
Number of entrepreneurs	3259920.	228136.2	14.28936	0.0000
	Effects Specification			
			S.D.	Rho
Cross-section fixed (dummy variables)				
Period random			22660886	0.0101
Idiosyncratic random			2.24E+08	0.9899
	Weighted Statistics			
R-squared	0.989773	Mean dependent var		3.47E+09
Adjusted R-squared	0.987105	S.D. dependent var		2.08E+09
S.E. of regression	2.36E+08	Sum squared resid		1.29E+18
F-statistic	370.9746	Durbin-Watson stat		1.257336
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.989699	Mean dependent var		3.47E+09
Sum squared resid	1.30E+18	Durbin-Watson stat		1.270086

Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	97.01442	1681.231	0.057704	0.9545
Number of entrepreneurs	4.886876	0.561211	8.707736	0.0000
	Effects Specification			

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		S.D.	Rho
Cross-section fixed (dummy variables)			
Period random		117.7007	0.0487
Idiosyncratic random		520.3873	0.9513
	Weighted Statistics		
R-squared	0.995112	Mean dependent var	14713.33
Adjusted R-squared	0.993837	S.D. dependent var	6513.017
S.E. of regression	511.3177	Sum squared resid	6013253.
F-statistic	780.3715	Durbin-Watson stat	1.624526
Prob(F-statistic)	0.000000		
	Unweighted Statistics		
R-squared	0.994919	Mean dependent var	14713.33
Sum squared resid	6270680.	Durbin-Watson stat	1.701113

Appendix 3: Interpretation of data using the Eviews statistical program, at the North-East Region level

Regression at the level of turnover
Dependent Variable: Total turnover
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.96E+09	5.04E+08	-5.878568	0.0000
Number of entrepreneurs	1803698.	147415.7	12.23545	0.0000
	Effects Specification			
			S.D.	Rho
Cross-section fixed (dummy variables)				
Period random			0.000000	0.0000
Idiosyncratic random			1.89E+08	1.0000
	Weighted Statistics			
R-squared	0.985021	Mean dependent var		3.19E+09
Adjusted R-squared	0.981114	S.D. dependent var		1.78E+09
S.E. of regression	2.44E+08	Sum squared resid		1.37E+18
F-statistic	252.0887	Durbin-Watson stat		0.717702
Prob(F-statistic)	0.000000			
	Unweighted Statistics			

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R-squared	0.985021	Mean dependent var	3.19E+09
Sum squared resid	1.37E+18	Durbin-Watson stat	0.717702

Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1353.551	1668.697	-0.811142	0.4256
Number of entrepreneurs	4.288903	0.488547	8.778892	0.0000

	Effects Specification	
	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	112.4533	0.0349
Idiosyncratic random	591.6911	0.9651

	Weighted Statistics		
R-squared	0.993986	Mean dependent var	13265.03
Adjusted R-squared	0.992418	S.D. dependent var	6792.990
S.E. of regression	591.5165	Sum squared resid	8047511.
F-statistic	633.6003	Durbin-Watson stat	1.147952
Prob(F-statistic)	0.000000		

	Unweighted Statistics		
R-squared	0.993811	Mean dependent var	13265.03
Sum squared resid	8308327.	Durbin-Watson stat	1.185616

Appendix 4: Interpretation of data with the help of the Eviews statistical program, in the North-West Region

Regression at the level of turnover

Note: In this region, are found the fixed effects and the cross, but and during the analyzed period. It is the only exception in the case of turnover, the Employees being also in fixed and random form.

Dependent Variable: Total turnover
Method: Panel Least Squares
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.35E+08	4.92E+08	1.086893	0.2907
Number of entrepreneurs	903550.7	122542.8	7.373351	0.0000
	Effects Specification			
Cross-section fixed (dummy variables)				
Period fixed (dummy variables)				
R-squared	0.994296	Mean dependent var		4.15E+09
Adjusted R-squared	0.991294	S.D. dependent var		2.55E+09
S.E. of regression	2.38E+08	Akaike info criterion		41.68606
Sum squared resid	1.07E+18	Schwarz criterion		42.19984
Log likelihood	-614.2909	Hannan-Quinn criter.		41.85042
F-statistic	331.1862	Durbin-Watson stat		1.514204
Prob(F-statistic)	0.000000			

Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5993.195	813.5250	7.366947	0.0000
Number of entrepreneurs	2.745777	0.202192	13.58008	0.0000
	Effects Specification			
			S.D.	Rho
Cross-section fixed (dummy variables)				
Period random			264.2426	0.2534
Idiosyncratic random			453.6010	0.7466
	Weighted Statistics			
R-squared	0.997575	Mean dependent var		16983.53
Adjusted R-squared	0.996942	S.D. dependent var		8344.245
S.E. of regression	461.3929	Sum squared resid		4896318.
F-statistic	1576.974	Durbin-Watson stat		1.284799
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.996720	Mean dependent var		16983.53

 doi:10.20944/preprints202001.0152.v1

Sum squared resid	6715153.	Durbin-Watson stat	1.335638

Appendix 5: Interpretation of data with the help of the Eviews statistical program, in the South-East Region

Regression at the level of turnover

Dependent Variable: Total turnover
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.38E+08	3.72E+08	-0.908564	0.3730
Number of entrepreneurs	824945.9	122390.2	6.740292	0.0000

	Effects Specification	
	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	0.000000	0.0000
Idiosyncratic random	1.57E+08	1.0000

	Weighted Statistics		
R-squared	0.962750	Mean dependent var	2.16E+09
Adjusted R-squared	0.953033	S.D. dependent var	7.31E+08
S.E. of regression	1.58E+08	Sum squared resid	5.77E+17
F-statistic	99.07548	Durbin-Watson stat	0.894573
Prob(F-statistic)	0.000000		

	Unweighted Statistics		
R-squared	0.962750	Mean dependent var	2.16E+09
Sum squared resid	5.77E+17	Durbin-Watson stat	0.894573

Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 6
Total panel (balanced) observations: 30
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.

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C	4701.200	1015.514	4.629378	0.0001
Number of entrepreneurs	1.596491	0.334139	4.777920	0.0001

	Effects Specification	
	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	142.2909	0.1690
Idiosyncratic random	315.5316	0.8310

	Weighted Statistics		
R-squared	0.992721	Mean dependent var	9545.433
Adjusted R-squared	0.990822	S.D. dependent var	3365.301
S.E. of regression	322.4073	Sum squared resid	2390768.
F-statistic	522.7716	Durbin-Watson stat	1.162018
Prob(F-statistic)	0.000000		

	Unweighted Statistics		
R-squared	0.991464	Mean dependent var	9545.433
Sum squared resid	2829999.	Durbin-Watson stat	1.234086

Appendix 6: Interpretation of data with the help of the Eviews statistical program, in the South-Muntenia Region

Regression at the level of turnover

Dependent Variable: Total turnover
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 7
Total panel (balanced) observations: 35
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.01E+09	3.04E+09	-2.966336	0.0062
Number of entrepreneurs	3897520.	854211.1	4.562713	0.0001

	Effects Specification	
	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	0.000000	0.0000
Idiosyncratic random	1.45E+09	1.0000

	Weighted Statistics		
R-squared	0.914517	Mean dependent var	4.80E+09

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Adjusted R-squared	0.892355	S.D. dependent var	4.13E+09
S.E. of regression	1.35E+09	Sum squared resid	4.95E+19
F-statistic	41.26481	Durbin-Watson stat	0.766277
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.914517	Mean dependent var	4.80E+09
Sum squared resid	4.95E+19	Durbin-Watson stat	0.766277

Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 7
Total panel (balanced) observations: 35
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2754.678	2402.696	-1.146495	0.2616
Number of entrepreneurs	5.503706	0.675693	8.145272	0.0000

Effects Specification		
	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	0.000000	0.0000
Idiosyncratic random	1147.755	1.0000

Weighted Statistics			
R-squared	0.994249	Mean dependent var	16752.03
Adjusted R-squared	0.992758	S.D. dependent var	13648.19
S.E. of regression	1161.483	Sum squared resid	36424152
F-statistic	666.8076	Durbin-Watson stat	1.167478
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.994249	Mean dependent var	16752.03
Sum squared resid	36424152	Durbin-Watson stat	1.167478

Appendix 7: Interpretation of data using the Eviews statistical program, in the South West Oltenia Region

Regression at the level of turnover

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Dependent Variable: Total turnover
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.30E+09	3.96E+08	-5.817003	0.0000
Number of entrepreneurs	1495789.	155018.7	9.649087	0.0000

	Effects Specification	
	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	0.000000	0.0000
Idiosyncratic random	1.60E+08	1.0000

	Weighted Statistics		
R-squared	0.985966	Mean dependent var	1.50E+09
Adjusted R-squared	0.982273	S.D. dependent var	1.12E+09
S.E. of regression	1.50E+08	Sum squared resid	4.25E+17
F-statistic	266.9687	Durbin-Watson stat	1.192641
Prob(F-statistic)	0.000000		

