

FINANCIAL TRAINING AND SUSTAINABLE FINANCIAL PERFORMANCE IN SMALLHOLDER AGRICULTURE: EVIDENCE FROM LUSHNJA, ALBANIA

Xhelentiona Mullaymeri,
Albana Gjoni, Erisa Demiri¹



¹ Xhelentiona Mullaymeri, corresponding author, ORCID: 0000-0009-0718-2548, e-mail: xhmullaymeri@ubt.edu.al; Albana Gjoni, ORCID: 0000-0001-7875-0387, e-mail: agjoni@ubt.edu.al, Erisa Demiri, Agricultural University of Tirana, Albania

Abstract: This study provides empirical and diagnostic evidence on institutions that offer financial training to farmers in a rural environment during the process of EU accession. The contribution is relevant for rural studies and future research that seeks to evaluate long-term effects and the impact of financial literacy in rural areas. This research documents how financial literacy training has been accessed, experienced, and perceived so far. Training participation, perceived usefulness, and relevant demographic data were the focus of the survey conducted in Lushnja, Fier. By mapping variables and their patterns, the study establishes baseline evidence on the alignment of current training and knowledge gaps, as reported by farmers.

Keywords: agricultural extension, financial literacy, training needs assessment, rural Albania, EU accession, sustainable financial performance

Highlights

- The majority of surveyed farmers reported limited need for financial training, in spite of acknowledging its significance.
- No association with self-reported financial stability was found.
- Current training is insufficient for farmers' needs.
- The correlation of training participation and perceived significance varied.

1. Introduction

As Albania advances toward European Union accession, alignment with the Common Agricultural Policy (CAP) requires developing effective agricultural knowledge and innovation systems (AKIS). The CAP framework emphasizes “farmers as entrepreneurs”, requiring not only technical skills but also financial competence (European Parliament, Council of the European Union, 2021). However, Albania’s Ministry of Agriculture lacks a national strategy for integrating financial education into extension services. The financial literacy training that has been made available and accessible to farmers in rural Albania has, thus far, been intermittent, as it has been delivered through short-term projects or NGOs, which has been the basis of its limited coordination, monitoring, and evaluation (Food and Agriculture Organization of the United Nations [FAO], 2023; Agricultural and Rural Development Agency [AZHBR], 2023; Deutsche Sparkasse Stiftung für Internationale Cooperation e.g., [German Sparkasse Stiftung], 2021; CIHEAM Zaragoza, 2025; Albania Agribusiness Support Facility [AASF], 2020; Training red Institute, 2026). This institutional gap instigates questions regarding the effectiveness of financial training, which revolve around participation, relevance, impact. Without baseline diagnostic data, institutions offering training would be unable to design evidence-based adaptations. In this study, the former research questions will be addressed, employing the use of a survey with participants in the municipality of Lushnja, which was selected as the study site because it ranks among the top agricultural producers in the region, making it representative of domestic agricultural production patterns.

1.1 Research context: Lushnja and Albanian smallholder agriculture

Lushnja is located in central Albania’s fertile plain, where agriculture remains the economic backbone despite structural constraints. Post-communist land reforms fragmented holdings, leaving the overwhelming majority of farmers with plots too small for economies of scale. The region faces chronic challenges: youth emigration, aging workforce, gender exclusion from formal training, and limited market integration.

Current financial training is delivered sporadically by various actors, such as NGOs, donor projects, occasional government initiatives, with no standardized curriculum, quality control, or impact monitoring. Farmers' experiences with these programs remain largely undocumented, creating an evidence gap for policy reform.

1.2 Study objectives

This diagnostic study seeks to:

1. Document current patterns of financial training participation and perceived effectiveness;
2. Identify demographic correlates of training access and reported benefit;
3. Assess alignment between farmer-reported needs and training outcomes;
4. Diagnose systemic gaps in Albania's rural financial education infrastructure;
5. Provide baseline evidence to inform alignment with EU CAP advisory service standards.

