Family farms from Romania Nord Vest Region in the context of the rural sustainable development

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Abstract

This paper analyses the extent to which aspects contributing to sustainable development are integrated at family farms level. The present research aims to inventory the state of family farms from the Nord Vest development region[1] from Romania, to see how they can contribute to the sustainable development of the area. Another objective is to investigate the availability of the family farm to develop and to identify the variables that can influence this desire, given its role in the existence of the Romanian village. As it was noted from the literature review, family farms have different characteristics from one country to another and even from one area to another, thus requiring different approaches. The characteristics revealed at the level of family farms from the Nord Vest Region outline a low economic viability, which indicates a low probability of economic development in the absence of coherent policies to support them directly.

Keywords: family farms, sustainable rural development, economic viability, Nord-Vest Region

Introduction

The 2014 international family agriculture UN year, has given us the opportunity to reflect on the status of family farming in the world and especially in Romania. The European Commission (EC) statistics (2013) together with the statement of the European Commissioner for Agriculture and Rural Development show that on a global level "family farms account for over 80% of farms, so there are more than 500 million farms totally.

In the European Union (EU), family farms account for 95% out of total and "are the foundation on which Europe has built its common agricultural policy. They continue to stay in the heart of European agriculture as a generator of competitiveness, growth and jobs, dynamic and sustainable rural economies "stated the European Commissioner at a conference (Matthews, 2013). Some researchers (Graeub *et al*., 2016) argue that family farms represent 98% of all farms and use about

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[1] Nord-Vest development region is designating the North West part of the country.

53% of the agricultural land and provide at least 53% of global agricultural production. The differences are given by different statistics taken into consideration.

They have an economic role in terms of food security, but also a social role since they structure rural areas. Also we cannot disregard the importance in the field of environmental protection. Therefore, it can be noticed that family farming is linked to sustainable development, affecting all its dimensions, no matter the name under which is found in different countries (agricultural family exploitation, agricultural family farm, family farm, family agriculture, etc.) (Matthews, 2013).

Globally there are many types of family agriculture that vary from the subsistence farming to the market-oriented, intensive, based on modern technologies one. This diversity of forms requires different approaches. The definition of family farming is not unanimous and it has not been clearly established statistically since differences exist both on a global and national level. Food and Agriculture Organization of the United Nations (FAO), (2013, p.2) define family farm as the way of organizing agricultural production, forestry, fishing, sheep breeding and aquaculture, which is managed and run by a family, relying on family labor, including both women and men. Family and farm are interconnected, co-evolve and combine the economic, ecological, social and cultural functions (FAO, 2013, p.2).

These aspects create significant challenges in terms of projecting and developing policies leading to sustainable development.

According to Statistical Office of the European Community (Eurostat, 2013), in the EU there are 10.8 million farms (with the vast majority of these - 96.2% - classified as family farms) and the average size of a farm is 14.2 hectares. In Europe, however there is a contrast in terms of farms structure: on the one hand, there is a large number of very small farms, 6 million (50% of total), that have an average of up to 2 ha and use only 2.5% of the total EU agricultural area, and, on the other hand, there is a small number of relatively large size farms (2.7% of total), with an average surface of 100 hectares, that use nearly half (50.2%) of the agricultural land in the EU-28. Almost one third (31.5% or 3.9 mil. ha) of all farms from the EU are in Romania. Of the total of 10.4 million family farms at EU-28 (2013), 34.5% are in Romania meaning over 3.58 million. These farms are characterized as small sized. About 75% of Romanian farms have an average size of less than 2 ha. The small size of farms together with the excessive fragmentation of land do not allow high yields and, implicitly, economic performance.

The lack of regulations to protect and encourage family farms in Romania makes them vulnerable to large domestic or foreign competitors both in terms of farm development and product marketing.

Therefore, the size of a viable economically family farm varies by region, manufacturing strategy, the level of market integration, family structure, access to inputs, technology and infrastructure, and by the employment opportunities existing beyond it. Hence, the interest many researchers show to sustainability since it can help the development of many areas.

The concept of sustainability is extensively discussed in both literature and public debates. The challenges that contemporary society must respond to require the consideration of all dimensions of the sustainability.

