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STUDIES ON INVESTMENTS IN EXPANDING STORAGE CAPACITIES FOR CEREALS AND INDUSTRIAL CROPS THROUGH NON-REIMBURSABLE FUNDS IN THE OLTENIA REGION

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Abstract

The NRDP is structured into a series of measures designed to support, modernize, and promote the sustainable development of Romania's rural areas.Sub-measure 4.2 – "Support for investments in the processing/marketing and/or development of agricultural products" is part of Measure 4 – Investments in physical assets. This sub-measure has multiple objectives: strengthening the competitiveness of primary producers by improving their integration into the agri-food chain, supporting participation in quality schemes, increasing the added value of agricultural products, and promoting their presence on local markets. With regard to DR 22, this intervention is entitled "Investments in conditioning, storage, and processing of agricultural and horticultural products." It is part of the Strategic Plan for the period 2023–2027 (CAP SP 2023–2027) under the umbrella of the European Agricultural Fund for Rural Development (EAFRD). Its primary aim is to modernize and expand infrastructure, ensuring that storage and processing capacities meet both current and future market demands.This study undertakes an analytical approach focused on the number of projects financed and the increase in storage capacity achieved through the absorption of European funds. The analysis concentrates on the modernization of grain and industrial crop storage facilities in the South-West Oltenia Region, during the period 2015–2024, and assesses their impact on the local economy.Ultimately, the paper intends to monitor and highlight the dynamics of modernization projects targeting storage capacities for cereals and industrial crops through Sub-measure 4.2 and DR 22 at the level of the South-West Oltenia Region.

***Keywords:** storage capacity, arable land, public funds, eligible fun*

INTRODUCTION

The development of rural areas in Romania has long been a priority within national and European agricultural policies, as these regions represent not only a vital economic sector but also a key component of social cohesion, environmental sustainability, and food security. Two important interventions have shaped the trajectory of agricultural

modernization and storage capacity development in Romania: Sub-measure 4.2 of the National Rural Development Programme (NRDP) 2014–2020 and DR 22 within the CAP Strategic Plan 2023–2027. Sub-measure 4.2 – "Support for investments in the processing/marketing and/or development of agricultural products" was conceived as part of Measure 4 – Investments in physical assets, one of the central pillars of the NRDP 2014–2020. Its main purpose was to stimulate the competitiveness of primary producers, particularly small and medium-sized farms, by facilitating their better integration into the agri-food chain. This objective was pursued through a combination of measures aimed at improving quality schemes, increasing added value for agricultural products, and promoting direct access to local markets. Additionally, Sub-measure 4.2 supported short supply chains, producer groups, and inter-branch organizations, while also fostering the creation and growth of small enterprises and new employment opportunities in rural communities. The underlying rationale was that improving processing and storage infrastructure would enhance both the efficiency and the resilience of agricultural producers, enabling them to adapt to dynamic market conditions and consumer demands. Over the implementation period, Sub-measure 4.2 targeted a wide range of investments, from the modernization of processing facilities and storage units to the adoption of new technologies for food safety, traceability, and quality control. By encouraging farmers and processors to collaborate, integrate vertically, and engage in value-added activities, this intervention contributed to reducing structural disparities between Romanian agriculture and that of other EU member states. Moreover, it had significant implications for the development of regional economies, particularly in less developed areas such as the South-West Oltenia Region, where agricultural production represents a crucial component of local livelihoods. Building on the experience of the previous programming cycle, the CAP Strategic Plan 2023–2027 introduced new interventions aligned with the European Green Deal, the Farm to Fork Strategy, and the broader objectives of the Common Agricultural Policy. Within this framework, DR 22 – "Investments in conditioning, storage, and processing of agricultural and horticultural products" has emerged as a continuation and refinement of the priorities addressed by Sub-measure 4.2. While maintaining the overarching goal of improving competitiveness, DR 22 places a stronger emphasis on sustainability, climate resilience, and efficient resource management. By targeting both agricultural and horticultural products, the intervention seeks to modernize infrastructure, expand storage capacities, and encourage environmentally friendly practices that reduce food loss and waste throughout the supply chain. One of the key novelties of DR 22 lies in its integration within the CAP Strategic Plan (2023–2027), which

adopts a more holistic and performance-oriented approach compared to the NRDP 2014–2020. Taken together, Sub-measure 4.2 and DR 22 represent two complementary steps in the long-term effort to modernize Romanian agriculture and rural infrastructure. While Sub-measure 4.2 laid the foundations for competitiveness and integration into value chains during the 2014–2020 period, DR 22 builds upon these achievements and adapts them to the new strategic context of 2023–2027. Both interventions have a direct impact on the South-West Oltenia Region, where the modernization of storage capacities for cereals and industrial crops is crucial for improving local economic performance and for ensuring that agricultural producers can better respond to market opportunities. This paper, therefore, aims to explore the dynamics and outcomes of these two interventions, focusing on their role in increasing storage capacity, supporting rural enterprises, and shaping the socio-economic development of the South-West Oltenia Region. Through this analysis, it seeks to highlight the importance of coherent and sustained investment in agricultural infrastructure as a driver of rural development, competitiveness, and resilience within Romania's evolving agri-food sector.

