



Rural Economic Dynamics in the Context of European Funds: The Impact on the Livestock Sector in Romania

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Abstract: The purpose of this study is to identify the impact of European funds on the livestock sector in Romania. Thus, I analysed the specific literature and existing studies, designed a questionnaire, conducted interviews, obtained answers and analysed the rural area in Romania to demonstrate that the rural economy and the Romanian livestock area are important for socio-economic development. Agriculture and animals growth have always been pillars of the economy, providing jobs and contributing to food production and by collecting data on livestock during a given period and by analysing the responses received from farmers, I aim to better understand how the Romanian countryside has developed thanks to European money.

Keywords: agriculture; rural development; evolution; European funds; animal husbandry

JEL Classification: O00, O10, O13, Q14

1. Introduction

The implications of European funds regarding the livestock sector are not limited to the economic dimension, but also penetrate the social sphere, and these sums attracted to the country were bases for collaboration and cohesion in rural communities, bringing together farmers, local authorities and non-governmental organizations in a common effort towards development. On the other hand, the resources provided by European funds have provided the necessary means to transform the livestock sector into a more resilient field and better prepared for global challenges, from quality requirements to animal health, thus ensuring that Romania remains competitive in an ever-changing agricultural market.

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To carry out this study, I outlined the following objectives:

- 1) Analysis of the impact of European funds on economic development in rural area of Romania;
- 2) Evaluation of transformations in the livestock sector in Romania;
- 3) Identifying the challenges and opportunities generated by European funds for the sustainable development of the livestock sector;
- 4) Investigating the perceptions and opinions of key actors in the livestock industry regarding the benefits and challenges brought by European funds.

2. Literature Review

Numerous studies and researches have been carried out on the evolution of rural economic development and the livestock sector in the context of the influence of European funds in Romania, and in the following I will try to highlight certain trends and relevant findings.

Various scientific studies show that rural economic development in Romania has been significantly increased thanks to European money, these funds contributing to the modernization of local infrastructure, the sustainable development of communities and the increase of the quality of life in the countryside. Investments in infrastructure, education, health and rural tourism projects had a positive impact on attracting private investment and economic growth (Fox & Porca, 2001; Iorio & Corsale, 2010), the livestock sector representing a significant part of the rural economy in Romania and was strongly influenced by the European funds. Investments in farms, in modern technologies, in resource management and training of farmers have considerably improved the performance of this sector and the increase in food quality and safety, in accordance with European requirements, has contributed to the increase in exports of livestock products (Cazacu, 2010). The influence of European funds on economic development and the livestock sector in Romania was significant, but it also came with challenges. On the one hand, these funds stimulated the modernization and diversification of economic activities in the countryside, creating new employment opportunities and generating income, and on the other hand, they brought difficulties related to the absorption of funds, excessive bureaucracy and the need for efficient resource management (Bogdan, 2022).

The specific literature highlights that European funds have eased the transition to more sustainable practices in the livestock sector. Investments in ecological technologies, increasing the efficiency of resource use and promoting animal welfare have become priorities, these changes not only having a positive impact on the environment and product quality, but also contributing to increasing long-term competitiveness (Diacon, 2020; Bruma, 2021). The literature shows that, despite

significant progress, there are ongoing challenges for rural development and the livestock sector in Romania, and a focus on innovation and research is needed to maintain competitiveness in a complex global context, but at the same time, efforts must be continued to reduce the economic and social gaps between rural and urban environments, ensuring a balanced and inclusive development (Gov, 2008).

The existing literature shows that European funds have been a catalytic factor for rural economic development and the modernization of the livestock sector in Romania [8], but the efficient management of funds and adaptation to constantly changing requirements remain important challenges for the sustainable development of these aspects in the future (Naros & Simionescu, 2018; Iacobuța, Brandi, Dzebo & Duron, 2022).