The sustainable development term was first defined in 1987 by the "Our Common Future" Brundtland Report, mentioning the three pillars of sustainable development process: economic, environmental and social. After 1987 many definitions have occurred some researchers (Johnston *et al*., 2007) estimating over 300 of them.

The analysis of different definitions of sustainability has led to note two things they all have in common:

1. The idea of efficient and responsible use of resources;
2. The consideration of the three components of sustainability: economic, environmental and social.

From the literature analysis (Axelsson *et al*., 2013) and documents available on the subject it was noticed that in 1995 the World Commission on Culture and Development makes its first reference to the fourth component of sustainability: the cultural sustainability. Thus, Hawkes (2001) believes that in present the four pillars of sustainability are:

- Economic viability: material prosperity;
- Responsibility towards the natural environment: ecological balance;
- Social Equity: justice, commitment, cohesion, social assistance;
- Cultural Vitality: welfare, creativity, diversity and innovation.

The cultural dimension of sustainability has been addressed for long time as part of the social sustainability and only in 2001 through the Universal Declaration on Cultural Diversity issued by UNESCO has begun the process of adding culture as the fourth dimension of sustainability (Axelsson et.al., 2013).

Therefore, sustainable development has become connected with any aspect of human life (Gawel A., 2012), starting from sustainable cities and communities until sustainable agriculture, sustainable institutions and organizations (Bell and Morse, 2008, p .5). We could say that sometimes sustainable development seems an obligation rather than an option.

In Romanian literature (Popa, 2006, p. 602) the concept of sustainability is seen as "the quality of a human activity to take place without exhausting available resources and without destroying the environment, thus without compromising the ability to meet the needs of future generations".

Often terms of sustainable development and durable development are considered synonymous. In this paper, we will work with the concept of sustainable development, which we consider most appropriate to explain the rural community development, meaning the development at individual, community level. This view is accepted by several Romanian researchers (Catrina, 2008; Gănescu, 2012; Mărginean, 2004), considering sustainability characteristics (the resources and their ability to support the development) as being included in its definition.

For a system to be sustainable all its subsystem components must be sustainable. So all four components are important when it comes to sustainable development, even if sometimes a greater importance is attached to one of them. They are interconnected, interrelated and mutually reinforce one each other (Dogliotti, *et al*., 2014). In the context of sustainable development, the agriculture-environment relationship must be seen in terms of efficiency and effectiveness on a long run. The environmental damage made by current conventional farming practices are multiple: biodiversity damage; pollution of surface and groundwater; increased emissions of greenhouse gases; soil pollution, leading to diminishing its production potential and not at least to the abandonment of some land surfaces (van der Werf, 1996; van der Werf and Petit, 2002; Horrigan *et al*., 2002).

The organization and use of resources at farm level should take into account not only the economic side of sustainability but also the environmental impact.

Family farms are designed to support all four dimensions of sustainability. They undergo great economic, political, social and environmental changes, which force them to adopt innovative strategies to remain economically sustainable (Matthews, 2013). The global context in which the family farms activate is not a very favorable one, so their number has declined steadily in the EU reaching an annual rate of decline of 4% during years 2005-2010 (Suess-Reyes and Fuetsch, 2016) while facing an increase in the average size of 4%, indicating a trend towards larger entities (EC 2013). Family farms are the predominant type of business in agriculture and represent a distinct family business in multiple ways:

- They resist due to long-term orientation of economic activity. The family farm has certain traditions and its primary objective is passing the business to the next generation, the succession (Gasson and Errington, 1993);

- Several generations work together and take decisions related to business. There are few areas where interdependence between activities and household are as noticeable as in agriculture (Heady, 1952);
- These businesses are characterized by the flexibility of working hours and the ability to change responsibilities among family members, which allows them to adapt to change;
- Descendants are familiarized since childhood with the activities and they often attach intense to them as production facilities and family life are usually in the same location (Dumas *et al*., 1995).

The characteristics of this type of business have also been noticed by Suess-Reyes and Fuetsch (2016).

1. Methods

The analysis of the literature in the field makes us look at the family farm sustainability in various ways and makes us want to see to what extent it can contribute to the sustainable development of the area in which is located. The existing studies have approached agriculture from different perspectives: sustainability in agriculture (Darnhofer *et al*., 2010), innovative production systems in agriculture (Le Gal *et al*., 2011), family business succession (Bonak *et al*., 2010). Relevant in this respect is the work of Suess-Reyes and Fuetsch (2016) which establishes a link between the innovative strategies used by family farms, the sustainability strategies and the family business succession. We want to see to what extent the aspects contributing to sustainable development are integrated at the level of family farms. Therefore, the present research aims to inventory the state of family farms from the Nord Vest Region of development from Romania, to see how they can contribute to the sustainable development of the area.

