AGRICULTURAL UNIVERSITY PLOVDIV

FACULTY OF ECONOMICS

DEPARTMENT OF ECONOMICS

Butrint Bytyçi

THE ROLE OF AGRICULTURE FOR THE ECONOMIC DEVELOPMENT OF THE REPUBLIC OF KOSOVO

AUTHOR'S ABSTRACT

of a dissertation for awarding the educational and scientific degree "DOCTOR"

professional field **3.8. ECONOMICS**

scientific specialty "**ECONOMICS AND MANAGEMENT (AGRICULTURE)**"

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Plovdiv, 2025

The dissertation has been reviewed and submitted for defence at a meeting of the Department Council of the Department of Economics, Faculty of Economics, Agricultural University – Plovdiv.

Dissertation details:

- Number of pages – 238
- Number of figures – 43
- Number of tables – 30
- Number of references – 264
- Number of publications by the PhD candidate – 3

The defence will take place on the 28.11.2025 at 13:00 in hall 322 of the Faculty of Agronomy, at an open session of the scientific jury composed of:

Prof. Dimo Atanasov Atanasov, PhD

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The materials related to the defence are available on the website of the Agricultural University – Plovdiv, www.au-plovdiv.bg, and in the library of the Agricultural University – Plovdiv, 12 Mendeleev Street.

CONTENTS

I. GENERAL CHARACTERISTICS OF THE DISSERTATION

1. Relevance of the Research Topic

Agriculture has historically been a cornerstone of economic development, serving as a foundation for food security, employment generation, and structural transformation. In the early stages of development, the sector makes a significant contribution to national output and provides capital for industrial growth. Moreover, increased agricultural productivity plays a crucial role in reducing rural poverty, ensuring social stability, and stimulating demand for goods and services across the economy. While the global focus has often shifted toward industrialisation and services, the strategic importance of agriculture remains more evident in developing and transition economies, where rural populations and agri-based livelihoods continue to be dominant.

In Kosovo, as one of the youngest states in Europe, with a significant portion of its population residing in rural areas, agriculture remains a vital component of the national economy. The sector makes a notable contribution to Kosovo's GDP, employment, and rural income, despite facing structural challenges such as land fragmentation, outdated technology, limited access to finance, and vulnerability to climate change. In addition, Kosovo remains a net importer of food and agricultural products, which exposes its economy to external shocks and underscores the need for strengthening domestic agri-food value chains.

At the same time, Kosovo's agricultural sector holds considerable untapped potential. With favourable agro-ecological conditions, a young rural labour force, and a good geographic position close to EU markets, agriculture could become a primary driver of inclusive growth and rural transformation. Kosovo's efforts to integrate with the European Union further reinforce the importance of aligning national agricultural policies with the Common Agricultural Policy framework. Such alignment offers opportunities for more investment, institutional modernisation, and better access to pre-accession funds.

Therefore, examination of the role of agriculture in Kosovo's economic development is an important topic. Strengthening the sector can contribute to broader financial objectives, including poverty reduction, improving the trade balance, job creation, and environmental sustainability. Realising this potential requires comprehensive policy reform, targeted investment, and strong institutional coordination to ensure agriculture becomes a pillar of sustainable and inclusive growth on Kosovo's path toward EU integration.

In the academic context, the role of agriculture in economic development provides a valuable perspective for interdisciplinary research, bridging economics, public policy, environmental studies, and rural sociology. Analysing the sector not only helps form national strategies and development plans but also contributes to broader regional debates about transition, structural transformation, and the green economy. Therefore, a comprehensive investigation of the agricultural sector's evolution, challenges, and perspectives in Kosovo is necessary for both the academic community and policymakers, especially in a region still facing socio-economic vulnerabilities, developmental imbalances, and legacies of conflict.

2. Aim, object, subject and tasks of the study

The study focuses on the agricultural sector of the Republic of Kosovo, examining its significance and evolving role within the broader context of the country's economic development.

The research presents an evaluation of the economic role of agriculture in Kosovo, including a review of the macroeconomic environment, key development indicators, infrastructure constraints, and other critical challenges for sustainable growth. Special attention is given to agricultural production structures, sector-specific policies, and strategic frameworks guiding the development of agriculture in Kosovo.

The aim of this study is to analyse the role of agriculture in Kosovo's sustainable economic development through a comprehensive theoretical and empirical assessment of its structural characteristics, dynamics, and potential for future growth, with a special emphasis on deriving policy-relevant insights to support more effective strategies.

The object of the study is the national economy of Kosovo, analysed through the dynamics of its economic growth and pathways towards sustainable development.

The subject of this study is the impact of agriculture on the sustainable development of Kosovo, analysed through key indicators such as GDP growth, employment, rural livelihoods, trade balance, and alignment with EU policies.

The research focuses on a comprehensive and systematic analysis of the agricultural sector, including its role in the national economy, the developmental and institutional measures applied, and the implications of globalisation on performance and competitiveness.

Additionally, the study extends to an analysis of the EU agro-economic and rural development policies, along with a comparative review of agricultural trends in the Western Balkans and Turkey, providing a regional perspective of Kosovo's agricultural development.

The **key tasks** of the study include:

- To present a theoretical framework on economic growth by reviewing growth theories
- To establish the conceptual and empirical link between agriculture and sustainable economic development
- To define the methodological framework, including research design, data collection, statistical and policy data sources, and the analytical tools applied, especially econometric models used to assess agriculture's impact on economic performance
- To analyse the development of the agricultural sector in the context of the EU Common Agricultural Policy (CAP), highlighting the evolution of policy instruments, reforms, and their relevance for candidate and potential candidate countries, including Kosovo
- To examine development trends and challenges in Western Balkan countries and Turkey, with a focus on productivity, policy harmonisation with the EU, and socio-economic effects of agricultural transformation
- To assess Kosovo's macroeconomic environment, while identifying structural constraints and institutional limits for progress
- To evaluate agricultural structure in Kosovo, including land use and production systems, and review national policy priorities and strategic frameworks for rural development
- To present empirical analysis of agriculture's contribution to economic development, using econometric modelling to evaluate the relationship between agricultural indicators and macroeconomic outcomes
- To identify challenges and limits, and propose policy recommendations for promoting sustainable agricultural development in Kosovo

3. Research Methods

The methodological approach incorporates both qualitative and econometric analysis, relying on secondary data and a comparative literature review. The study integrates theoretical analysis, policy evaluation, and sectoral comparison, focusing on the economic role of agriculture, its structure, and policy implementation in the EU, the Western Balkans, and Kosovo.

For the theoretical foundation, methods such as analysis and synthesis are used to systematise concepts of growth and agricultural development, induction and deduction to build hypotheses and derive conclusions, the historical method to trace the evolution of agriculture and

the transformation of Kosovo, and comparative analysis to evaluate similarities and differences with other Balkan countries and the EU.

At the empirical level, descriptive statistics are applied to study macroeconomic and agricultural indicators, while time series analysis captures the dynamics of GDP, output, and investments. To ensure robustness and avoid spurious regressions, the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests are applied to check the stationarity of the data. Their purpose is to determine the order of integration and decide how variables should be used before conducting regression and cointegration analysis. In the empirical part, a Vector Error Correction Model (VECM) is applied to capture both short-term dynamics and long-term relationships between agricultural output, capital formation, education, and GDP per capita in Kosovo.

In addition, document and content analysis are employed to investigate policy frameworks and institutional arrangements, with a comparative assessment of Western Balkan countries and the EU.

The purpose is to explore the link between agricultural development and economic growth, and to critically assess the alignment and effectiveness of policies in the Western Balkans and Kosovo, especially in the context of EU integration.

II. MAIN STRUCTURE AND CONTENT OF THE DISSERTATION

CHAPTER I: THEORETICAL AND METHODOLOGICAL FRAMEWORK OF ECONOMIC GROWTH AND THE ROLE OF AGRICULTURE

This chapter presents the theoretical, conceptual, and methodological foundation of the study. It begins by reviewing key concepts, theories, and models of economic growth, from classical approaches to modern frameworks such as Solow's neoclassical model and endogenous growth theory, highlighting their relevance for understanding long-term development and the role of agriculture. It also identifies the main drivers of economic growth—capital accumulation, productivity, technology, institutions, and trade, while focusing on agriculture's contribution to GDP, employment, industrialisation, structural transformation, poverty reduction, and food security, particularly in developing and transition economies.

The chapter further explores the connection between agricultural policy and sustainable development, examining the role of technology and innovation, including precision farming, digitalisation, and biotechnology in enhancing efficiency and environmental outcomes. It outlines

the significant challenges that constrain agricultural development, including land fragmentation, low competitiveness, limited investment, environmental pressures, and weak institutions. Finally, it presents the methodological framework of the study, which combines a literature review, policy analysis, and comparative methods.

This survey applies a mixed qualitative approach—descriptive, analytical, and comparative—to explore the relationship between agricultural policy and economic development in the Western Balkans, with a special focus on Kosovo.

The research begins with a **systematic literature review** of classical and modern growth theories, emphasising Solow's neoclassical growth model, which is extended to include agricultural output (Romer, 1990; Barro & Sala-i-Martin, 2004). This provides a framework for assessing agriculture's contribution to productivity and GDP growth.

A **policy analysis** examines the evolution, objectives, and impacts of the EU Common Agricultural Policy, focusing on reforms and the 2023–2027 framework, including direct payments, rural development measures, and "green architecture" (Erjavec et al., 2018; Volk et al., 2012; Matthews, 2022). The study evaluates alignment efforts in Western Balkan countries, especially Kosovo, with EU standards.

A **comparative analysis** assesses structural characteristics, production trends, and policy measures in the region, highlighting common challenges such as fragmented land ownership and low investment (Bogdanov et al., 2023; Bajramović et al., 2023). Key indicators—land use, productivity, and market integration—are compared across countries.

Data sources include policy documents (e.g., Kosovo's Agriculture and Rural Development Strategy 2022–2028), Eurostat, FAO, World Bank, national statistics, and European Commission reports. Descriptive statistics and cross-country comparisons are used to interpret trends in output, budget allocations, and policy effectiveness.