	Unweighted Statistics		
R-squared	0.985966	Mean dependent var	1.50E+09
Sum squared resid	4.25E+17	Durbin-Watson stat	1.192641

Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2493.752	1113.338	-2.239887	0.0373
Number of entrepreneurs	4.032670	0.436830	9.231673	0.0000

	Effects Specification

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			S.D.	Rho
Cross-section fixed (dummy variables)				
Period random			214.1081	0.3492
Idiosyncratic random			292.3195	0.6508
	Weighted Statistics			
R-squared	0.996281	Mean dependent var		7770.040
Adjusted R-squared	0.995303	S.D. dependent var		4380.150
S.E. of regression	300.2042	Sum squared resid		1712329.
F-statistic	1018.047	Durbin-Watson stat		1.109873
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.994390	Mean dependent var		7770.040
Sum squared resid	2627744.	Durbin-Watson stat		1.475657

Appendix 8: Interpretation of data using the Eviews statistical program, in the West Region

Regression at the level of turnover

Dependent Variable: Total turnover
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 4
Total panel (balanced) observations: 20
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9.27E+09	8.74E+08	-10.61536	0.0000
Number of entrepreneurs	3730521.	234045.0	15.93934	0.0000
	Effects Specification			
			S.D.	Rho
Cross-section fixed (dummy variables)				
Period random			1.63E+08	0.1895
Idiosyncratic random			3.38E+08	0.8105
	Weighted Statistics			
R-squared	0.996272	Mean dependent var		4.60E+09
Adjusted R-squared	0.995278	S.D. dependent var		4.81E+09
S.E. of regression	3.30E+08	Sum squared resid		1.64E+18
F-statistic	1002.100	Durbin-Watson stat		2.730197
Prob(F-statistic)	0.000000			
	Unweighted Statistics			

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R-squared	0.995563	Mean dependent var	4.60E+09
Sum squared resid	1.98E+18	Durbin-Watson stat	2.690985

Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Panel EGLS (Period random effects)
Sample: 2013 2017
Periods included: 5
Cross-sections included: 4
Total panel (balanced) observations: 20
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2710.502	1730.174	-1.566607	0.1381
Number of entrepreneurs	5.362928	0.463664	11.56642	0.0000

	Effects Specification	
	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	507.0478	0.3943
Idiosyncratic random	628.4265	0.6057

	Weighted Statistics		
R-squared	0.998303	Mean dependent var	17235.30
Adjusted R-squared	0.997850	S.D. dependent var	14078.62
S.E. of regression	652.7849	Sum squared resid	6391922.
F-statistic	2205.647	Durbin-Watson stat	1.589991
Prob(F-statistic)	0.000000		

	Unweighted Statistics		
R-squared	0.997011	Mean dependent var	17235.30
Sum squared resid	11374471	Durbin-Watson stat	1.561066

Appendix 9: Interpretation of data with the help of the statistical program Eviews, at the level of the Bucharest-Ilfov Region

Note: Because only Ilfov county is found here, so the regression type will be changed to a simple one, type LS (Least Squares Method). This type of regression is performed with time and data series (effects are not applied here, but some additional tests are performed if they are to be included, although it is not necessary).

Regression at the level of turnover

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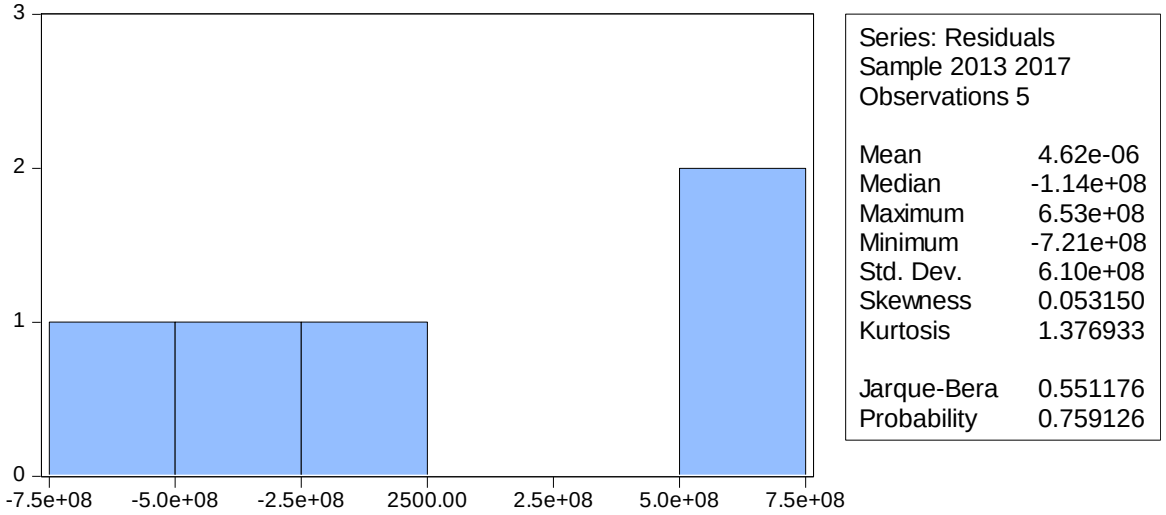
Dependent Variable: Total turnover
Method: Least Squares
Sample: 2013 2017
Included observations: 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.81E+09	2.26E+09	-2.124584	0.1236
Number of entrepreneurs	3140634.	195508.5	16.06392	0.0005