Another objective of this paper is to investigate the availability of the family farm to develop and to identify the variables that can influence this desire, given its role in the existence of the Romanian village. As it was noted from the literature review, family farms have different characteristics from one country to another and even from one area to another, requiring thus different approaches.

To reach the objectives of this research we have first analyzed the scientific literature in the field focusing on studies, surveys, reports, statistics and publications that help us get an insight into the scale and importance of the analyzed topic.

This study is made based on a quantitative research where questionnaires were used. The questionnaires were administered with the help of students of the Agricultural and Environment

Economy study program from the Babeș-Bolyai University of Cluj-Napoca during the period of June-July 2016.

The questionnaires were administered directly into the Nord Vest Region due to the accessibility of conducting a field survey (the availability of farm owners to participate in this study, the access itself to the researched area and the support of local authorities in achieving the research).

Nord Vest Region has an area of 34160 square kilometers, representing 14.3% of Romania's territory, thus ranking 4th at the national level, and 29th out of the 273 regions of the EU. It consists of six counties: Bihor (BH), Bistrița-Năsăud (BN), Cluj (CJ), Maramureș (MM), Satu Mare (SM) and Sălaj (SJ).

The rural territory of the region covers 29285.93 square kilometers, representing 85.73% of the total area. Municipalities in the region are of varied size, with an average population of 3,060 inhabitants. The largest commune is Florești (Cluj county) with 22813 inhabitants, and the smallest one is Ploscoş (Cluj county) with 702 inhabitants.

The situation of the counties of the Nord Vest Region from a demographic point of view is shown in the table below.

Table 1. Population and number of rural localities in the counties of the Nord Vest Region

	Romania	Nord Vest Region	BH	BN	CJ	MM	SM	SJ
Total population	21.354.396	2.711.016	592.242	316.834	689.517	509.163	363.040	240.220
Rural population	9.627.243	1.270.839	295.596	197.832	234.830	209.848	191.728	141.005
Number of villages	13.427	1.911	458	249	434	247	234	289

Source: National Statistical Institute, Tempo Online Database, 2011

According to the National Rural Development Plan 2014-2020 (NRDP 2014-2020), in the 2002-2011 period, at regional level, a constant percentage increase of the elderly population (60 years and over) is observed, from 18.3% to 21.1%, a trend that was also observed at the level of all counties. The trend persists in both rural and urban areas. On the same time interval, there is a drop in the percentage of young people (0-14 years) from 18.1% in 2002 to 16.1% in 2011.

The tendency is also recorded at the level of the counties, yet the decrease in young people share is more pronounced in rural areas. An average of 46.9% of the Nord Vest Region is rural population with a diverse ethnic structure (Romanians 75%, Hungarians 19.3%, Roma 3.5%, Ukrainians 1.3%, others 0.9%).

The road network in the region has an upgrade rate of 27.2% (NRDP 2014-2020). The total length of the simple drinking water distribution networking the Region was 10458.7 km in 2011, representing 15.8% of the national network. In the Nord Vest Region all urban areas are supplied with water, with a national average of 99%. Regarding the rural area 82.63% of the localities have a distribution network being above the national average of 69.47%. The number of localities connected to the public sewerage system in the Nord Vest Region was 130 in 2011, of which 41 were localities located in the urban area. Less than half of households have access to internet from a home network, most of them focusing on urban areas.

The relevant macroeconomic indicators place the Nord Vest Region on the third place nationwide in terms of GDP and Gross Added Value but with values below the national average for labor productivity and GDP per capita at a large distance from the European Union average.

Representing 14.3% of the country's territory and 12.92% of the total population, the Nord Vest Region has contributed with 11.32% to the formation of the national GDP. The economy of the Nord Vest Region is mainly based on the tertiary sector (with a high share of trade) and industry (especially manufacturing), with the agricultural sector declining. The GDP per capita is 5200 euro (in nominal terms), but 10.3% below the national average (NRDP 2014-2020).