The **literature-based methodological framework** integrates systematic review and narrative synthesis (Tranfield et al., 2003), drawing on development theories (Todaro & Smith, 2015; Johnston & Mellor, 1961), CAP evaluations, and studies on technology, innovation, and sustainability (FAO, 2022; Đokić et al., 2022). The analysis encompasses policy harmonisation (Vaško, 2023; Volk et al., 2012), institutional readiness, subsidy management, and the absorption of EU assistance.

A **comparative and sectoral framework** examines productivity indicators—GVA, TFP, labour productivity, and yield, against policy priorities such as competitiveness, market integration, and environmental sustainability. Kosovo's case study examines the contribution of agriculture to GDP, employment, trade balance, and public spending, utilising data from the MAFRD and the Kosovo Agency of Statistics to assess policy outputs and outcomes.

Despite the various alternatives in the theory presented in this investigation, this study adopts Solow's neoclassical model due to its analytical clarity and dynamic structure, extending it to include agriculture as a growth determinant.

The analysis is extended to include agricultural factors as they affect economic growth. Thus, the production function becomes:

$$Y(t) = K(t)^{\beta}.AGO(t)^{\lambda}.[A(t).L(t)]^{\lambda} \quad (1)$$

Where:

• Y(t) is the average economic growth rate with GDP per capita in constant 2015 US dollars.

• L (t) enters the model multiplicatively, so a (t) L (t) is effective labour proxied with completed secondary education.

• Capital in period t is proxied by gross capital formation

This formulation allows empirical estimation of agriculture's role alongside capital and human capital in Kosovo's economic growth (2009–2020). The simplified empirical model is:

$$PCGDP = f(GCF, EDU, AGO) \quad (2)$$

Where:

• PCGDP = Gross Domestic Product per capita (in constant 2015 US dollar values)

• GCF = Gross Capital Formation (in constant 2015 US dollar values)

• EDU = Percentage of completion of secondary education (%)

• AGO = Agricultural output

Based on the above model, the basic equation for the regression model is written as follows:

$$yt = \beta0 + \beta1x1t + \beta2x2t + \ldots + \beta nxnt + \varepsilon t \quad (3)$$

Where yi is the dependent variable, x1i, x2i,..., xni are the independent variables, β0, β1, β2,..., βn are the coefficients to be estimated, and εt is the error term, which includes all other

factors influencing the dependent variable that are not captured in the analysed independent variables.

Hypothetical Framework

Main Hypothesis:

Ho: The agricultural sector has a significant role in the economic development of the Republic of Kosovo.

Supporting Hypotheses:

H1: The integration of new technologies in agriculture in the Republic of Kosovo improves production and competitiveness of the agricultural sector.

H2: The adoption and harmonisation of agricultural policies with European Union standards will contribute to the improvement of the agricultural sector in the Western Balkan countries, including the Republic of Kosovo.

H3: The introduction of sustainable agricultural practices and policies has a positive effect on the long-term sustainability of the agricultural sector in the Republic of Kosovo

From the perspective of methodology in econometric analysis, it is crucial to choose an approach that corresponds to the nature and specific characteristics of the data series for the analysed relationship in order to obtain economically reasonable insights and results. The findings from the previous section indicate that most variables have a unit root, meaning they are non-stationary at levels. In this case, since most variables become stationary after first differencing, i.e., integrated of the same order, and there is the presence of endogenous variables in the model, the most appropriate econometric technique is Johansen's cointegration technique (Johansen, 1992), which is based on the Maximum Likelihood method and helps separate short-term and long-term dynamics from the data.

Given that most variables are non-stationary at levels but stationary after first differencing (I(1)), and the model includes endogenous variables, the Johansen cointegration method (1992) is used. This multivariate technique:

1. Estimates a Vector Autoregression (VAR) model.
2. Reformulates it as a Vector Error Correction Model (VECM) to capture short- and long-term dynamics
3. Determines the number of cointegration vectors using the Maximum Eigenvalue (λ_max) and Trace (λ_trace) statistics.

4. The Pantula principle is applied to select the appropriate deterministic trend specification. For this study, model 4 (with an intercept in both equations and a restricted trend in the long run) is chosen based on its alignment with long-run growth trends.
5. After establishing the number of cointegration vectors, it is necessary to approach their calculation.

The model that is based on the finding of the existence of a cointegration vector, that is, which contains an error correction mechanism, is known as the Vector Error Correction Model (Harris and Sollis, 2003). The general layout of this model is as follows:

$$\Delta X_t = \alpha\beta^t X_{t-1} + \sum_{i=1}^{k-1} \Gamma_i \, \Delta X_{t-1} + \varphi \, D_t + \varepsilon_t \quad (4)$$

X_t – vector of endogenous variables

Δ- first symbol operator

$\alpha\beta^t X_{t-1}$ – the error correction term

Γi- short-run dynamics

Dt- deterministic components

$$\Gamma_0 \Delta y_t = \alpha[\beta : \eta][y_{t-1} \;] + \Gamma_1 \Delta y_{t-1} + ... + \Gamma_p \Delta y_{t-p} + \mathrm{B}_0 x_1 + ... + \mathrm{B}_q x_q + CD_t + u_t \quad (5)$$

Where $y_t = (y_{1t},..., y_{Kt})$ is a vector of K observable endogenous variables, $x_t = (x_{1t,...,}x_{Mt})$ is a vector of M observable exogenous or non-modeled variables. It is assumed that the residual vector u_t is a K-dimensional unobservable process with zero mean and a positive definite covariance matrix $\mathrm{E}(u_t u_t) = \Sigma_u$. The parameter matrices α and β have dimensions (K × r) and must have rank r. They determine the long-run part of the model, where β contains the cointegrating relations (in our case, the coefficient of central interest in this study), and α\alphaα represents the adjustment coefficients of that relationship when it deviates from equilibrium.

The study acknowledges limitations related to data consistency and availability, especially for Kosovo and some Western Balkan countries, where agricultural data may be incomplete, outdated, or methodologically inconsistent. These limitations are mitigated by triangulating multiple sources and cross-referencing institutional data to ensure accuracy.

CHAPTER II: THE EUROPEAN AND REGIONAL CONTEXT OF AGRICULTURAL DEVELOPMENT

This chapter offers a comprehensive examination of the European Union's agricultural structure and policies, as well as their implications for economic development. It begins with an overview of the EU's agricultural structure, highlighting the diversity of farming systems, production patterns, and regional disparities. The discussion turns to the Common Agricultural Policy, tracing its historical development and successive reforms leading up to the 2023–2027 programming period. The chapter also assesses the impact of CAP reforms on economic growth and agricultural performance across the EU, demonstrating how policy interventions have influenced productivity, income distribution, and rural transformation.

The analysis further explores the specific challenges that CAP implementation poses for new Member States, drawing lessons relevant to candidate countries such as Kosovo. It extends the focus to the agricultural sector and policies in the Western Balkans and Turkey, identifying structural weaknesses, institutional constraints, and policy gaps that influence their EU integration paths. Finally, the chapter examines the opportunities and challenges of harmonising Kosovo's agricultural policies with EU standards. Issues such as institutional capacity, fiscal constraints, rural development needs, and alignment with the European Green Deal are discussed as central to Kosovo's agricultural strategy. Together, these sections establish the regional and policy context in which Kosovo must situate its agricultural reforms and integration efforts.

Challenges for CAP Implementation for new Member states and Lessons for Kosovo

The accession of Bulgaria (2007), Romania (2007), and Croatia (2013) to the European Union marks a significant expansion of the Common Agricultural Policy (CAP) to new member states with distinct agricultural structures, institutional issues, and rural development needs. These countries face multiple challenges in aligning with and implementing CAP provisions, which offer important lessons for candidate countries such as Kosovo.

1. Administrative and Institutional Capacity

A critical barrier for effective CAP implementation in Bulgaria, Romania and Croatia has been the insufficient administrative and institutional capacity. They struggle to establish and accredit paying agencies and management structures for distributing CAP funds. For example, Romania experienced delays in absorbing EU funds due to weak administration and corruption risks (Mantino, 2009). Croatia, despite having prior experience with pre-accession programs, also

faced difficulties with Rural Development Programs (RDPs) due to limited coordination and a lack of expertise (Bartlett et al., 2017).

These challenges highlight the importance of Kosovo to prioritise creating a reliable and transparent institutional framework capable of managing EU funding mechanisms, such as the European Agricultural Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD).

2. Absorption Capacity and Co-Financing

All three countries faced significant challenges in absorbing CAP funds, particularly in Pillar II. The co-financing requirement was burdensome for small-scale farmers and local governments with limited resources. In Bulgaria and Romania, small-scale and subsistence farmers, who comprise the majority, often lacked the resources and technical knowledge necessary to access rural development funds (Csáki & Jámbor, 2013).

Kosovo faces similar structural limitations, characterised by fragmented land and the dominance of small farms. Without targeted support, Kosovo may struggle to meet co-financing rules and ensure fair access to CAP instruments.

3. Structural Problems and Competitiveness

The new member states had agriculture with low productivity, poor infrastructure, and weak markets. Croatia, for example, experienced limited productivity gains after accession due to low investment and weak supply chains (Bogdanov, 2012). Bulgaria and Romania also continue to struggle with competitiveness, despite years of CAP support.

For Kosovo, this means modernisation and investments in infrastructure, technology, and market integration are needed so that its agriculture can benefit from the CAP and compete in the single market (Erjavec & Volk, 2010).

4. Rural Development and Social Disparities

CAP in Bulgaria and Romania had mixed effects on rural development. Some regions benefited from improved infrastructure and job opportunities, but poorer and more remote areas remained behind (Swain, 2013). In Croatia, funds often failed to reach the most marginalised communities due to weak targeting and planning (Bartlett et al., 2017).

Kosovo must therefore ensure that future CAP-like policies prioritise inclusion and regional equity, especially in rural areas affected by poverty, depopulation, and underinvestment.

Implications for Kosovo

The experiences of Bulgaria, Romania and Croatia offer critical insights:

- Institutional preparation is key: Kosovo must build transparent, accountable and efficient institutions to manage CAP, with a strong paying agency and the Ministry of Agriculture.
- Support for small farmers: Because small farms dominate, Kosovo needs targeted finance, advisory services and training to ease access to CAP.
- Investment in competitiveness: Modernisation, agro-processing and infrastructure must be priorities to raise productivity and support rural diversification.
- Inclusive rural development: CAP-like policies must fight inequalities and support disadvantaged rural communities to ensure sustainable growth.