R-squared	0.988508	Mean dependent var	3.12E+10
Adjusted R-squared	0.984677	S.D. dependent var	5.69E+09
S.E. of regression	7.04E+08	Akaike info criterion	43.87152
Sum squared resid	1.49E+18	Schwarz criterion	43.71529
Log likelihood	-107.6788	Hannan-Quinn criter.	43.45222
F-statistic	258.0496	Durbin-Watson stat	2.393454
Prob(F-statistic)	0.000525		

Normalitatea seriei reziduale



Testul de heteroskedasticitate

Heteroskedasticity Test: White

F-statistic	1.287890	Prob. F(2,2)	0.4371
Obs*R-squared	2.814580	Prob. Chi-Square(2)	0.2448
Scaled explained SS	0.190964	Prob. Chi-Square(2)	0.9089

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Sample: 2013 2017
Included observations: 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.

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C	-2.25E+18	5.14E+18	-0.438430	0.7039
Number of entrepreneurs	5.22E+14	8.92E+14	0.585592	0.6174
Number of entrepreneurs ^2	-2.57E+10	3.81E+10	-0.673357	0.5701

R-squared	0.562916	Mean dependent var	2.97E+17
Adjusted R-squared	0.125832	S.D. dependent var	2.04E+17
S.E. of regression	1.91E+17	Akaike info criterion	82.70184
Sum squared resid	7.28E+34	Schwarz criterion	82.46750
Log likelihood	-203.7546	Hannan-Quinn criter.	82.07290
F-statistic	1.287890	Durbin-Watson stat	3.542345
Prob(F-statistic)	0.437084		

Self-correlation test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.086967	Prob. F(2,1)	0.5613
Obs*R-squared	3.424668	Prob. Chi-Square(2)	0.1804

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Sample: 2013 2017
Included observations: 5
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.28E+09	2.46E+09	0.521173	0.6941
Number of entrepreneurs	-121023.8	216088.2	-0.560067	0.6750
RESID(-1)	-0.572201	0.596522	-0.959228	0.5132
RESID(-2)	-1.111928	0.820019	-1.355979	0.4045

R-squared	0.684934	Mean dependent var	4.62E-06
Adjusted R-squared	-0.260266	S.D. dependent var	6.10E+08
S.E. of regression	6.84E+08	Akaike info criterion	43.51654
Sum squared resid	4.68E+17	Schwarz criterion	43.20409
Log likelihood	-104.7914	Hannan-Quinn criter.	42.67796
F-statistic	0.724644	Durbin-Watson stat	2.288974
Prob(F-statistic)	0.675140		

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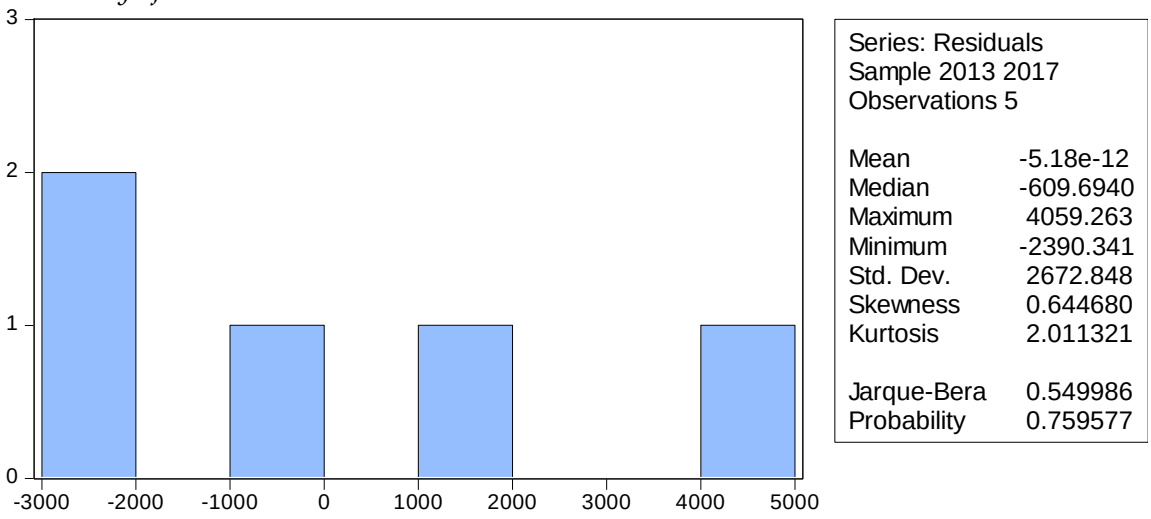
Regression of the average number of employees