The educational infrastructure at the Region level comprises 819 schools, 209 high schools and 12 vocational schools, most of them in the urban area. The sanitary units are represented by 61 hospitals and which are mainly located in the urban area. Social services are almost non-existent.

The Nord Vest Region comprises several biogeographical regions: Panonic, Alpine and Continental and 22.04% of the region's territory is declared a Natura 2000 site, a percentage close to the European average (PDR_2014_2020.pdf).

From the point of view of the number of protected natural areas of national interest, Bihor county is best represented with 64 such areas, at the opposite side being Satu Mare county with 7. If relating to the surface of the protected areas of national interest, the largest such areas are in Maramureş county (60% of the total area of the county), while in Sălaj county their proportion is almost insignificant.

As far as the use of land is concerned, the agricultural land covers over 2 million hectares (61.3% of the total area of the Nord Vest Region), and the forest fund is 1.03 million hectares (30.2% of total). At the same time there is an area of about 50000 hectares of water.

Table 2. Land use in the Nord-Vest Region (square kilometers)

	Nord Vest Region	BH	BN	CJ	MM	SM	SJ
Total surface, out of which:	34.159	7.544	5.355	6.674	6.304	4.418	3.864
-agricultural	20.923	4.993	2.989	4.246	3.112	3.175	2.408
-forests	10.329	1.949	1.911	1.702	2.892	809	1.066
-water	510	136	75	89	56	96	58
-other surface	2.398	466	380	637	244	339	332

Source: INS Tempo Online 2011

Agricultural land areas are increasingly affected by different degradation processes, whether the ones induced by anthropogenic activity or by natural phenomena. The degraded and unproductive land amounts to 107,504 ha in 2011, up to 12% compared to 2005 (96,050 ha), 21.6% of the country total, surpassing all other regions.

According to statistics (INS, 2014) in the Nord-Vest Region, there are 498.000 farms almost entirely family farms.

There were investigated 94 family farms, their dimension being conditioned by the available human, financial and time resources.

The questionnaire comprised questions regarding the resources of the family farm: (land, livestock, labor and technical facilities), the family farms desire to develop, the awareness on the existing funding sources for the farm and questions of identification and characterization of the owner.

The present study is based on the RBV theory (resource-based-view theory). According to the theory the available resources and their processing possibility differ from farm to farm, which can be a force generating competitive advantage in the market (Barney, 1991). The resource-based theory gives a clear explanation of the difference between farms. The competitive advantage can be achieved through the use of resources that cannot be purchased on the market, relevant to our research. Family farms have rare resources, that cannot be imitated or substituted and therefore they must ensure the preservation, reproduction and development of these unique resources. Conducting any business involves identifying those resources that may become a force generating competitive advantage. In the present study we started from a number of assumptions investigated by other studies (Darnhofer *et al*., 2010; Graeub *et al*., 2016; Medina, *et al*. 2015; Suess-Reyes and Fuetsch, 2016,) and we have formulated the following hypotheses:

1. The advanced age of the owner of family farm leads to a reduced desire to develop the entity.
2. The education level of the owner of the family farm determines the willingness to develop the farm.
3. There is a link between farm size and the desire to develop the farm.

4. There is a link between the family farm technical equipment and the desire to develop the farm.
5. There is a link between the information on available funding sources and the desire to develop the farm.

2. Results

The characteristics drawn from the analysis of collected data show that it is the case of family farms managed by older people with an average age of 63 years, mostly men (67% of total).

Table 3. Distribution of family farms owners by age and gender

Age category	31-40		41-50		51-60		61-70		71-80		≥81		Total	
Persons	4		10		20		37		20		3		94	
Male/Female	3	1	9	1	12	8	28	9	8	12	3	0	63	31

Source: authors' elaboration

Regarding the education level of the farm owner, we are dealing predominantly with people with a low education level (middle school).

Table 4. The distribution of family farms owners according to the level of education

Education level	Primary	Secondary	High school	High education	Total
Persons	23	52	15	4	94

Source: authors' elaboration

The production structure of the investigated family farms is the following: 88.3% have a mixed production and 11.7% have a vegetable production, which shows an integration of the production on most investigated farms. Even though their range regarding size is between 0.04 ha and 72 ha, the average family farm size is 5.33 ha. Concerning livestock and poultry, we could note that in general each holding owns 2-3 species but a small number of animals per species. This confirms their subsistence rather than market orientation character.