The Agricultural Sector and Policy in the Western Balkans and Turkey

The macroeconomic environment of the Western Balkans and Turkey is marked by transitional economies with varying degrees of stability and growth potential.

Table 1: Sector indicators - gross agricultural output and employment, 2020

Indicator	Period	AL	BA	XK	ME	MK	RS	TR	EU
VAT in agriculture (million EUR)	2010–2012	1,700	871	610	247	705	2,296	51,629	200,765
VAT in agriculture (million EUR)	2017–2019	2,368	985	538	304	899	2,635	42,530	235,425
Index 2017–2019/2010–2012 (%)	-	139.3	113.1	88.1	123.3	127.5	114.8	82.4	117.3
Proportion of VAT from agriculture of total GDP (%)	2010–2012	21.1	8.2	15.5	9.2	11.0	8.1	9.5	1.7
Proportion of VAT from agriculture of total GDP (%)	2017–2019	21.4	6.8	9.9	8.3	9.7	7.4	6.6	1.7
Index 2017–2019/2010–2012 (%)	-	101.5	83.2	63.7	89.8	87.4	91.6	69.6	97.4
Employment in agriculture and forestry (million persons)	2010–2012	508.3	164.3	-	11.7	118.3	492.7	5,265.6	9,821.3
Employment in agriculture and forestry (million persons)	2017–2019	459.1	144.1	-	18.5	116.9	461.7	5,279.1	8,375.4
Index 2017–2019/2010–2012 (%)	-	90.3	87.7	-	157.4	98.8	93.7	100.3	85.3
Proportion of employed in agriculture and forestry of total employment (%)	2010–2012	54.8	19.9	-	5.8	18.4	21.5	22.9	4.4
Proportion of employed in agriculture and forestry of total employment (%)	2017–2019	37.3	17.5	-	7.7	15.3	16.2	18.6	3.9
Index 2017–2019/2010–2012 (%)	-	68.1	87.9	-	132.2	83.3	75.6	81.4	-

: No data available.

Source: WB&TR StatDatabases, Eurostat (2020), CAP context indicators (European Commission, 2020b).

Agriculture remains a vital economic sector, contributing significantly to the country's GDP and employment, particularly in rural areas. However, productivity levels generally lag behind EU averages due to structural inefficiencies, small farm sizes, limited mechanisation, and insufficient access to modern technology.

Agriculture remains a vital economic sector for all countries/territories in the Western Balkans and Turkey. Gross value added (GVA) generated by agriculture, forestry, and fisheries shows significant growth in most countries/territories, except in Kosovo and Turkey, where the value fell by 12% and 18%, respectively, between 2017 and 2019 compared to the period 2010–2012.

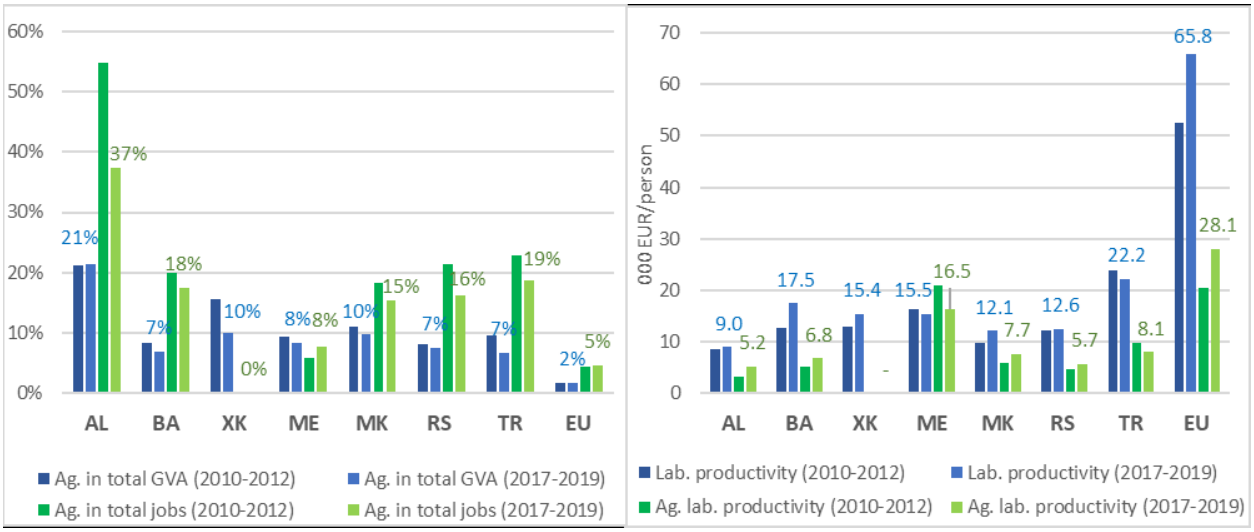
In contrast, as national economies grow, the proportion of value added from agriculture in each country's total GVA declines significantly in the Western Balkans and Turkey. As expected, this tendency is stronger than in the EU. The decrease in GVA from agriculture in the total GVA of the state is the highest in Kosovo and Turkey, followed by North Macedonia, Montenegro and Serbia. Albania is the only country where the proportion of GVA from agriculture in relation to GVA for all activities remains relatively stable.

The significance of the agricultural sector in the national economies of the Western Balkans and Turkey is confirmed by the substantial number of people employed in the industry. While in the EU, only 3.9% of people are engaged in agriculture, in all Western Balkan countries and territories, this proportion is significantly higher, ranging from 7.7% in Montenegro to 37.3% in Albania, although it has decreased over the years in most countries/territories. This decline is most pronounced in Albania (-32%) and Serbia (-24%). Despite ongoing structural changes, the disproportionately high share of the workforce employed in agriculture relative to its contribution to gross domestic product (GDP) indicates lagging productivity growth in agriculture compared to other sectors of the economy.

Economic development in the region is dynamic. For example, labour productivity levels, calculated as total gross value added per employed person, have increased gradually in almost all Western Balkan countries and territories between 2017 and 2019. Exceptions are Montenegro and Turkey, where labour productivity declined in recent years. However, labour productivity levels lag far behind the rapid growth shown in the EU average. The highest values of aggregate labour productivity in the period 2017–2019 were recorded in Turkey (22.2 thousand euros/person), followed by Bosnia and Herzegovina and Montenegro with 17.5 thousand euros/person and 15.5

thousand euros/person, respectively. The lowest total labour productivity was found in Albania (€ 9,000 per person).

Figure 1: Gross value of agriculture versus employment (left) and total labour productivity and agricultural labour (right).



Source: WB&TR StatDatabases, Eurostat (2020), CAP context indicators (European Commission, 2020b).

The same dynamics are observed in labour productivity in agriculture, with a growth trend in all countries/territories, except for Montenegro and Turkey. Indicators range from an agricultural GDP of € 5,200 per person in Albania to € 8,100 per person in Turkey. In comparison, Montenegro stands out with a significantly higher value (agricultural GDP of 16,500 euros per employed person in agriculture), mainly due to the smaller number of people employed in agriculture than other countries/territories.

Rural development is closely tied to agricultural performance, with many communities facing depopulation, aging populations, and inadequate infrastructure. Investment in rural diversification, infrastructure, and services is crucial to improving livelihoods and slowing migration trends.

Agricultural policies in the region vary in scope and effectiveness, but all countries are at different stages of aligning with the EU Common Agricultural Policy. Harmonization is assessed through six principles: Strategic Policy Frameworks, Financial Resources, Direct Producer Support, Competitiveness Measures, Sustainability and Public, Rural Quality of Life and Income.

The successful implementation of the CAP in Kosovo hinges on a complex interplay between its macroeconomic context and the progression of harmonization with EU acquis. The experiences of Bulgaria, Romania, and Croatia demonstrate that macroeconomic stability and institutional preparedness are foundational to the effective absorption of EU agricultural funds and the achievement of policy objectives.

- **Macroeconomic Environment: Opportunities and Constraints**

Kosovo's macroeconomic environment presents both facilitating and constraining factors for CAP alignment. On one hand, macroeconomic stability has been relatively maintained, with low inflation and a steady, though modest, GDP growth rate (Bartlett et al., 2017). However, Kosovo's economy remains vulnerable due to its high unemployment, trade deficit, and dependence on remittances and donor assistance (World Bank, 2023). These structural weaknesses undermine the fiscal space available for co-financing requirements under IPARD and future CAP-related instruments.

Moreover, the informal sector constitutes a significant portion of Kosovo's economy, including in agriculture, where small-scale, subsistence farming dominates production (Volk et al., 2019). This limits the capacity of the government to generate public revenue and of farmers to meet the eligibility criteria for EU-funded programs. Without substantial formalization and financial inclusion of rural producers, the potential for utilizing CAP-type support remains low.

- Harmonization Process: Institutional and Administrative Readiness

Kosovo's harmonization with the CAP requirements remains at an early stage. While the Stabilization and Association Agreement (SAA) outlines commitments toward gradual alignment with the EU's agricultural and rural development policies, practical progress is constrained by weak administrative capacity and fragmented institutional responsibilities (Erjavec & Volk, 2010; SWG & FAO, 2019).

The absence of an EU-accredited Paying Agency and underdeveloped monitoring, evaluation, and control systems impedes effective implementation of structured support mechanisms like IPARD. Furthermore, inter-ministerial coordination is often weak, and the policy cycle suffers from a lack of continuity and stakeholder engagement (Bogdanov et al., 2012). The establishment of a strategic policy framework, based on CAP principles and incorporating measurable objectives and indicators, is a prerequisite for alignment. However, Kosovo still

struggles with the integration of EU horizontal issues such as cross-compliance, agri-environmental measures, and LEADER-type local development.

Table 2: SWOT Analysis – Macroeconomic Environment and Policy Harmonization in Kosovo

Strengths	Weaknesses
- Strategic alignment with EU integration via the Stabilisation and Association Agreement (SAA).	- Fragmented land ownership; most farms <2 ha, limiting economies of scale (Volk et al., 2017).
- Favorable agro-climatic conditions for fruit and vegetable production.	- Limited institutional capacity; absence of an accredited Paying Agency.
- Young and active rural population, offering long-term development potential.	- Low competitiveness; widespread use of outdated technology (Bogdanov et al., 2012).
Opportunities	**Threats**
- Access to EU financial and technical support through IPARD III and pre-accession tools.	- Political instability may delay reforms and EU accession efforts.
- Potential for rural diversification via agri-tourism, organic farming, and value-added chains.	- Brain drain and rural depopulation, especially among young people.
- Digitalization and smart agriculture could improve efficiency and sustainability (Csáki & Jámbor, 2013).	- Increasing vulnerability to climate change with low institutional capacity for mitigation (Bartlett et al., 2017).