We do not attempt to measure causal impacts or evaluate specific programs. Rather, we provide a descriptive needs assessment to guide future training design and policy reform. All "effectiveness" measures capture participant satisfaction and self-assessed learning, not verified knowledge acquisition or behavioural change. These are indicators of training experience quality, not outcome impact.

Despite policy emphasis on financial literacy in Albania's Rural Development Strategy (2021–2027), no systematic assessment documents:

- Current training participation rates
- Farmer perceptions of training relevance and quality
- Demographic patterns in access and perceived benefit
- Alignment between training content and farmer-reported needs

This study provides baseline diagnostic data to fill this evidence gap.

2. Literature review

The role of financial training within rural advisory systems has gained prominence in agricultural development discourse, particularly in EU-accession contexts where alignment with Common Agricultural Policy frameworks is required.

Previous research has emphasized the uneven uptake of advisory services across rural regions and the need to understand farmer engagement as a contextual process rather than a linear input-output relationship (Knierim et al., 2017, Šūmane et al., 2018). By documenting how financial training is perceived within a specific rural locality, this paper contributes empirical material to this strand of rural institutional analysis.

Within this literature, farmer perceptions are treated as analytically meaningful indicators of institutional alignment. Low participation in financial training by farmers may indicate weak perceived relevance and accessibility issues. Other studies carried out in Europe highlight advisory systems tend to produce generic material that insufficiently reflects local knowledge gaps and relevant issues, causing farmers to attend in symbolic manner, rather than being active, engaged participants (Prager & Creaney, 2017). This paper situates financial training within a similar institutional perspective.

2.1 EU frameworks for farmer advisory services

In EU member states, farmer training falls under national Agricultural Knowledge and Innovation Systems (AKIS), with Farm Advisory Services (FAS) providing business skills, risk management, and financial literacy support (European Commission, 2025). CAP funding supports diverse models, from integrated "Agri-

Entrepreneur” modules in French agricultural schools, regional finance advisory hubs in Italy, to digital learning platforms like the Erasmus+ FLER project’s gamified tools (Zervas, 2024).

Albania, as a candidate country, must develop comparable systems but currently lacks institutional infrastructure for coordinated training delivery or quality assurance.

2.2 Evidence on training effectiveness

International evidence on financial literacy training shows mixed results. While knowledge gains are commonly reported, behavioural change and financial outcomes are harder to demonstrate (Willis, 2011). A 2019 study found that digital financial education with SMS reminders improved knowledge and self-reported performance among existing savers but showed limited impact on broader financial practices (Attanasio et al., 2019).

Research carried out across seven countries in Europe classified persistent disproportionate financial literacy levels, namely insufficiency in budgeting, fraud awareness, risk management, and retirement planning (Czech et al., 2024). The study used gamified tools (e.g., virtual escape rooms) and the results were promising, in spite of effectiveness varying by age and country. OECD evidence implies Southeast European rural populations have lower financial literacy, savings rates, and digital financial access than urban populations, which makes them more vulnerable to events such as economic shocks (OECD, 2022). However, disaggregated data on rural farmers specifically remains scarce, creating challenges for targeted intervention design.

3. Methodology

Data was collected via survey in Lushnja municipality, Fier County, Albania, in 2025. The survey included 12 closed-ended questions measuring demographics, farm characteristics, training participation, and self-reported outcomes.

Participants were recruited through agricultural extension contacts and local farmer networks. The final sample (N=200) reflects common demographic characteristics observed in Albanian agriculture. The variables “perceived need for financial training”, “perceived importance of financial training”, “perceived effect of financial training”, “perceived impact on financial knowledge” utilise the best judgement of farmers who participated in financial training offered, as opposed to auditing their income and business. Descriptive statistics is used to characterize the sample and patterns. Chi-square tests are used to examine demographic associations. Spearman correlations are used to identify correlation among ordinal variables. Simple bivariate correlations are used to study association between training participation and self-reported outcomes, without causal interpretation. The cross-sectional design and self-reported measures limit conclusions to descriptive patterns and perceived relationships.