3. Methodology

To carry out this scientific research, I used a qualitative approach based on interviews, I defined the research theme as the impact of European funds on the livestock sector in Romania, I analysed the specialized literature and I identified the existing gaps. I designed specific questions for a questionnaire and selected the group of participants, 50 livestock farmers from the rural area of Neamț County, Romania. The interviews took place in February 2023 and in this study I interpreted the answers received and embodied in the questionnaires. Next, I analysed specific economic indicators, such as the gross domestic product (GDP) in agriculture and the dynamics of livestock and meat production in Romania.

4. Results and Discussions

I prepared a questionnaire with yes/no questions about rural economic dynamics in the context of European funds and the impact on the livestock sector in Romania, to find out the opinion of livestock farmers, from Neamț County, Romania, the rural area, about European funds and about their impact on the livestock sector. I designed this questionnaire taking into account four basic sections, European funds and rural economic development, the impact of European funds on the livestock sector, opportunities and challenges, sustainability and the future of the livestock sector.

Table 1. Questionnaire with Questions Addressed to Farmers

Section 1: European funds and rural economic development
1. Are you familiar with the existence of European funds intended for rural development in Romania? Yes No
2. Have you noticed an increase in investment in infrastructure and services in your area as a result of European funds? Yes No
3. Do you think that European funds contributed to the modernization of rural villages? Yes No
Section 2: The impact of European funds on the livestock sector
4. Have you noticed an improvement in animal husbandry techniques on your farm thanks to European funds? Yes No
5. Did the European funds contribute to the improvement of animal welfare conditions in the livestock sector? Yes No
6. Have you noticed an increase in production capacity in the livestock sector following investments from European funds? Yes No
Section 3: Opportunities and Challenges
7. Do you think that European funds have created new employment opportunities in the livestock sector? Yes No
8. At the same time, do you consider that the process of accessing European funds was complicated and bureaucratic? Yes No
9. Have you noticed a diversification of economic activities in the countryside following the investments from European funds? Yes No
Section 4: Sustainability and the future of the livestock sector
10. Have European funds stimulated the adoption of more sustainable practices in resource management in the livestock sector? Yes No
11. Do you consider that investments from European funds have strengthened the competitiveness of the livestock sector in the context of international markets? Yes No
12. Do you think that continued funding from European funds would support the sustainable development of the livestock sector in the future? Yes No

Source: developed by the author

Table 2. Centralizer with the Answers Received from the 50 People Interviewed

Question	Yes	No	% Yes	% No
1	45	5	90	10
2	35	15	70	30
3	30	20	60	40
4	40	10	80	20
5	45	5	90	10
6	40	10	80	20
7	38	12	76	24
8	30	20	60	40
9	33	17	66	34
10	42	8	84	16
11	36	14	72	28
12	48	2	96	4

Source: developed by the author based on the answers received in the interviews

According to the answers received, I collected the data in table 2 and noticed that a significant perspective is emerging on the impact of European funds in rural development in Romania. I found that a significant proportion of farmers, namely 90%, are aware of the presence of these European funds intended for rural development in the country, which means a high level of information among the agricultural community. I conclude that 70% of farmers noted an increase in investment in infrastructure and services in their area as a result of the use of European funds, thus suggesting a significant level of progress in these key sectors, and 60% of farmers believe that these funds have had a role in the modernization of rural villages, thus emphasizing a positive impact in terms of the development of these communities.

In the zootechnical field, a favorable picture emerges, as 80% of the respondents have noticed an improvement in animal husbandry techniques in their farms thanks to European funds, thus reflecting a significant influence in this aspect. In addition, 90% of farmers believe that these funds have had a positive role in improving the well-being of animals in the livestock sector, thus showing concern for their welfare.

Regarding the economic sector, we note that 80% of farmers have seen an expansion of production capacity in the livestock sector as a result of investments from European funds, thus signaling a significant development in this sphere. Also, 76% of farmers see these funds as a source of new employment opportunities in the livestock sector, thus indicating a possible positive effect on the labor market. However, the challenges should not be omitted, for 60% of the farmers, the process of accessing European funds was perceived as complicated and bureaucratic, thus highlighting the administrative difficulties encountered in this process.