Source: Own survey

The fiscal burden of harmonization must also be considered. In countries such as Bulgaria and Romania, co-financing requirements posed major challenges during the pre-accession period, often delaying or distorting policy implementation (Swinnen & Van Herck, 2012). For Kosovo, which faces similar budgetary constraints, there is a risk of underfunding critical institutional reforms and complementary rural development programs.

Implications for CAP Implementation in Kosovo

Drawing from both the macroeconomic context and the harmonization challenges, several key implications can be identified for Kosovo's future CAP implementation:

1. **Institutional development must be prioritized**: Establishing a functional Paying Agency, improving data collection systems (e.g., farm registries and land cadastre), and professionalizing public administration are essential to manage CAP-like schemes effectively (Erjavec et al., 2011).
2. **Need for tailored policy design**: Given the dominance of small farms and the informality in the sector, Kosovo will need to design inclusive support schemes that are accessible and adapted to local realities. Rigid transposition of CAP instruments may fail to address Kosovo's structural deficiencies.

3. **Financial constraints require strategic prioritization**: Limited public resources necessitate a clear prioritization of policy objectives, focusing first on capacity building and pilot rural development programs before full CAP implementation.

4. **Private sector and donor synergy**: Kosovo should leverage private investments, donor support, and diaspora engagement to complement limited government funding for harmonization-related investments.

5. **Risk of policy capture and uneven development**: Without strong governance mechanisms, there is a risk that CAP-type support will disproportionately benefit larger or politically connected actors, exacerbating rural inequality and undermining policy legitimacy (Bartlett et al., 2017).

6. **Environmental sustainability must be integrated early**: Climate resilience and sustainable land management, although not yet fully mainstreamed in Kosovo's policy, must be embedded in pre-accession planning to align with the Green Deal and Farm to Fork strategies central to the new CAP.

CHAPTER III: ECONOMIC AND AGRICULTURAL DEVELOPMENT OF THE REPUBLIC OF KOSOVO: ANALYSIS AND EMPERICAL RESEARCH

This chapter provides an assessment of the economic and agricultural development of the Republic of Kosovo, combining structural analysis with empirical research. It begins by outlining the macroeconomic environment and key structural characteristics of the economy, identifying factors such as trade imbalances, unemployment, and fiscal constraints that shape the country's development trajectory. The discussion then shifts to the role of public infrastructure, highlighting limiting factors and risks that hinder sustainable economic growth. Particular attention is given to the interlinkages between macroeconomic challenges and agricultural development, illustrating how structural vulnerabilities in the economy directly impact the performance and modernisation of the agricultural sector.

The chapter further explores Kosovo's agricultural production, competitiveness, and market orientation, analysing the sector's capacity to integrate into value chains and compete regionally. It reviews financial support measures and strategic policy documents for agriculture and rural development, situating them within the broader EU integration framework. The main challenges facing agricultural development are identified, including land fragmentation, low investment levels, and weak institutional capacity. Finally, the chapter presents empirical research

on the relationship between agriculture and economic growth in Kosovo, offering evidence-based insights into the sector's role as both a stabilising force and a potential driver of long-term economic development.

Kosovo is at an early stage of development and has made some progress in establishing a functioning market economy. The economic recovery in Kosovo significantly slowed down in 2022, as investments were curtailed and household consumption growth accelerated due to high inflation, which spiked to double-digit values due to increased prices of energy, food, and transportation. Russia's war of aggression against Ukraine caused mainly immediate effects through increased domestic prices and uncertainty. Supported by high revenue growth and significant under-implementation of public capital expenditures, the budget was close to balance in 2022, and the public debt ratio fell. However, the investor base for public debt remains narrow. Social benefits remain poorly targeted.

The Assembly adopted a new law on the minimum wage, which decoupled the level of veterans' pensions from the minimum wage. The financial performance of public enterprises poses a fiscal risk.

The current account deficit increased significantly, driven by rising import energy prices. The financial sector remained well-capitalized and stable, and bank lending grew nominally. However, continued supervisory vigilance is required in the context of slowing economic growth, tightening financial conditions, and rapid growth in household mortgage lending. The economy remained resilient during the recent crises. However, the private sector continues to be hindered by long-standing structural challenges such as widespread informal economy, high broader corruption, and generally weak rule of law. The business environment has improved to some extent. Labour market formalization continued, but labour market participation and employment rates, especially among women and young people, remain very low, while unemployment stays high.

Recommendations from 2021 were partially addressed and remain largely valid. To improve the functioning of the market economy, Kosovo should particularly:

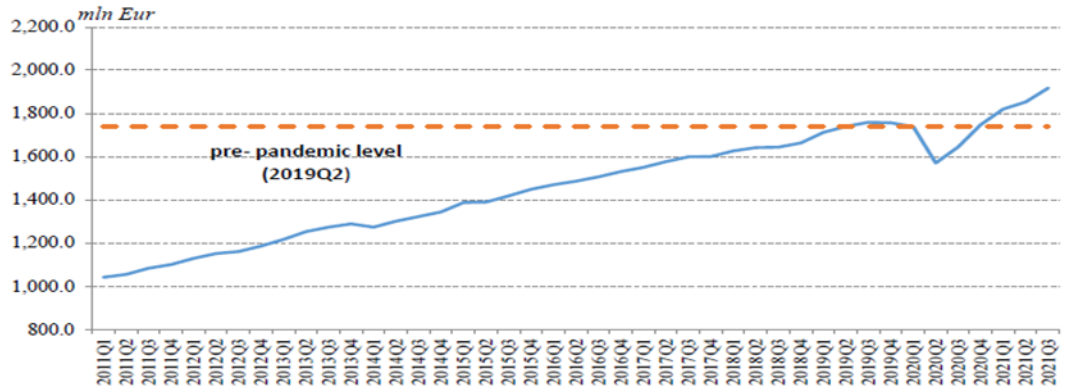
- Continue to mitigate the impact of the energy crisis with well-targeted and time-limited support measures while adhering to the fiscal rule deficit of 2% of GDP;

- Ensure the implementation of the legal ceiling on veterans' pensions and the wage rule and review tax expenditures, quantifying the revenue losses due to all exemptions, privileges, and special regimes;
- Improve the quality of public spending by reforming the social security system and addressing weaknesses in public investment management;
- Implement appropriate measures for the business environment, particularly in combating the informal economy and simplifying and digitizing permits and licenses.

Development indicators reveal the risk and capacity of each country for development and its ability to manage it. In macroeconomic analyses, the approach to development indicators varies.

The World Bank includes around 75 indicators in its analyses, classified into social, economic, financial, and environmental categories. Social indicators encompass demographic trends, education, labor market, social protection, and income distribution. Economic indicators are based on the system of national accounts, balance of payments, and other factors, which improve understanding of financial aspects. Credit availability is important for the financial sector, which influences economic activity.

Figure 2: GDP with Previous Year's Prices - Seasonally Adjusted



Source: World Bank

Although GDP has been a primary indicator, it cannot be the only one because it does not provide enough details and does not consider different aspects of economic development. Therefore, a comprehensive analysis and comparison over a more extended period are necessary.

The structure of income generation and its distribution are critical aspects that determine the economic development of countries. It is important to analyze how income is generated and distributed among citizens.

For sustainable and inclusive development, it is necessary to consider strategies for economic diversification, investments in social programs and education, and measures to improve income distribution. Otherwise, growth can be short-lived and unable to meet the entire population's needs.

The overall economy of Kosovo in 2021 witnessed high growth after 2020, marked by a decline due to the impact of the COVID-19 pandemic. Preliminary estimates from the Kosovo Statistical Agency show that Kosovo's economy grew 10.5% in 2021. The high growth in economic activity is attributed to improved health and supportive financial-fiscal policies.

Agricultural development in Kosovo is closely linked with the country's broader macroeconomic context, which still poses structural and policy challenges that limit the sector's modernisation. Agriculture remains a key pillar of Kosovo's rural economy, employing about 20% of the labour force and contributing nearly 10% of GDP (MAFRD, 2021), but persistent vulnerabilities, including a weak industrial base, high trade deficits, unemployment and narrow fiscal space, limit its growth potential.

One major constraint is Kosovo's chronic trade imbalance, especially in the agri-food sector. KAS (2021) reports that imports exceed exports by almost ten times, showing a serious productivity and competitiveness gap. This is part of a broader issue, as the economy heavily relies on imports and remittances. Growth driven mainly through consumption and diaspora inflows has reduced incentives for productive agricultural investment (Riinvest Institute, 2020). As a result, the sector struggles to join value chains or expand export production, limiting its role in long-term macro stability.

Unemployment and underemployment in rural areas make the situation worse. While agriculture provides a safety net for households, much of the labor is informal and subsistence-based, giving low returns and little upward mobility (GAP Institute, 2019). Weak job creation is tied to limited capital, poor access to credit, and low technology use. The financial sector is underdeveloped and risk-averse, offering little support to small or cooperative farms (World Bank, 2022).

Kosovo's low fiscal capacity also restricts state support for agriculture and rural development. Spending on agriculture is far below EU standards, and alignment with the Common Agricultural Policy (CAP) is still slow and fragmented (European Commission, 2023). This

underinvestment blocks efforts to modernize infrastructure, improve extension services, or promote innovation—all crucial for raising productivity and incomes.

Political and institutional instability adds to macroeconomic uncertainty, discouraging long-term investment. Foreign direct investment in agriculture is negligible, held back by fragmented land, poor markets, and weak rule of law, governance and property rights (EBRD, 2021). These weaknesses reduce confidence of both domestic and international investors.

In conclusion, macroeconomic challenges in Kosovo—trade imbalance, unemployment, low investment, limited fiscal space, and fragile institutions, are tightly linked with agricultural constraints. Tackling them needs a broad policy approach that treats agriculture as a strategic sector. Reforms should focus on macro stability, better rural finance, EU policy alignment, and stronger governance. Only then can agriculture become both a stabilizing force and a driver of inclusive growth in Kosovo.