Dependent Variable: Average number of employees
Method: Least Squares
Sample: 2013 2017
Included observations: 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23735.60	9916.143	2.393632	0.0964
Number of entrepreneurs	3.699302	0.857159	4.315771	0.0229

R-squared	0.861277	Mean dependent var	66114.80
Adjusted R-squared	0.815036	S.D. dependent var	7176.297
S.E. of regression	3086.338	Akaike info criterion	19.19653
Sum squared resid	28576455	Schwarz criterion	19.04031
Log likelihood	-45.99133	Hannan-Quinn criter.	18.77724
F-statistic	18.62588	Durbin-Watson stat	1.582800
Prob(F-statistic)	0.022916		

Normality of the residual series



Series: Residuals
Sample 2013 2017
Observations 5

Mean	-5.18e-12
Median	-609.6940
Maximum	4059.263
Minimum	-2390.341
Std. Dev.	2672.848
Skewness	0.644680
Kurtosis	2.011321
Jarque-Bera	0.549986
Probability	0.759577

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The heteroskedasticity test

Heteroskedasticity Test: White

F-statistic	0.096746	Prob. F(2,2)	0.9118
Obs*R-squared	0.441059	Prob. Chi-Square(2)	0.8021
Scaled explained SS	0.080289	Prob. Chi-Square(2)	0.9607

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Sample: 2013 2017
Included observations: 5

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-94861863	2.34E+08	-0.406171	0.7240
Number of entrepreneurs	17222.50	40554.36	0.424677	0.7124
Number of entrepreneurs ^2	-0.722720	1.732669	-0.417114	0.7171

R-squared	0.088212	Mean dependent var	5715291.
Adjusted R-squared	-0.823577	S.D. dependent var	6425958.
S.E. of regression	8677605.	Akaike info criterion	35.07410
Sum squared resid	1.51E+14	Schwarz criterion	34.83976
Log likelihood	-84.68525	Hannan-Quinn criter.	34.44516
F-statistic	0.096746	Durbin-Watson stat	3.541531
Prob(F-statistic)	0.911788		

Self-correlation test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	229.6566	Prob. F(2,1)	0.0566
Obs*R-squared	4.989138	Prob. Chi-Square(2)	0.0825

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Sample: 2013 2017
Included observations: 5
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-15328.80	1189.560	-12.88611	0.0493
Number of entrepreneurs	1.386186	0.105953	13.08297	0.0486
RESID(-1)	-0.359338	0.066623	-5.393584	0.1167
RESID(-2)	-1.495682	0.069831	-21.41856	0.0297

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R-squared	0.997828	Mean dependent var	-5.18E-12
Adjusted R-squared	0.991310	S.D. dependent var	2672.848
S.E. of regression	249.1595	Akaike info criterion	13.86463
Sum squared resid	62080.47	Schwarz criterion	13.55218
Log likelihood	-30.66156	Hannan-Quinn criter.	13.02604
F-statistic	153.1044	Durbin-Watson stat	3.345726
Prob(F-statistic)	0.059323		

Appendix 10: Impact of using the Eviews statistical program, at national level, on the number of entrepreneurs in the rural area

The dependent variable	**Coefficient of number of entrepreneurs**								
	National Level	Bucharest-Ilfov	Center	Northeast	Northwest	South East	South-Muntenia	South West Oltenia	West
Total turnover	**2.535.830**	3.212.247	3.259.920	1.803.698	903.551	824.946	3.897.520	1.495.789	3.730.521
UNIT: lei									
Average number of employees	**3,68**	5,19	4,89	4,29	2,75	1,60	5,50	4,03	5,36
UNIT: persons									

Source: Data processed in EViews

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