On the economic diversification side, 66% of the respondents observed an increase in the diversity of economic activities in the rural environment due to investments from European funds, thus indicating a positive effect on economic development at the local level. Regarding sustainability, we note that 84% of farmers believe that European funds have stimulated the adoption of more sustainable practices in the management of resources in the livestock sector, thus reflecting a strong commitment to environmental protection and animal welfare.

72% of farmers are of the opinion that investments from European funds have strengthened the competitiveness of the livestock sector on the global market, and 96% of farmers are confident that continued financing from European funds could support the sustainable development of the livestock sector, which means a deep trust in the long-term potential of these funds.

The analysis of rural economic dynamics in the context of European funds and the impact on the livestock sector involves a wide range of economic and development indicators, and these indicators should provide a clear perspective on the economic evolution and performance of the livestock sector in Romania. Thus, the analysis of the GDP evolution can provide a perspective on economic growth in rural areas, predominantly agriculture with animal breeding and plant cultivation.

Table 3. Gross Domestic Product in 2020, Romania

	Achievements- millions of lei current prices -	Volume indices in % compared to 2019	Price indices in % compared to 2019
Total Gross Domestic Product 2020	1066780.5	96.3	104.1
Agriculture, forestry and fishing	44579.2	84.7	111.9

Source: developed by the author based on INS, 2023

Table 4. Gross Domestic Product in 2021, Romania

	Achievements - millions of lei current prices -	Volume indices in % compared to 2020	Price indices in % compared to 2020
Total Gross Domestic Product 2020	1187402.4	105.8	105.2
Agriculture, forestry and fishing	53619.0	105.9	113.5

Source: developed by the author based on INS, 2023

It can be seen that in the year 2020, during the first phase of the COVID-19 pandemic, total GDP saw a slight decline, while the agricultural sector performed relatively better than average, with a smaller decline in volume terms and a significant increase in price terms. This suggests that the agricultural sector was less

affected by disruptions in supply chains and continued to generate significant income. The data from 2021 shows an impressive recovery of the economy as a whole, and the agricultural sector has played a significant role in this revival, the significant increase in the volume of agricultural GDP, over 5%, reflecting the ability of the sector to adapt and develop despite the challenges brought by the pandemic.

Although the agricultural sector has shown greater resilience in the face of the crisis, it should be noted that the initial decline in the volume of total GDP in 2020 indicates a general difficulty in the economy. This reflects the negative impact on other sectors, associated with disruptions in supply chains and falling domestic and foreign demand. We see continued growth in the agricultural sector in 2021, exceeding the level of 2020, demonstrating a sustainable growth trend and investment opportunities in this sector.

In conclusion, the data in Tables 3 and 4 shows that the agricultural sector played a significant role in the stabilization and recovery of the economy during the pandemic and continued to register notable increases in the following year.

Table 5 shows the dynamics of livestock and meat production in the period 2015-2022 and reflects a relatively stable trend in terms of total sheep and goats during this period, this stability showing a concern and an effort to maintain a number consisting of animals in the livestock sector, impacted by European money.

Table 5. Dynamics of Sheep/Goat Herds and Meat Production in the Period 2015-2022

SPECIFICATION	UM	2015	2016	2017	2018	2019	2020	2021	2022
Total numbers of sheep/goats	thousands of heads	11250	11359	11485	11716	11954	11893	11536	11692
Total live sheep/goat meat production	thousands of tons	110	114	116	116	127	121	128	139

Source: developed by the author based on INS and MADR, 2023

Taking into account the data, we can see the evolution of the total sheep and goats, as well as the total production of live sheep and goat meat over a period of 8 years, from 2015 to 2022.

The total flocks of sheep and goats experienced a slight and constant increase from 11,250 thousand heads in 2015 to 11,692.1 thousand heads in 2022. This steady increase in flocks suggests a stability of the sheep and goat breeding sector in this period, following the policies to develop and encourage this type of growth in the agricultural sector. On the other hand, the total production of live sheep and goat meat has had a moderate increase from 110 thousand tons in 2015 to 139 thousand tons in 2022 and this indicates that although livestock numbers have increased steadily, the increase in meat production was not as rapid. This aspect suggests a

concern for sustainable resource management and a focus on production quality rather than massive and rapid growth.