The Republic of Kosovo encompasses a total area of 10,905.25 square kilometers and is located in Southeastern Europe. In terms of land use, Kosovo's territory is classified into several categories: agricultural land constitutes approximately 38.53% of the total area, forest and forested land account for 44.11%, urban land covers 4.40%, while the remaining 12.96% is designated as other land uses. According to data from the agricultural survey, the cultivated area of agricultural land did not change significantly. In 2016, the total cultivated area was 415,826 hectares, while in 2017 there was a slight increase, continuing to rise in 2018 when the area reached 418,582 hectares. The agricultural land continued to increase in 2019, reaching 420,141 hectares, with a change of 0.4% in 2019 compared to 2018.

The largest share of cultivated land is occupied by meadows and pastures (including common areas), which account for 51.9% of the total agricultural land. It is noted that this category of land did not undergo significant changes during this period. In 2019, this area was 217,931 hectares, representing a decrease of 0.1% compared to 2018.

The meadows and pastures in 2019 are followed by orchards, which account for 44.8% of the area, or 188,365 hectares, including areas for open field vegetables (first crop) and greenhouses (first crop). The land area for greenhouses includes open field vegetables as a first crop (8,319 hectares) and vegetables in greenhouses as a first crop (517 hectares). In 2019, the vegetable area expanded compared to the beginning of the period, resulting in a 6.4% increase over 2018. The data show that, compared to 2018, there was a 10.6% growth in the area with vegetables in

greenhouses as a first crop in 2019. Garden areas were presented in 2016 at 994 hectares, and this number continued to increase in the following years. In 2019, this area was 1,122 hectares, representing an increase of 11.9% compared to 2018.

Table 3. Land Use - Total Agricultural Land Area, Forests, Urban Land, and Others

Year	Total Area	Agricultural Land	Of which:	Fields	Open Field Vegetables (First Crop)	Vegetables in Greenhouses (First Crop)	Gardens	Forests and Wooded Areas	Urban Land	Other
2016	1,090,800	415,826	38.53%	187,223	7,864	457	6,364	218,808	48,000	145,103
2017	1,090,500	416,072	38.53%	186,954	8,033	467	7,135	218,314	48,000	144,540
2018	1,090,500	418,582	38.53%	188,359	7,818	468	8,558	218,152	48,000	142,047
2019	1,090,500	420,141	38.53%	188,365	8,319	518	10,115	217,932	48,000	140,488
2020	1,090,500	420,210	38.53%	188,372	8,435	547	10,029	217,102	48,000	141,291

Source: Statistical Yearbook of the Republic of Kosovo, 2021

Between 2016 and 2019, Kosovo experienced a steady increase in the area dedicated to tree plantations, which expanded from 5,493 hectares in 2016 to 9,244 hectares by 2019. This reflects a notable cumulative growth, with the most significant annual increase recorded in 2019, where the area under tree plantations rose by 20.3% compared to the previous year.

In contrast, the cultivated area of vineyards remained relatively stable during the same period. A modest expansion was recorded in 2019, with a 2.9% increase over 2018, indicating limited dynamics in vineyard development during these years.

In 2021, Kosovo's crop production increased by 11.5% compared to the previous year. This growth was primarily driven by higher production values in key agricultural segments, including cereals, fodder crops, vegetables, and fruits. These categories made a significant contribution to the overall increase in plant-based output.

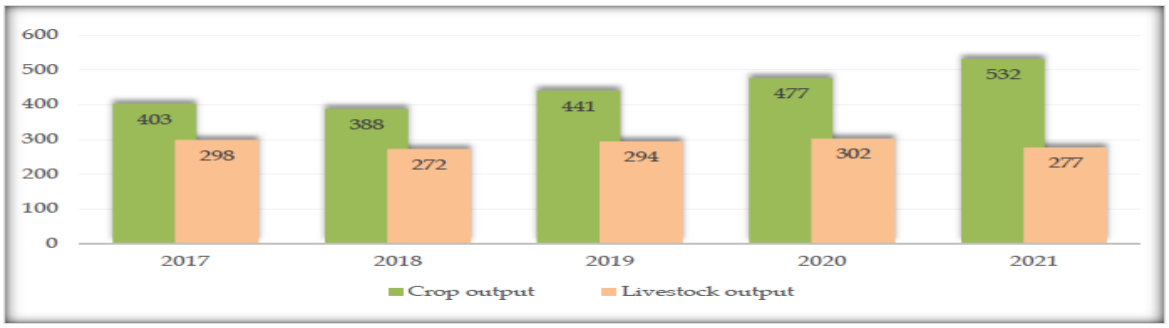
In contrast, the livestock sector experienced a decline of 8.4% in 2021 relative to 2020, indicating a divergent performance between the two main branches of agriculture.

Despite the decline in livestock output, the combined value of crop and livestock production showed a moderate overall growth of 3.8% in 2021 compared to the previous year. This suggests that gains in crop production were sufficient to offset the contraction in animal-based products.

Intermediate consumption was estimated at €339.7 million in 2021. This represents a 7.4% increase relative to 2020, indicating an intensification of production processes and possibly reflecting higher input prices or expanded cultivation.

Data for the period 2017–2021 reveal a consistent upward trend in crop production values, with 2021 marking the peak within the observed timeframe. Conversely, commodity production, which encompasses both crops and livestock, exhibited a more variable pattern, with fluctuations from year to year, a contrast to the more stable upward trajectory of cereal production specifically.

Figure 4: Production of agricultural products in millions of euros, 2017-2021

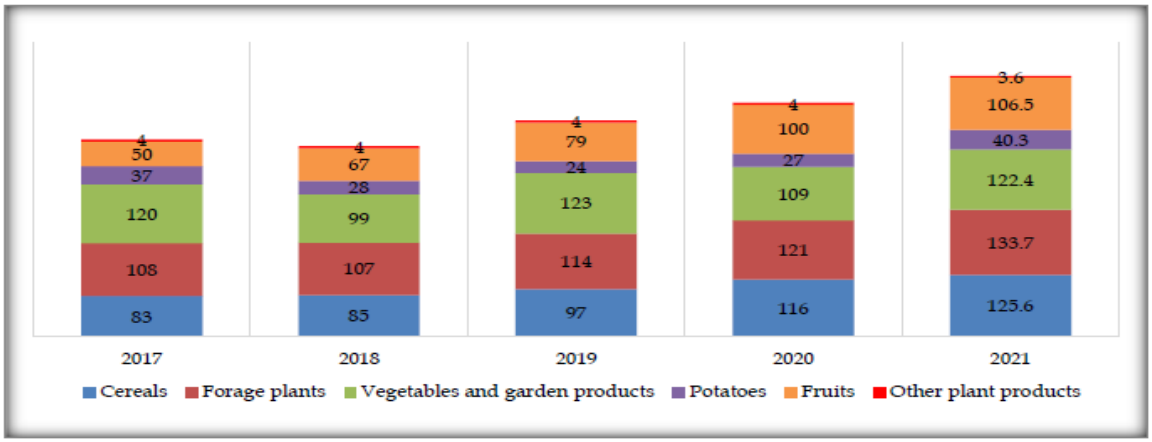


Source: KAS - Economic Accounts for Agriculture '17,'18,'19, '20, '21, prepared by DEAAS-MAFRD

The agricultural sector in Kosovo demonstrated mixed performance indicators in 2021, as reflected in the trends of production, intermediate consumption, and gross value added for the period 2017 to 2021.

In 2021, the total value of agricultural production increased by 3.4% compared to the previous year, indicating a modest expansion in sectoral output. Conversely, intermediate consumption, which includes inputs such as seeds, fertilisers, and fuel—declined by 3.5%, suggesting improved input efficiency or reduced input use.

Figure 5: Production of crops in millions of euros, 2017-2021



Source: KAS - Economic Accounts for Agriculture

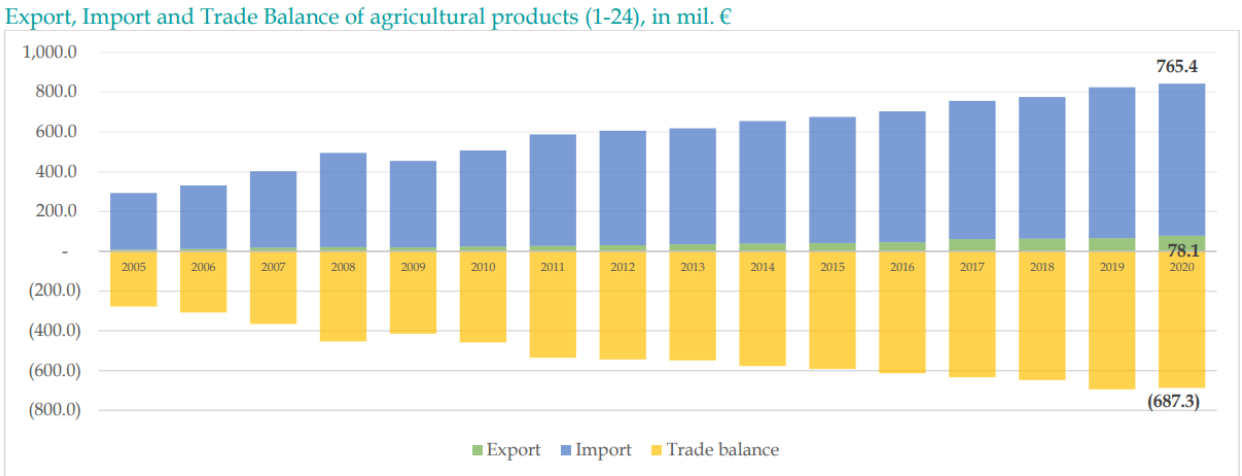
Despite the increase in overall production and decline in intermediate consumption, gross value added (GVA) fell to 453 million euros, representing a 9.4% decrease from the previous year. This decline in GVA may reflect unfavourable price developments, shifts in input-output structure, or a decline in high-value-added activities within the sector.

These dynamics highlight the complexity of agricultural value creation and underscore the importance of examining not only output growth but also cost structures and value distribution within the agricultural economy.