4. Results

4.1 Training participation and perceived need

Participation is limited, with 50% of farmers reporting never participating in financial training, 16% rarely, and 34% sometimes (Table 1). No farmers reported frequent participation, indicating training is at best occasional. 73.5% of farmers perceive “little need” for financial training, while only 26.5% acknowledge a need. None of the farmers answered that they felt “high need” for training, suggesting low awareness of knowledge gaps or perception that training is irrelevant to their specific problems. The significance of training is recognised among all farmers, including those who did not participate in financial training programs. The contradiction may indicate programs may benefit from updating their content, to align with farmers’ needs.

Tab 1. Descriptive statistics derived from survey answers (N = 200). Source: developed by the authors

VARIABLE	CATEGORY	N	%
GENDER	Female	16	8
	Male	184	92
	Total	200	100
AGE GROUP	18–30 years	12	6
	31–50 years	126	63
	>50 years	62	31
	Total	200	100
EDUCATION LEVEL	Primary school	120	60
	Professional high school	0	0
	General secondary	80	40
	Higher education	0	0
	Total	200	100
EMPLOYMENT TYPE	Self-employed farmer	200	100
	Employed on another farm	0	0
	Seasonal employee	0	0
	Public sector employee	0	0
	Total	200	100
FARMING EXPERIENCE	<5 years	6	3
	5–20 years	109	54.5
	>20 years	85	42.5
	Total	200	100
FARM SIZE	≤2 hectares	200	100
	2–10 hectares	0	0
	>10 hectares	0	0
	Total	200	100
PRIMARY AGRICULTURAL ACTIVITY	Horticulture	62	31
	Pomology	34	17
	Animal husbandry	104	52
	Total	200	100
PERCEIVED NEED FOR FINANCIAL TRAINING	None	0	0
	Little need	147	73.5
	Need	53	26.5
	High need	0	0
	Total	200	100
PERCEIVED IMPORTANCE OF FINANCIAL TRAINING	None	0	0
	Slightly important	0	0
	Important	120	60
	Very important	80	40
	Total	200	100
FREQUENCY OF PARTICIPATION IN FINANCIAL TRAINING	Never	100	50
	Rarely	32	16
	Sometimes	68	34
	Frequently	0	0
	Total	200	100
PERCEIVED EFFECT OF FINANCIAL TRAINING	Significant Improvement	98	49
	Moderate Improvement	102	51
	Slight Improvement	0	0
	No Perceived Improvement	0	0
	Total	200	100
PERCEIVED IMPACT ON FINANCIAL KNOWLEDGE	Minimal Impact	0	0
	Slight Impact	0	0
	Moderate Impact	166	83
	Substantial Impact	34	17
	Total	200	100

4.2 Perceived effectiveness among participants

Among farmers who have participated (n=100), 83% report “moderate impact” on financial knowledge, 17% report “substantial impact”, while 0% report minimal or no impact. Similarly, perceived training effect shows that 49% report “significant improvement”, 51% report “moderate improvement”, 0% report slight or no improvement. In spite of the overwhelmingly positive responses, training participation did not show correlation with reported financial performance ($r=-.022$, $p=.757$). Unobserved variables not captured in this study could be the cause behind the absence of correlation between training participation and self-reported sustainable financial performance, in spite of a high level of perceived learning.

4.3 Demographic patterns in training access and benefit

Chi-square analysis revealed that years of experience were significantly associated with perceived training impact ($\chi^2 = 19.97$, $p < .001$, $V = .22$) (Table 2). Farmers with 5–20 years of experience were more likely to report significant improvement. Farmers with >20 years of experience were more likely to report minimal benefit. Farmers with <5 years of experience reported sporadic impact.