Table 6. Dynamics of Cattle Herds and Meat Production in the Period 2015-2022

SPECIFICATION	UM	2015	2016	2017	2018	2019	2020	2021	2022
Total numbers of cattle	thousands of heads	2092	2005	2011	1977	1923	1875	1819	1814
Total meat production of live beef	thousands of tons	200	206	196	188	179	173	168	166

Source: developed by the author based on INS and MADR, 2023

Table 6 shows that total cattle herds registered a downward trend during this period, from 2,092 thousand head in 2015 to 1,814 thousand head in 2022. This significant reduction indicates a change in cattle stock management strategy, influenced by economic, technological or market factors. On the other hand, the total production of live beef registered a moderate decrease, from 200 thousand tons in 2015 to 166 thousand tons in 2022. This decline is related to the decrease in cattle herds, but also to changes in consumer preferences, demand for healthier meat or environmental and sustainability factors.

In a broader perspective, these data point to a possible paradigm shift in the cattle and beef industry. Economic, social and ecological factors have influenced the decisions made by farmers and producers regarding cattle stock management and meat production.

Table 7. Dynamics of pig herds and meat production in the period 2015-2022

SPECIFICATION	UM	2015	2016	2017	2018	2019	2020	2021	2022
Total numbers of pigs	thousands of heads	4927	4708	4406	3925	3834	3785	3619	3338
Total meat production of live pigs	thousands of tons	562	588	583	550	512	498	495	438

Source: developed by the author based on INS and MADR, 2023

After analysing the data presented in Table 7 regarding the dynamics of pig herds and meat production in the period 2015-2022, I concluded that the total herds of pigs registered a significant decrease during the 8 years period, from 4,927 thousand heads in 2015 to 3,338 thousand heads in 2022. This downward trend reflects

complex influences such as changes in pork demand, concerns about animal health and welfare.

Over the same period, total live pigmeat production has decreased from 562 thousand tons in 2015 to 438 thousand tons in 2022, this decline in production being directly related to the reduction in pig herds, but could also reflect changes in how resources are managed and used in the pork industry.

5. Conclusions

By accessing European funds, the livestock sector in Romania has experienced a significant transition towards modernization and sustainable development, and this influence cannot be underestimated, as European funds have provided essential financial resources and incentives to address multiple challenges and opportunities in this field.

European investments have contributed to improving production efficiency, adopting more sustainable agricultural practices and increasing competitiveness on the domestic and international market. By financing projects to modernize the farm, purchase state-of-the-art equipment and advanced management technologies, the livestock sector in Romania went through a process of reconfiguration that led to an increase in the quality and quantity of products.

European funds have also contributed to improving animal health by investing in veterinary infrastructure, disease control and monitoring, and improving animal welfare, with a positive impact on product quality and the image of the livestock industry as a whole.

Thus, through European funds, the livestock sector in Romania obtained many of the necessary resources to adapt to contemporary requirements and challenges, transforming into a modern, competitive industry compatible with the principles of sustainable development.

Based on the results obtained, I outlined some recommendations:

Although a significant number of farmers are familiar with European funds, the awareness efforts to ensure that all those interested have access to these resources, through workshops, seminars and online resources that can contribute to a deeper understanding of the benefits offered by the funds, should be increased;

Due to the positive observations regarding investments in infrastructure and services, the recommendation would be to continue and expand these projects in rural communities, effective investments being able to strengthen the economic and social bases of these areas;

Pursuing animal welfare, European funds should be used to support projects aimed at better living conditions for animals, higher standards of care and ethical practices in the livestock sector;

Investments that support the increase in production capacity can contribute to increasing competitiveness at the national and international level, and the continuation of these investments can strengthen Romania's position on the global market;

To address the bureaucratic challenges, measures can be implemented to simplify the processes of accessing European funds, such as detailed guides and dedicated assistance for applicants;

Continued investment in diversifying economic activities can help increase the resilience of rural communities and reduce dependence on a single sector.

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