From the perspective of livestock, it has been noticed that on average a farm owns 2.97 LSU (Live Stock Units), with large differences from one to another, as it can be seen in Table 5.

Table 5. Family farm distribution after LSU

Livestock unit (LSU)	Number of farms	Percent (%)
They do not own LSU	5	5,31
Under 1	35	37,23
1 to 3	24	25,53
3 to 10	28	29,78
Over 10	2	2,15

Source: authors' elaboration

The reduced number of LSU shows the subsistence character of the family farms in the investigated area, even if it is above the national average of 1.41LSU / farm (NDRP 2014-2020, 2016).

Referring to the cultivated areas, it has been noticed that the main crops are the ones of corn and small vegetable designed to ensure own consumption. In some farms there are also pastures in order to support sheep and goat farming, together with small areas of vineyards and orchards. The structure of the investigated family farms by size classes is shown in table no.6.

Table 6. Family farms distribution according to the agricultural used surface

Size class (Ha)	Number of farms	Percent(%)
Under 1 ha	14	14,89
1 to 2 ha	29	30,85
2 to 5 ha	22	23,40
5 to 10 ha	17	18,08
Over 10 ha	12	12,78

Source: authors' elaboration

The subsistence character of the analyzed family farms is also confirmed by the fact that 63.8% of them do not market products, thus they produce only for self-consumption. This feature makes them unviable from an economic point of view and jeopardize the succession of the business even where it would be possible from a socio-demographic point of view.

In terms of social aspects and labor resource is was found that a farm has an average of 3.5 members, of which 2.5 people working on the farm. As the foreign labor resource is concerned there is an average of 0.38 people, mostly laborers that work in the farm for a very short period (usually one day). Expressed in work units, the resource available at farm level has an average of 2.58 AWU (Annual Work Units) at an average size of 5.33 ha and 2.9 held LSU. At national level, according to the National Plan of Rural Development (NPRD) 2014-2020 (2016), the situation is similar, ie 1.9 persons / farm (3.4 ha), which represents only 0.4 AWU.

Regarding the availability of technical equipment we have noticed that 59.5% of farms we have investigated owe tools and agricultural machinery (tractors, seed, lawn mowers, etc.), which is a paradox relating to the actual worked surface. These facilities are underutilized due to the reduced size of the family farms and the lack of willingness to provide agricultural services to other farms. Most of the investigated farmers use their technical equipment only for their own activities. This type of management is not based on the principles of efficiency.

This damaging habit of owning the entire set of agricultural tools and machineries could be removed if association and cooperation in agriculture is taken into consideration.

What is specific to the investigated family farms is that they carry out farming activities only on their private land (98% of total), despite the fact that in the Nord-Vest Region there are large areas of land that is not used.

The entire socio-economic context of recent years has determined these family farms not to grow. The promoted policies must take into account both their productive characteristics and the socio-cultural characteristics, with consideration of the environmental impact.

Of the total family farms investigated, only 23 have developed over the last 5 years, representing 24.46%. For development, family farms have mainly used their own funds (73.91%) and have purchased either land or machinery and livestock. Of those that have developed over the past 5 years, 26.09% have used European funds, mainly for the purpose of purchasing agricultural machinery.

Data analysis confirms Hypothesis 1 according to which the advanced age of the owner of family farm leads to a reduced desire to develop the entity (the correlation coefficient has the value of - 0.35). It has been observed that once owners of family farms are aging they lose their interest in developing the farms. This is considered to be also influenced by the impossibility of ensuring the business succession. As it results from both data presented by the NPRD and from the authors research there is an aging population in rural areas, as the following data shows: under 15 years 16,1% at regional level (15.6% at national level); between 15-64 years 62.8% (68.7% at national level); over 64 years 21.1% (15.7%at national level).

From the point of view of the influence that farms owner training level has on the desire to develop it, the authors have expected to find at least a direct link of an average intensity. The results are partially confirming the direct link between the two variables (working hypothesis 2), but its intensity is reduced (correlation coefficient 0.15). A possible explanation could be the large number of farm owners with a low level of training (79.79%). Farms development up to present is influenced by the level of training (correlation coefficient 0.40), but the desire to further develop the activities is

strongly influenced by the farm owners age. As a consequence, the level of training is not a determining factor in the decision to develop the farm considering farms owners advanced age, depending most likely on the possibility of ensuring succession.