Tab 2. Chi-square tests for independence on demographic and outcome variables (N = 200). Source: developed by the authors

Demographic variable	Outcome variable	χ^2	p	Cramer's V
Gender	Training need	.19	.662	.022
Age	Training significance	.73	.694	.043
Education Level	Knowledge impact	1.42	.234	.060
Farm Size	Training participation	-	-	-
Experience	Training effect	19.97	<.001	.223

Note: N = 200. χ^2 = chi-square statistic. Farm size analysis not computed due to zero variance (all farms ≤ 2 hectares). $p < .001$.

Spearman correlations showed age correlates with experience and participation (Fig. 1). Age positively correlated with farming experience ($\rho = .41$, $p < .001$). Age positively correlated with training participation ($\rho = .17$, $p = .016$). Older farmers are slightly more likely to have attended training.

Education shows an inverse relationship with experience. Educational attainment is negatively correlated with farming experience ($\rho = -.49$, $p < .001$), which means farmers with higher education tend to have fewer years in agriculture (possibly entering farming later or as a secondary career). No statistical tests on gender and farm size were possible due to sample homogeneity (92% male, 100% farms <2 hectares).

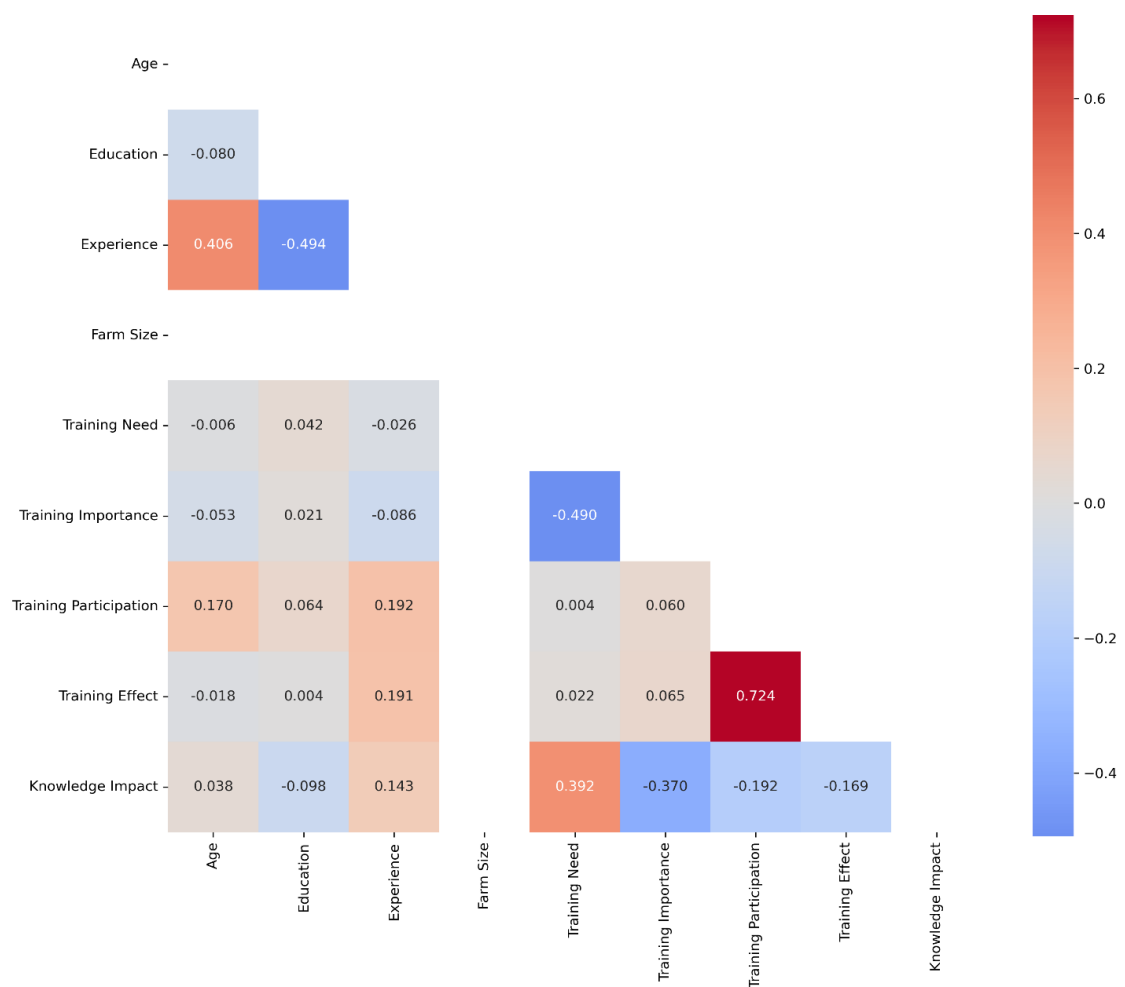


Fig 1. Spearman correlation matrix of ordinal survey variables (N=200). Source: developed by the authors

5. Discussion

The findings should be interpreted as indicators of institutional interaction rather than measures of training effectiveness. Farmer-reported participation, perceived learning, and perceived need function here as signals of how financial training is positioned and received within the local advisory system.

The coexistence of low perceived need for training and high perceived importance suggests a distinction made by farmers between abstract recognition of financial knowledge and the practical relevance of available training formats. Among European studies, similar findings are portrayed as weak correlations between advisory services and operational realities of farmers (Knierim et al., 2017). The lack of correlation found between training participation and perceived financial stability aligns with studies that discovered