MATERIALS AND METHODS

A statistical study is carried out in this article to highlight the investments made through Submeasure 4.2 of the RDP 2014–2020 and DR 22 of the PS 2023–2027, regarding the projects financed for the development of storage capacities for cereal and industrial crop production in the counties of Dolj, Gorj, Mehedinți, Olt, and Vâlcea, which together form the South-West Oltenia development region.

The analysis is based on the following indicators: number of storage units, storage capacity, arable land area, number of financed projects, and the value of public (non-reimbursable) investment. The study examines the situation of authorized warehouses in the Oltenia region, the total number of selected projects, the overall value of the selected projects, and the public value of the financed investments.

Correlations are established, such as the relationship between the total storage capacity and the arable land area in each county of the region. Additional links are analyzed between the total number of storage facilities and the agricultural surface, as well as between the number of storage facilities and their aggregated capacity. These comparisons are intended to provide a deeper understanding of the regional dynamics, emphasizing both the distribution of resources and the efficiency of financial support granted through European and national programs.

RESULTS AND DISCUSSIONS

The analysis of total storage capacity in relation to arable land in the South-West Oltenia region highlights an uneven situation across counties. In

2024, Dolj County recorded the highest value, with approximately 1.62 million tons of storage capacity for an arable land area of 488,560 hectares, corresponding to 3.32 tons per hectare. Olt County follows closely, with 1.12 million tons for 390,336 hectares, or 2.87 tons per hectare, reflecting a balanced correlation between agricultural resources and storage infrastructure.Vâlcea, despite having a much smaller arable area (86,857 ha), achieved 197,309 tons of capacity, representing 2.27 tons per hectare, which demonstrates a high level of efficiency of investments relative to land size.

Table 1. Situation of storage capacities and arable land in Oltenia
(Source: Own calculations based on http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table)

Year **County**	**Number of storage facilities**	**Total storage capacity[t]**	**Number of storage facilities**	**Total storage capacity[t]**	**Arable land [ha]**
	2023		**2024**		
Dolj	262	1484474	272	1620959	488560
Gorj	21	26620	24	28098	98239
Mehedinti	69	259788	71	262788	187910
Olt	166	1024851	177	1120871	390336
Valcea	16	86709	22	197309	86857
Total	534	2882442	566	3230025	1251902

Table 2. Public and eligible project values by county funded through Submeasure 4.2
(Source: Own calculations based on afir.ro data)

Year	County										Total Eligible	Total Public
	Value	Dolj		Gorj		Mehedinți		Olt		Vâlcea			
2016	Eligible	0		0		0		0		0		0	
	Public		0		0		0		0		0		0
2017	Eligible	6507593		0		0		0		0		6507593	
	Public		3253795		0		0		0		0		3253795
2018	Eligible	722811		0		0		6458159		0		7180970	
	Public		361405		0		0		3229079		0		3590484
2019	Eligible	1766309		0		0		4027586		3201298		8995193	
	Public		1837837		0		0		2630850		1600649		6069336
2020	Eligible	588828		0		0		5506708		0		6095536	
	Public		294414		0		0		2202683		0		2497097
2021	Eligible	0		0		0		0		0		0	
	Public		0		0		0		0		0		0
2022	Eligible	8913448		0		0		6074671		0		14988119	
	Public		6842260		0		0		3612203		0		10454463
2023	Eligible	1199900		0		0		0		2965654		4165554	
	Public		599950		0		0		0		1186261		1786211
Total	Eligible	19698889		0		0		22067124		6166952		47932965	
	Public		13189661		0		0		11674815		2786910		27651386

Table 3. Public and eligible project values by county funded through DR 22

(Source: Own calculations based on afir.ro data)

Year	County						Total
	Value	Dolj	Gorj	Mehedinți	Olt	Vâlcea	
2024	Eligible value	12676338	0	0	10018219	4615384	27309941
	Public value	8239617	0	0	6511842	2999999	17751458
	FEADR	7003675	0	0	5535066	2549999	15088740
	Cumulative total (public investment value)	168699038	0	0	215530547	259293400	643522985
2025	Eligible value	0	0	0	0	0	0
	Public value	0	0	0	0	0	0
	FEADR	0	0	0	0	0	0
	Cumulative total (public investment value)	0	0	0	0	0	0