In 2021, entrepreneurial income declined by 13.5% compared to the previous year, indicating a deterioration in profitability. This trend is aligned with the observed decrease in both gross value added, which fell by 9.4%, and net value added, which also recorded a 13.5% decline. These reductions point to mounting cost pressures, lower margins, or declining output efficiency within the agricultural sector during the period.

With a dominance of unmodernized small-scale farming and open competition from EU countries in the region, Kosovo's low agricultural competitiveness is directly reflected in a widening trade deficit, especially with EU countries. However, it should be noted that the negative trade balance is caused by the higher rate of imports than the rate of exports; however, it should be pointed out that some trade channels are being consolidated.

Figure 5: Export, import and trade balance of agricultural products, mil. EUR



Source: KAS, compiled by DEAAS – MAFRD

The data reveal that Kosovo has a heavy dependence on imports, underscoring persistent challenges in achieving food system resilience and trade competitiveness.

Between the two reference periods (2006–2010 and 2011–2015) and the most recent years, Kosovo's agricultural exports increased markedly. From an average of €19.1 million in 2006–2010, exports grew to €34.7 million in 2011–2015, reaching €78.1 million by 2020**.** This represents more than a quadrupling of export value over approximately 15 years. However, despite this positive trend, exports remain relatively narrow in terms of product diversity and are still small in scale compared to imports.

On the import side, the data illustrate Kosovo's substantial dependence on foreign agricultural products. Total imports grew from an average of €419 million in 2006–2010 to €765.4 million in 2020**.** The trade deficit in agro-food products is thus substantial, with imports nearly ten times larger than exports.

Exports of Meat and meat preparation increased from an average of €0.5 million in 2006–2010 to €2.8 million in 2020. This more than five-fold increase suggests a growing, though still modest, market share in meat products. Nevertheless, variations within this category, particularly between 2016 and 2017, could be indicative of sector-specific challenges, such as quality certification, compliance with sanitary standards, or price volatility in regional markets.

Table 4: Export of agricultural products by groups (%)

Category	2006-10	2011-15	2016	2017	2018	2019	2020
Export (mil. €)	19,1	34,7	45,2	61,3	64	65,5	78,1
Meat and meat preparation (CN 02 and CN 16)	0,5	0,8	1,6	1,3	1,4	1,8	2,8
Dairy products; eggs; natural honey (CN 04)	1,4	0,7	1,1	0,8	0,7	1,2	1,1
Remains from the food industry; Fodder food (CN23)	1,6	2,5	2	1,7	1,9	1,1	1,4
Various edible preparations (CN 21)	0,8	0,6	1	0,6	1	0,9	0,8
Drinks, alcohol and vinegar (CN 22)	23,1	34,6	37,6	39,4	43,1	43,8	38
Edible fruits and vegetables (CN 08 and CN 07)	22,6	15,7	19,1	22	22,5	19,8	23,8
Other	50	45	37,7	34,1	29,3	31,4	32,2

Source: KAS

Although Dairy products reached €1.4 million in the earlier period (2006–2010), the value did not show a clear upward trend.

By 2016, it recorded €1.1 million, dipped slightly in subsequent years, and stood at €1.1 million in 2020. This lack of dynamics, rather than growth, may reflect structural challenges in dairy production, such as limited modern processing facilities, stringent EU standards, or issues in scaling production to meet export demand.

The export category of "Drinks, alcohol and vinegar" is particularly notable for its high value relative to others. In 2006–2010, exports in this category already reached €23.1 million, rising in subsequent years to peak values (for example, €43.8 million in 2019) before slightly decreasing to €38.0 million in 2020. The robust performance of this sector underlines its importance to Kosovo's agricultural export portfolio, suggesting that products such as wine, brandy, and other alcoholic beverages, as well as vinegar, have achieved a degree of market penetration, likely enhanced by quality improvements, branding efforts, and favorable regional market dynamics.

Table 5: Import of agricultural products by groups (%)

Category	2006-10	2011-15	2016	2017	2018	2019	2020
Import (mil. €)	419	594	658,7	694,5	712,3	759,4	765,4
Edible fruits and vegetables (CN 08 and CN 07)	7,9	7,6	8,5	8,4	8,3	8,5	8,4
Meat and meat preparation (CN 02 and CN 16)	12,7	13,5	12,6	12,9	12,9	13,7	12,1
Remains from the food industry; Fodder food (CN23)	2,9	2,9	2,9	2,7	2,8	2,1	2,7
Various edible preparations (CN 21)	6,4	7,8	8,9	9,2	9,6	9,8	9,9
Dairy products; eggs; natural honey (CN 04)	7	6,3	6,3	6,5	6,7	6,6	6,6
Preparation from cereals, flour or starch (CN 19)	7,9	8,4	9,2	9,1	9,1	9,1	9,1
Drinks, alcohol and vinegar (CN 22)	11,8	10,2	10,7	10,8	10,8	10,6	10
Other	43,4	43,3	41	40,5	39,9	39,9	41,1

Source: KAS

Fruits and vegetables also demonstrate positive tendencies. With exports at €22.6 million in the 2006–2010 period, the value undergoes slight fluctuations—falling to €15.7 million in the 2011–2015 period, and then recovering steadily to reach €23.8 million in 2020. This pattern may indicate initial challenges or reorientation in product mix or market access, followed by a consolidation and growth phase. Given Kosovo's agro-climatic conditions favorable to horticulture, these trends suggest an area with significant potential for further development.

In summary, the data reveal both growth and divergence among product categories. The rapid increase in exports of drinks and alcoholic products, as well as the recovery in fruits and vegetables exports, contrasts with inconsistent performance in categories like dairy and various edible preparations. These trends highlight the need for targeted policy interventions aimed at addressing structural inefficiencies, improving quality and compliance (especially in meat and dairy sectors), and enhancing product diversification. Such measures could support sustainable

export growth and a more balanced agri-food trade portfolio, contributing to broader economic development goals.

During the analyzed period, Kosovo experienced a notable increase in agricultural exports, rising from €15.7 million to €78.1 million. Despite this growth, the export base remains relatively small and geographically concentrated, primarily within the Western Balkans and selected EU countries.

Albania consistently represents Kosovo's largest agricultural export market, although its share has gradually declined over time. This suggests that while Albania remains a key trading partner due to geographic and cultural proximity, Kosovo is slowly diversifying its export destinations.

Germany has emerged as a growing export market, with its share increasing significantly—from 6.6% in 2010–2014 to 14.9% in 2020. This trend indicates the potential for further integration into the EU market, likely driven by diaspora connections, increasing product quality, and trade facilitation efforts.

On the other hand, exports to Serbia have decreased steadily over the years. This decline may be attributed to political and trade tensions, tariff barriers, and efforts to redirect trade toward the EU and other regional markets. North Macedonia's share has also diminished, albeit more moderately, suggesting stable yet slightly weakened bilateral trade.

On the import side, Kosovo remains highly dependent on agricultural products. Total imports increased from €379.5 million (2005–2009 average) to €765.4 million in 2020, indicating growing demand unmet by domestic production and a widening agri-food trade deficit.

In conclusion, Kosovo's agro-food trade exhibits moderate growth in exports, yet remains characterised by a substantial structural trade deficit. Export growth is concentrated in a few product categories. At the same time, imports are diversified and high in value, indicating low self-sufficiency and competitiveness in key sectors, particularly meat, dairy, and processed foods. Addressing these imbalances will require coordinated investments in value chains, improvements in food safety and quality infrastructure, and strategic support for domestic production that can substitute imports and better integrate into regional and EU markets. Enhancing the competitiveness of the livestock and dairy sectors, along with investing in food processing, could be critical steps toward reducing Kosovo's agro-food trade dependency.

Based on the analysis, it can be concluded that agriculture is a critical sector in Kosovo's economy, accounting for approximately 7% of GDP and employing over 25% of the labour force (Kosovo Agency of Statistics, 2023). While its contribution to exports is relatively modest, the sector holds untapped potential for expanding agri-food exports, particularly in niche markets such as fresh fruits, vegetables, medicinal plants, and organic products. This analysis assesses the export potential of Kosovo's agriculture sector, examining comparative advantages, structural constraints, and strategic opportunities.

Despite proximity to EU markets and preferential trade arrangements (e.g., EU Autonomous Trade Measures and CEFTA), Kosovo has not yet achieved a significant share in regional or European agri-food trade.

Sectoral Export Potential

Fruits and vegetables: Berries (such as raspberries and strawberries) and peppers exhibit strong export potential due to favourable agro-climatic conditions and growing demand in the EU for seasonal, fresh, and organic produce. According to FAO (2021), Kosovo's raspberry production has increased significantly, with export growth targeting Austria and Germany.

Key constraints include:

- Lack of cold storage and post-harvest handling facilities
- Inconsistent quality standards
- Limited branding and traceability systems

Medicinal and Aromatic Plants (MAPs): Kosovo has a long tradition of collecting wild MAPs such as sage, thyme, and chamomile**,** which are in demand in the EU and North American markets. As highlighted by the GIZ (2020), this sector represents a niche with high value per hectare and potential for organic certification; however, overharvesting and weak regulation threaten its sustainability.

Dairy and Meat Products

Kosovo has a comparative advantage in small-scale dairy production, particularly in the production of cow and sheep milk cheeses. However, exports are constrained by:

- Non-compliance with EU hygiene and phytosanitary standards
- Lack of veterinary and traceability systems
- Informality in the value chain (World Bank, 2022)

Opportunities exist for targeting diaspora communities and Balkan speciality food stores in the EU, provided that food safety systems improve.