engagement can provide cognitive gains without changing farmer structural vulnerability or viability in the long-term (Šūmane et al., 2018). This is further validated by our finding that outcomes varied by farming experience. Another European rural study emphasises relevance of training is affected by farming experience, among other variables (Prager & Creaney, 2017). Observed patterns are interpretive and analytically grounded derivations of data rather than causal due to our study focus not being program design features, advisory quality, or structural constraints. Future research may build on this diagnostic foundation by integrating objective indicators, longitudinal designs, and comparative case studies to assess how different advisory configurations influence farmer engagement and outcomes.

6. Implications

This study provides baseline descriptive evidence relevant to research on rural advisory systems in EU-accession and peripheral regions. The findings underscore the importance of examining not only training availability, but also how training is perceived and differentiated across farmer groups. From our research, we find three analytical implications develop;

1. Participation in financial training does not infer future broad self-assessment of financial stability.
2. Categorising farmers by variables shapes engagement with training whilst aggregate metrics obscured correlation.
3. Analytical data that uses perception and self-reported figures may be used as early indicator of institutional misalignment.

In this study, the authors do not evaluate institutional performance or propose definite measures. We do however provide empirical grounding for comparative research on advisory system design across regions and stages of institutional development. Objective indicators are recommended in future longitudinal studies, or comparative case studies examining training and advisory services and outcomes.

Acknowledgements

This work was not supported by any organisation or grant. We sincerely thank all the farmers who responded to our survey, for their valuable cooperation and data contribution. We also thank the reviewers for their constructive comments, which greatly improved the quality of this manuscript.