At the opposite end are Mehedinți and Gorj counties, where storage infrastructure remains insufficient. Mehedinți records only 262,788 tons for 187,910 hectares (1.40 t/ha), while Gorj shows an extremely low level, with just 28,098 tons for 98,239 hectares, corresponding to 0.29 tons per hectare. These values reveal a significant discrepancy between agricultural potential and storage capacities. Compared to 2023, the total storage capacity increased from 2.88 million tons to 3.23 million tons, representing an approximate growth of 12% at the regional level. This positive trend confirms the progress of investments in agricultural infrastructure, yet consolidation remains concentrated in Dolj, Olt, and Vâlcea, while Gorj and Mehedinți continue to be weakly represented.The analysis of the number of storage facilities in relation to arable land highlights significant disparities among the counties of the South-West Oltenia region. In 2024, Dolj ranks first with 272 storage facilities for 488,560 hectares of arable land, equivalent to approximately one facility per 1,796 hectares. Olt follows with 177 facilities for 390,336 hectares, corresponding to one facility per 2,206 hectares. These values confirm a high density of storage infrastructure in the counties with the largest agricultural areas, where storage needs are proportional to production potential. Vâlcea, although characterized by a much smaller arable area (86,857 ha), has 22 storage facilities, resulting in a favorable ratio of one facility per 3,948 hectares. This reflects recent investments that have rapidly increased storage capacity relative to land size. Mehedinți, with 71 facilities for 187,910 hectares, records one facility per 2,646 hectares, placing it below Dolj and Olt. Gorj shows the weakest performance, with only 24 facilities for 98,239 hectares, or one facility per 4,093 hectares, a value that suggests insufficiently developed infrastructure. At the regional level, the total number of storage facilities increased from 534 in 2023 to 566 in 2024, while the arable land area remained constant at 1,251,902 hectares. This led to an improvement in regional density, from one storage facility per 2,343 hectares in 2023 to one facility per 2,212 hectares in 2024. The general trend therefore indicates improved accessibility to storage infrastructure, yet disparities between counties remain significant, with Dolj and Olt leading, Vâlcea emerging, and

Gorj and Mehedinți still lagging behind. The analysis of the number of projects implemented and the associated eligible amounts in the South-West Oltenia region reveals a dynamic characterized by gradual growth, followed by a strong acceleration in recent years. During the period 2016–2018, the number of funded projects was relatively low, with eligible amounts ranging between 0.5 and 6 million euros per county, reflecting an initial stage of accessing European funds for storage and processing investments. After 2019, the trend becomes more pronounced, especially in Dolj and Olt counties, which consistently attract a higher volume of projects and eligible funding. For example, Olt reached more than 4 million euros in eligible value in 2019 and continued to grow, surpassing 5.5 million euros in 2020. Dolj also recorded significant progress, approaching 9 million euros in 2022. The year 2023 marked the peak of the analyzed period, with remarkable intensification: Olt exceeded 22 million euros in eligible value, while Dolj reached around 12 million euros. Vâlcea, although characterized by a smaller arable area, also registered a substantial increase, surpassing 6 million euros in eligible funding. By contrast, Gorj and Mehedinți remained marginal, with very limited involvement, almost insignificant at the regional level. In 2024, eligible amounts remained high, totaling over 27 million euros for the region, confirming a consolidation of interest in storage infrastructure investments. However, the distribution remained unbalanced: Dolj and Olt concentrated the largest share of funds, Vâlcea played an increasingly important role, while Gorj and Mehedinți did not attract new projects. Overall, the analysis highlights a clear polarization of investments: Dolj and Olt account for more than two-thirds of both projects and eligible amounts, strengthening their role as regional centers of agricultural production and infrastructure. Vâlcea shows visible and promising growth, while Gorj and Mehedinți face challenges in accessing funds and implementing projects, which further accentuates intra-regional disparities.

CONCLUSIONS

The data analyzed for the period 2016–2024 reveal a positive and increasingly dynamic evolution of investments in storage and processing infrastructure for agricultural production in the South-West Oltenia region. The steady growth in both the number of storage facilities and the total storage capacities demonstrates a clear correlation between the availability of arable land and the development of support infrastructure. However, this correlation is not evenly distributed across counties. Dolj and Olt stand out with high values in terms of both storage capacity per hectare and the density of storage facilities, confirming their role as regional agricultural poles. Vâlcea, despite its relatively small arable land area, has recorded rapid growth in investments, reflected in a favorable ratio between infrastructure and land. By contrast, Gorj and Mehedinți remain significantly below the regional average, which indicates a structural gap in accessing funds and developing storage capacity.

The analysis of projects and eligible amounts shows a clear polarization of investments. Dolj and Olt together account for more than two-thirds of the total funds attracted, reaching record values in 2022–2023, while Vâlcea has consolidated its position as an emerging beneficiary. This geographical concentration of investments can be interpreted as a consequence of high agricultural potential, but also as a territorial imbalance, since Gorj and Mehedinți remain marginalized and exert limited impact on regional infrastructure. From a broader perspective, the period under review marks the transition from an initial stage of European fund absorption (2016–2018) to a phase of consolidation and expansion (2019–2021), culminating in a strong acceleration of investments during 2022–2024. The increase in both total storage capacity and the number of projects and eligible values confirms a stronger mobilization of public and European resources to support agricultural infrastructure. At the same time, the persistent territorial disparities highlight the need for more balanced policies aimed at supporting lagging counties and reducing intra-regional inequalities.

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