There is a reduced number of persons with high-school education (20.21%), fact that puts its mark on the way activities are managed. The situation at national level is similar in this respect, ie 19% of the rural population has an average level of education and over, and only 38.5% of the rural population has only primary studies (NRDP 2014-2020, 2016). Here adds the much higher school dropout rate in urban than rural areas (5.3% according to NRDP 2014-2020, 2016). Perspectives are not good considering the total number of agricultural high school graduates was below 1% of the total number of national high school graduates. It can also be included the low attractiveness of the agricultural sector and the early stage in lifelong learning, which will influence the level of training of future farm managers.

The family farms owners level of training is a form of intellectual capital that influence, according to studies (Cavicchioli *et al*, 2015; Kimhi et Nachlieli; 2001, Mishra et El-Osta, 2008; Stiglbauer and Weiss, 2000; Suess-Reyes and Fuetsch, 2016), the chances of the family farm succession. These aspects influence the level of development of the social pillar of sustainable development. There is a lower social inclusion rate of the rural population compared to other rural areas from Europe and in relation to the urban population. 71% of the population exposed to poverty and social exclusion lives in rural areas (NRDP 2014-2020, 2016).

Analyzing the structure of the family work resource from the investigated family farms it was noticed the absence of a potential successor in most cases (59%). The bleak prospect of family farms succession makes the current owners unwilling to develop them. This will lead to the depopulation of the Romanian rural environment and the disappearance of many family farms.

This phenomenon will result in even larger areas of unused land, unused machinery and the disappearance of a lifestyle. The developed states from Europe have already faced this phenomenon and are making considerable efforts to revitalize the rural environment.

The development policy promoted in this field should consider how to promote succession and support the development of these entities. In present, the only programs that aim supporting succession are "Installation of young farmers", sub-measure 6.1 of the NRDP and "Support for the development of small farms", sub-measure 6.3. The existence of these programs is not sufficient to ensure succession this depending on the size and effectiveness of family, as shown by studies conducted in several states (see Suess-Reyes and Fuetsch, 2016).

As Hypotheses 3 is concerned, the low value of the correlation coefficient (0.23) shows that there is a weak link between the level of technical equipment of the family farms and their desire to develop. This can be explained, in our opinion, by the motivation that led to the decision to purchase the equipment: the independence in carrying out agricultural activities and not the further development of the farm. Also, the low level of training has put its mark on this investment decision, which influences the economic performance of the family farm.

The existence of technical endowments could allow the development of activities by renting uncultivated surfaces. Increasing farm size would improve the financial situation and implicitly the chances for succession. A decisive role for the Romanian agriculture is played by the phenomenon of severe land fragmentation. Consequently, the increase of the family farm dimension must be correlated with the increase of the work plot size, improving the efficiency of using the existing technical facilities.

Concerning the 4th working hypothesis, the data obtained show a weak link (correlation coefficient 0.20) between the size of the farm and the desire of currents owners to develop it. A possible explanation for this situation could be due to the high proportion of older owners who have no prospects of succession. It can also be added the lack of economic efficiency, which limits the possibilities and the desire for development.

We believe that an important role in this regard is played by the way in which the agricultural activities are credited. The absence of an agricultural bank makes access to financial resources more difficult for current owners and also negatively affects the succession. As other studies show (Lonborg et Rasmussen, 2014, Medina G., *et al*., 2015), family farms suffer from an acute shortage of financial capital while investment is conditioned by the existence of own financial funds, governmental ones, or by funds obtained from activities outside them (World Bank 2007). The difficulty of farms development is also negatively influenced by the rural poverty rate, which, according to the NRDP, amounts to 47.4% of the total population and the GDP / capita in the rural area represents one third of the EU average.

We have noticed that the viability and development of family farms, in addition to existing facilities, are also conditioned by other contextual variables, among which we mention the promoted agricultural policies and the access to infrastructure (roads, electricity and irrigation).