Academic references

- [1] Attanasio, O., Bird, M., Cardona-Sosa, L. & Lavado, P. (2019). *Freeing financial education via tablets: Experimental evidence from Colombia* (NBER Working Paper No. 25929). Cambridge, MA: National Bureau of Economic Research. DOI: 10.3386/w25929.
- [2] Czech, K., Ochnio, L., Wielechowski, M. & Zabolotnyy, S. (2024). Financial Literacy: Identification of the Challenges, Needs, and Difficulties among Adults Living in Rural Areas. *Agriculture*, 14(10), 1705. DOI: 10.3390/agriculture14101705.
- [3] Demertzis, M., Mejino-López, J. & Léry Moffat, L. (2024). The state of financial knowledge in the European Union: a new survey. *Journal of Financial Literacy and Wellbeing*, 2(1), 38–62. DOI: 10.1017/flw.2024.8.
- [4] Hagenauer, G. & Raufelder, D. (2021). Lehrer-Schüler-Beziehung. In: Hascher, T., Idel, TS. & Helsper, W., eds., *Handbuch Schulforschung*. Wiesbaden: Springer. DOI: 10.1007/978-3-658-24734-8_47-1.
- [5] Prager, K. & Creaney, R. (2017). Achieving on-farm practice change through facilitated group learning: Evaluating the effectiveness of monitor farms and discussion groups. *Journal of Rural Studies*, 56, 1–11. DOI: 10.1016/j.jrurstud.2017.09.002.
- [6] Šūmane, S., Kunda, I., Knickel, K., Strauss, A., Tisenkopfs, T., des los Rios, I., Rivera, M., Chebach, T. & Ashkenazy, A. (2018). Local and farmers' knowledge matters! How integrating informal and formal knowledge enhances sustainable and resilient agriculture. *Journal of Rural Studies*, 59, 232–241. DOI: 10.1016/j.jrurstud.2017.01.020.
- [7] Willis, L. E. (2011). The financial education fallacy. *American Economic Review*, 101(3), 429–434. DOI: 10.1257/aer.101.3.429.
- [8] Xu, G., Feng, L., Wang, W. & Liang, Q. (2024). Digital Financial Literacy and Rural Income Inequality. *Sage Open*, 14(3). DOI: 10.1177/21582440241275642.

- [9] Zervas, D. (2024). *The end of the Erasmus+ project FLER*. EPALE. Retrieved from: <https://epale.ec.europa.eu/en/blog/end-erasmus-project-fler>. Last accessed November 11, 2024.

Other sources

- [10] Agricultural and Rural Development Agency (2023). The call for the National Agricultural Training Scheme is open. <https://azhbr.gov.al/en/eng-hapet-thirrja-per-skemen-kombetare-te-trajnit-ne-bujqesi/>.
- [11] Albania Agribusiness Support Facility (2020, January). AASF newsletter (No. 2). <https://aatsf.com.al/wp-content/uploads/2020/02/The-Albanian-Agribusiness-Support-FacilityE.pdf>.
- [12] CIHEAM Zaragoza (2025). EU-funded project to transform agricultural training and innovation in Albania. <https://www.iamz.ciheam.org/agendas/eu-funded-project-to-transform-agricultural-training-and-innovation-in-albania/>.
- [13] Deutsche Sparkassenstiftung für internationale Kooperation e.V. (2021). Strengthening financial literacy in the Republic of Albania. <https://www.sparkassenstiftung-albania.org/projects/financial-literacy>.
- [14] European Commission (2025). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a financial literacy strategy for the EU (COM (2025) 681 final). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX%3A52025DC0681&>.
- [15] European Commission (2023). Monitoring financial literacy levels. European Union. <https://europa.eu/eurobarometer/surveys/detail/2953>.
- [16] European Parliament & Council of the European Union (2021). Regulation (EU) 2021/2115 [Rules on support for strategic plans under the common agricultural policy (CAP Strategic Plans)]. Official Journal of the European Union, L 435, 1–186. (Consolidated version of 25 May 2024). <https://eur-lex.europa.eu/eli/reg/2021/2115/oj/eng>.
- [17] Food and Agriculture Organization of the United Nations (2023, November 8). FAO and the Agricultural University of Tirana empower Albanian farmers and extension specialists with financial literacy training [Press release]. United Nations Albania. <https://albania.un.org/en/252197-fao-and-agricultural-university-tirana-empower-albanian-farmers-and-extension-specialists>.
- [18] Ministry of Agriculture and Rural Development (2022). 2021–2027. Agriculture, Rural Development and Fisheries Strategy 2021–2027. Government of Albania. https://bujqesia.gov.al/wp-content/uploads/2022/09/Programi-IPARD-III_2021-OECD (2022), Boosting Financial Literacy of Rural Populations in South East Europe, OECD Publishing, Paris, https://doi.org/10.1787/9cf0c269-en.2027_English.pdf.
- [19] Trainingcred Institute (2026). Rural finance and credit for agriculture for NGOs training course – Albania. <https://trainingcred.com/al/training-course/rural-finance-and-credit-for-agriculture-for-ngos-training>.