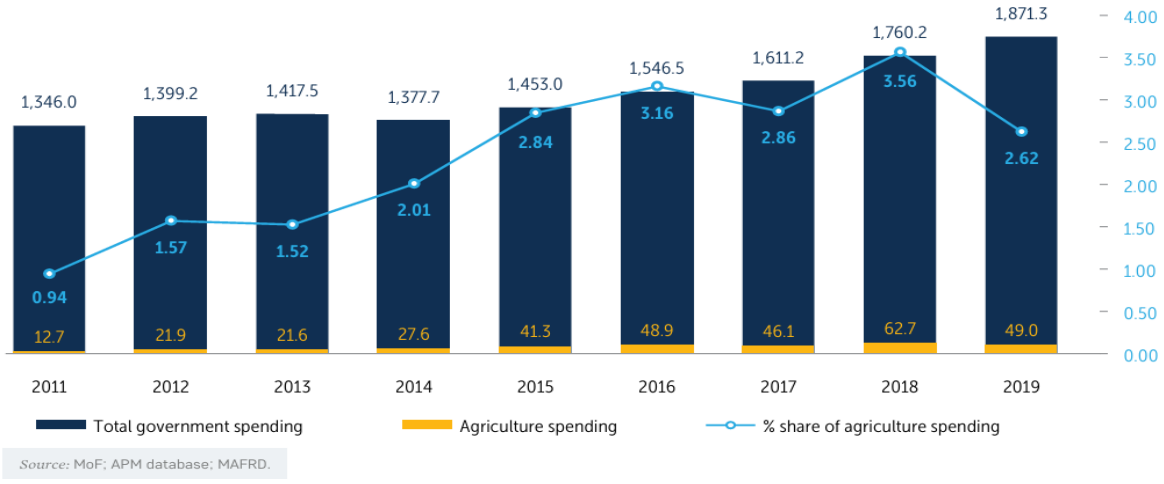
Organic and Ethnic Foods

There is emerging interest in organic production, especially among younger farmers. The EU market for organic food grew by over 13% in 2021, and Kosovo could position itself as a low-cost, high-quality supplier (IFOAM, 2022). Ethnic food preferences among the Kosovar diaspora also present a viable market channel.

Kosovo's agricultural export potential is significant but underutilised. Key export drivers include high-value horticulture, MAPs, dairy, and organic/ethnic foods. Unlocking this potential will require coordinated investments in quality infrastructure, standards compliance, and value chain development, as well as strategic engagement with EU and diaspora markets.

Between 2011 and 2019, public expenditure on agriculture in Kosovo exhibited relatively high levels compared to countries of a similar economic structure. However, it remained low when assessed against the European Union (EU) average.

Figure 6: Total Public and Agriculture Spending, Millions Euros in 2011 Values, 2011–2019



On average, agricultural spending accounted for approximately 2.3% of total government expenditure during this period. Notably, in real terms, public spending on agriculture grew at an average annual rate of 22 per cent, significantly outpacing the growth of overall public expenditures, which increased by only 4.3 per cent annually. This rapid growth in agricultural support was primarily concentrated from 2015 to 2018, characterised by a substantial escalation in funding, followed by a noticeable contraction in 2019.

In the same year, 2019, total public support for agriculture in Kosovo accounted for 8.6 per cent of the sector's gross value added—a figure that is markedly higher than those observed in most other Western Balkan countries, except North Macedonia. When viewed in terms of support intensity—measured as a share of agricultural value added—Kosovo's public agricultural expenditure ranks among the highest in the region and well above the average for countries with comparable economies.

In terms of the composition of agricultural support, direct payments have historically constituted the most significant expenditure category within Kosovo's agricultural and rural development budget. Before the onset of the COVID-19 pandemic, the sector received its highest levels of direct financial support. Between 2014 and 2019, direct payments accounted for an average of 49.7 per cent of total agriculture and rural development expenditures, with their share increasing incrementally from 51 per cent in 2014 to 55 per cent by 2019. These payments extend across all major farming subsectors, with the scope of eligible activities and commodities expanding progressively since 2015 (Ilic et al., 2019). Eligibility is determined by minimum thresholds for farm area or livestock numbers, depending on the subsector.

Support rates vary by crop and production type: cereals receive lower payment rates (€100–150 per hectare), while higher-value crops are incentivised more robustly—vegetables at €300/ha, fruit at €400/ha, and vineyards at €1,000/ha. Livestock farming accounts for a substantial share of direct support, receiving approximately 34 per cent of the total direct payments, followed by cereal producers (32 per cent) and other crop producers (25 per cent). Overall, the direct payments budget expanded rapidly in the years following 2014, with an annual average increase of 20%. The sharpest growth occurred between 2014 and 2016, a period marked by the adoption of new support instruments and increased allocations targeting high-value agricultural products and livestock.

While coupled support schemes are present, their scale remains modest. In 2019, specific measures such as the milk quality premium (6.7 per cent of direct payments), support for seedlings (0.7 per cent), and assistance to the wine sector (1.3 per cent) formed only a minor portion of the overall direct payments framework. Data reveal a consistent trend of over-execution of the direct payments budget. Since 2014, average absorption rates for direct payment funds have exceeded planned allocations, reaching approximately 108 % indicating a consistent pattern of budget overspending in this category.

Kosovo has taken significant steps to align its agricultural policy and administrative structures with the requirements of the European Union.

Institutionally, the Ministry of Agriculture, Forestry and Rural Development (MAFRD) has made progress in developing the necessary administrative bodies for CAP-aligned policy implementation. These include the Managing Authority, Payment Agency (ADA), and a Monitoring Committee, all of which are tasked with overseeing various components of the ARDP (Miftari & Hoxhaj, 2014). Additional institutional developments include the establishment of a Department for Advisory Services and the opening of municipal information centres, which aim to provide technical assistance and disseminate knowledge to farmers (Ilic et al., 2019).

Despite this progress, further efforts are necessary to achieve full compliance with the EU in agriculture and food safety. Weaknesses remain in the areas of monitoring and evaluation, timely payment execution, and processing of support applications (EC, 2019). Although Kosovo has advanced in developing key CAP-compatible systems, such as the Integrated Administration and Control System (IACS), the Farm Accountancy Data Network (FADN), animal identification systems, and the Land Parcel Identification System (LPIS), institutional capacity remains insufficient, particularly in areas such as market organization, farm advisory services, and quality policy formulation.

Legislative progress has been made in harmonizing food safety, feed, and veterinary laws. The operational capacity of the KVFA has improved, but deficiencies persist in inspection systems, infrastructure for animal and plant health monitoring, and the functioning of institutions responsible for phytosanitary oversight.

In terms of support modalities, Kosovo's agricultural policy remains heavily reliant on direct payments tied to area and livestock numbers, with limited use of coupled subsidies such as milk quality premiums and seedling support.

The rural development policy component of the ARDP broadly reflects the 2014–2020 CAP framework. However, the allocation of resources remains toward agri-food competitiveness (78.8 per cent of planned funds) and social inclusion (16.6 per cent), with minimal investment in environmental preservation (1.4 per cent) and knowledge transfer and innovation (3.2 per cent).

Financial support to the agricultural sector also includes risk-sharing instruments such as credit guarantees. MAFRD collaborates with USAID and the European Bank for Reconstruction and Development (EBRD) to facilitate access to finance for farmers. The Kosovo Credit Guarantee

Fund (KCGF) provides guarantees for loans extended to small and medium-sized enterprises in the agribusiness sector (MAFRD, 2019). In 2018, funding allocated for food safety and quality control accounted for 13% of the overall agricultural support.

Concerns persist regarding the effectiveness of current support measures in achieving structural transformation and improving productivity in the sector. Empirical analyses (World Bank, 2017; Kerolli-Mustafa et al., 2017) suggest that area- and headage-based direct payments have little impact on stimulating innovation or production increases and may, in fact, perpetuate inefficiencies by discouraging farm restructuring. Coupled subsidies can also distort resource allocation and reduce competitiveness. Historically, public investment in rural development—particularly in public goods such as infrastructure, research and development, and extension services—has been inadequate. As a result, Kosovo's agricultural policy has made only modest progress toward facilitating modernisation and aligning with the long-term structural and sustainability objectives of the EU.

The Ministry of Agriculture, Forestry, and Rural Development (MAFRD) implements its mandate through several core strategic and programmatic documents, notably the *Agriculture and Rural Development Program (ARDP) for 2014–2020, the Extended Expenditure Framework for 2016–2018, and the Economic Reform Program for 2016–2018*. These documents articulate medium- and long-term objectives for the agricultural sector, specifying intervention measures, monitoring mechanisms, and financial frameworks for implementation. Short-term goals and policy instruments are operationalised through the annually adopted *National Program for Agriculture and Rural Development*, supported by corresponding annual action plans.

The ARDP 2014–2020, an evolution of the prior ARDP 2007–2013, aligns Kosovo's rural development goals with the strategic framework of the European Union's Common Agricultural Policy (CAP). It adopts a programmatic approach that links domestic multiannual planning with EU integration processes, particularly supported through the Instrument for Pre-Accession Assistance (IPA II). This alignment aims to enhance data management capacities within MAFRD and to enable harmonisation with EU agricultural policy standards. Key expected outcomes include enhanced competitiveness of agri-food enterprises, improved access for producers to both EU and regional markets, job creation, income growth, and better access to vocational education and training in the agricultural sector. In addition, the ARDP promotes measures to strengthen climate change adaptation and resilience (MAFRD, 2013).

Table 6: Priorities and measures of the Agriculture and Rural Development Program

Priority	Measures
Improvement of the sustainability and competitiveness of all agricultural products and agro-industry, along with continued approximation to EU standards	M 101 - Investments in physical assets of agricultural households M 103 - Investments in physical assets for processing and marketing of agricultural products
Restoration, protection, and improvement of ecosystems related to agriculture and forestry	M 201 - Measures for agro-environment and organic farming M 202 - Planting and protection of forests
Support for socio-economic inclusion, poverty reduction, and territorially balanced development of rural areas	M 302 - Diversification and development of businesses in agriculture M 303 - Preparation and implementation of Local Strategic Development Strategies – LEADER
Transfer of innovations and knowledge in agriculture, forestry, and rural development, and strengthening of the capacity of public administration in implementing rural development programs	M 401 - Increased training M 402 - Advisory services M 501 - Technical assistance
Other	Irrigation projects

Source: MAFRD (2013). Agriculture and Rural Development Program 2014-2020. The Ministry of Agriculture, Forestry, and Rural Development, Pristina.

The program focuses on four core priority areas derived from IPA guidance. Between 2014 and 2016, MAFRD selectively implemented several measures under these priorities, while preparing institutional and administrative capacities for the future implementation of the remaining measures. The overarching aim of the ARDP is to reduce import dependency and exploit the potential for duty-free access to the EU market, thereby supporting increased national income and farm-level profitability.

Despite progress, structural challenges persist. A limited number of agricultural producers and processors are currently competitive in the EU and global markets. Constraints include small-scale and subsistence farming models, land fragmentation, limited access to finance, low adoption of modern agricultural technologies, and high rural unemployment rates.