According to NRDP (2016), the situation of the indicators of socio-economic development of the rural environment is the following: the quality of the roads is deficient, only 7% of the total communal roads have been upgraded by 2013; the access to the drinking water network of rural localities amounts to 70.29%, and to the sewerage network only 21.53%. Basic services do not meet

the needs of the rural population, which has a negative impact on the economic development of rural areas. Also, the educational infrastructure is poorly developed in rural areas both in terms of the number of schools and access to culture, which has led to the fact that less than 33% of the rural population has used the computer at least once.

Of total investigated family farms about 55% are aware of the possibility of business development using European Structural Funds. However there is a link of low intensity (a correlation coefficient of 0.38) between the level of information on the available funding sources and the willingness to develop the farm.

From 52 farms owners that detain information on European Structural Funds, 44% (23 people) want to develop their farms appealing to them. This reluctance comes from the lack of understanding the financing mechanism, the high bureaucracy, lack of trust in the implementing bodies and the lack of funds required for co finance.

The lack of interest in developing family farms using this funding source can be diminished by better information on their usefulness and opportunity, as well as by providing direct support in the form of consultancy.

Regarding the environmental protection according to the NRDP and PDR NV 2014-2020, the existence of the subsistence and semi-subsistence family farms produces a number of positive and negative effects:

Positive effects:

- Allows the maintenance of a high level of biodiversity;
- Allows the existence of a diversity of habitats and ecosystems, forests and valuable agricultural landscapes;
- Natural and semi-natural ecosystems account for 47% of the national territory;
- There are 300,000 ha of virgin forests in Romania and 30% of Europe's large carnivores' population;
- GHG emissions from agriculture are reduced compared to other EU Member States.

Negative effects:

- The abandonment of agricultural activities and inappropriate agricultural practices that have appeared due to the lack of specialized knowledge or limited financial resources have caused the emergence or accentuation of the soil erosion phenomenon.
- A number of agricultural surfaces have been affected by the misuse of chemical fertilizers and pesticides, as well as by the inadequate mechanical work resulting in the degradation of the primary environmental components (soil and water).

- The diminution of some agricultural activities, such as growing livestock in stables, has led to the abandonment of 15% of the permanent grassland areas, along with their degradation by the appearance of some invasive species.
- Due to the replacement of domestic breeds with more productive or easier to maintain ones, the number of domestic breeds is decreasing, endangering their existence. The cause of this phenomenon is, among other things, the neglecting of the research sector in the field.

Regarding the cultural pillar of sustainable development, it is characterized by a rich cultural heritage, but insufficiently capitalized. The rural environment has a huge potential in terms of lifestyle, rural architecture, customs and traditions, local gastronomy, popular port and crafts. The full potential of cultural heritage to contribute to sustainable development can be harnessed by integrating their preservation into local decision-making policies and processes.

The Nord Vest Region of Romania is characterized by an extremely diverse cultural potential due to the ethnic diversity of the population. Decisions adopted at different levels should take into account the development of infrastructure designed to preserve and promote them.

Conclusions

The characteristics revealed at the level of family farms from the Nord-Vest Region outline a low economic viability, which indicates a low probability of economic development in the absence of coherent policies to directly support them. Family farms' lack of economic viability determines low levels of sustainable rural development. Medina G., (2015) argues that rural development paradigms today refer to the concept of pluriactivity, non-agricultural income and access to market niches.

At the same, time the economic sustainability of the farms, which is given mainly by their small size influence succession in ownership. According to the work of Suess-Reyes J. and Fuetsch E., (2016), and analyzing 53 articles that approach family farm issues it has been noticed the influence family farm size has on succession and thus on sustainable development. Unfortunately, in the case of the analyzed family farms from the Nord Vest Region it is our belief that if succession is not ensured, most of the farms will disappear.

Their disappearance conditions the existence of life itself in rural areas. A similar aspect can also be noticed regarding the social dimension of the rural development. The aging and reduced population rises questions regarding the existence of the family farms. This situation is reinforced by the national support policies (closing schools in rural areas, the ones with an agricultural profile).

Culturally, these socio-demographic characteristics can be an asset in the development and transmission of customs and traditions. The existence of family farming has a lower impact on the environment and therefore the support of family farms enables the sustainable development from an ecological perspective.

The performed analysis enables us to state that the sustainable rural development in the case of the investigated area has its start point in the economic viability of the family farm. This determines the social, ecological and cultural sustainability.

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