In preparation for EU accession, MAFRD has undertaken, with international donor support, structural reforms to align with CAP and IPARD policy requirements. The Ministry established the Department of Advisory Services to provide technical, legal, and economic support to farmers. Municipal-level advisory centres and "information points" were established to enhance farmers' access to guidance and support, aiming to boost productivity and sectoral development. Additionally, MAFRD developed a dedicated online platform to disseminate information, track the implementation of rural development measures, and oversee the disbursement of grants and subsidies in accordance with EU standards.

The Agriculture Development Agency (ADA), acting as the Management Authority, oversees the execution and monitoring of financial support schemes. Farmer registration is administered through a centralised Farmer Registry system, which supports subsidy allocation and payment control mechanisms and serves as the foundation for policy reform and EU harmonisation.

To advance EU integration and sectoral reform, the Government of Kosovo, in collaboration with its development partners, committed to increasing the annual budget for subsidies and grants by 5% per year. This commitment is supported by IPA II (2014–2020) and development projects such as AGRO-USAID (2015–2020). In 2016, the rural development budget totalled €23 million, targeting productivity enhancements and quality improvements across the crop and livestock sectors. Of the 2016 ARDP budget under Pillar I, 50% was allocated to direct support measures, of which 73% was used for direct payments and 27% for accompanying activities. New payment schemes were introduced that year, including support for barley, oats, quail farming, organic agriculture, and aquaculture.

The *National Strategy for Agriculture and Rural Development 2022–2028* delineates Kosovo's vision for transforming its agricultural sector to meet EU and regional market standards. The strategy emphasises increased production efficiency, value chain development, institutional strengthening, and environmentally sustainable resource management. It is informed by SWOT and sectoral analyses and organised around four strategic goals with corresponding specific objectives.

Table 7: Strategic and specific objectives and their problems

Problems and Their Causes	Strategic and Specific Goals
Low added value per annual working unit due to fragmented farms / small-scale farming; - limited integration of local farms / agri-food producers; - old and outdated agricultural equipment and machinery, weak agricultural infrastructure (e.g., irrigation systems, agricultural roads, etc.); expensive inputs and limited access to financial capital; - lack of storage capacities; - underdeveloped advisory system.	Strategic Goal I - Increasing competitiveness of the agri-food sector and improving efficiency and sustainability of farm production. Specific Goal 1.1: Support for achievable farm income and sustainability across the territory. Specific Goal 1.2: Enhancing competitiveness and market orientation. Specific Goal 1.3: Improving the position of farmers in the value chain
High presence of unregistered businesses and workforce; - High migration rate from rural areas (especially among young people); - Lack of financial capital for investments; - Inadequate skilled workforce and weak rural infrastructure (including social infrastructure such as childcare facilities); - Lack of waste management and especially recycling, while illegal dumping of waste is a common practice on roads	Strategic Goal III - Supporting businesses in rural areas and increasing employment and social infrastructure Specific Goal 3.1: Promoting employment, growth, social inclusion, and local development in rural areas, including bio-economy Specific Goal 3.2: Improving agriculture's response to societal demands for food and health, including safe, nutritious, and sustainable food, reducing food waste, and animal welfare Specific Goal

Problems and Their Causes	Strategic and Specific Goals
and watercourses; rural tourism is not developed as agro-tourism; lack of drying, storage, packaging, and labeling facilities in the value chain for medicinal and aromatic plants and non-wood forest products; - Weak marketing of local products.	3.3: Promoting gender equality, including women's participation in agriculture and social inclusion of vulnerable communities and groups
Weak institutional capacity of the Payment Agency in terms of procedures and IT system for control and payments; absence of an ex-post monitoring system for executed projects; deficiencies in the institutional capacity for accreditation of certification and inspection bodies for organic agriculture and lack of legislation and support for producer organizations schemes; - Absence of control and supervision programs for diseases; no link between animal identification and registration systems with direct payments (for future IACS); separate registration of animal movements; building institutional capacity for control and supervision of the market and use of PPP, including imports; - Significant gaps in the preparation of inventories of fish species and alignment with market policies with EU legislation; - Horizontal gap is related to digitization of institutions (including their relationship with the public/farmers) and weak integration of innovations into knowledge transfer networks.	Strategic Goal IV - Comprehensive institutional and sectoral reforms to create efficient public services. Specific Goal 4.1: Comprehensive reorganisation and functionalization of the ADA as an IPARD Agency Specific Goal 4.2: Achieving trust in budget management and implementation for IPARD III program measures Specific Goal 4.3: Digitisation of the sector and knowledge transfer

Source: Own interpretation

Agricultural and economic development- empirical research

The purpose of this section will be to empirically examine and analyse the relationship between the influence of agriculture and several other variables on economic growth in the Republic of Kosovo for the period 2009-2020. A key problem in empirical analysis for economic growth is which variables to include in the model. This is a result of what Brock and Durlauf (2001) call an open-ended theory, meaning that the causal relationship between one variable and economic growth proposed by one theory does not exclude the relationship between another variable and economic growth proposed by another theory. Durlauf and Quah (1999) suggest over 90 variables as potential determinants of economic growth. Since the primary goal of this study is to analyse the influence of agriculture on economic growth, a minimal model for economic growth is specified as a tool to understand this relationship, aiming to illustrate the impact of one variable (the development of the agricultural sector) on economic growth. For this purpose, this study will draw on Aremu's (2014) work to establish a proper framework for this topic. From their work, the most suitable variables for this analysis are conceptualised, namely: Gross Domestic Product per capita (in constant 2015 US dollar values), which will represent a measure of economic growth; Gross Capital Formation (in constant 2015 US dollar values),

Percentage of completion of secondary education (%), and Agricultural output, which will represent independent variables.

Table 8: Integrative characteristics of series

Determinants	Augmented Dickey Fuller		Phillips Peron		Conclusion
	At level	First differentiation	At level	First differentiation	
LOG(PCGDP)	-1.2901	-2.9314**	-1.3140	-3.5391**	I(1)
LOG(GCF)	-1.6937	-2.7654*	-1.6937	-2.9128*	I(1)
LOG(EDU)	-2.4068	-2.8631*	-2.5744	-4.1596**	I(1)
LOG(AGO)	-2.3837	-3.8384**	-2.3809	-6.1228***	I(1)

Source: Own survey

Since time series are used for analysis in the paper, their integrative characteristics should be determined first. It involves examining the stationarity or non-stationarity of the variables. To identify these characteristics of the time series, several tests for stationarity, including the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) tests, are applied in the paper. The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests examine the hypothesis that the time series has a unit root, that is, it is non-stationary. Moreover, to overcome non-stationarity, the time series should be differentiated d times, thus obtaining an integrated series, denoted as I(d), where d is the order of integration. A 10% significance level is used in this paper as a critical value for determining whether the time series is stationary or not.

According to the Pantula principle, the process begins by computing the most restrictive model (1). It proceeds towards the least restrictive (5), with λmax and λtrace tests conducted at each level of s. Then, the first combination of the number of cointegration vectors and the option for deterministic components where the null hypothesis (of λmax and λtrace) is not rejected is chosen. In economic practice, the second, third, and fourth options are most commonly used, as evidenced by Johansen (1992) and Harris and Solis (2003). The second option is used if it is believed that there is no trend in the time series.

The results indicate that the third and fourth options are preferred for analysis in this study, as they exhibit a trend that aligns with the analysis of the long-term relationship between variables.

For determining the optimal option in this study, both the Akaike and Schwarz information criteria are used. In this study, they yield different results. According to the Akaike criterion, the fourth option provides the best results, while according to the Schwarz criterion, the first option is

preferred. Considering the above, for this analysis, the fourth option will be used in all three specifications, as it contains a trend that aligns with the study of the long-term relationship between variables. The results of cointegration tests for all regression equations are summarised in the following table.

Table 9: Pantula principle for testing the number of cointegration vectors for the first regression equation

Number of Cointegration Vectors	Option 1		Option 2		Option 3		Option 4		Option 5	
	λmax	λtrace	λmax	λtrace	λmax	λtrace	λmax	Λtrace	λmax	Λtrace
Null Hypothesis r=0	X	X	X	X	X	X	X	X	X	X
Alternative Hypothesis r<=1	√	√	√	√	√	√	√	√	√	√
√ √ - Null Hypothesis not rejected at 5%; X - Null Hypothesis rejected at 5% significance level										

Source: Own survey

From the econometric results, we can conclude that all selected parameters are statistically significant. Positive parameters in the specification indicate that if they increase by 1%, GDP per capita on average increases by 1.21%, 0.79%, and 0.63%, respectively, all else being equal. These findings underscore the critical importance of certain economic factors in driving GDP per capita growth, highlighting the significant role of these variables in the overall financial framework of the Republic of Kosovo**.**

Table 10: Results of the VECM analysis for all three specifications

Determinants	LOG(PCGDP)
LOG(GCF)	1.21***
LOG(AGO)	0.79***
LOG(EDU)	0.63**
R^2	0,72
H0: The coefficients are jointly insignificant (p-statistic)	0.0000
H0: The residuals have no serial correlation of First-order Serial Correlation Test (p-statistic)	0.8157
H0: Residuals are homoscedastic ARCH – autoregressive conditional heteroscedasticity	0.5134

Source: Own survey

The Vector Error Correction Model (VECM) estimated for the Republic of Kosovo from 2009 to 2020 reveals a robust long-run equilibrium relationship among per-capita GDP (PCGDP), gross capital formation (GCF), agricultural output (AGO), and secondary education completion

(EDU). All three explanatory variables enter the cointegrating vector with positive and highly significant elasticities, indicating that higher investment, agricultural production, and human-capital formation are each associated with sustained increases in GDP per capita.

First, the coefficient on LOG(GCF) of 1.21 (significant at the 1 % level) implies that a 1 % increase in real gross capital formation tends, in the long run, to raise GDP per capita by approximately 1.21 %, ceteris paribus. This elasticity exceeds unity, suggesting not only that capital accumulation is growth-promoting, but also that it has an amplifying effect on output per capita—consistent with endogenous growth theories, in which investment in physical capital generates increasing returns to scale.

Second, the agricultural sector also emerges as a significant driver of growth. The LOG (AGO) coefficient of 0.79 ($p < 0.01$) indicates that a 1 % increase in agricultural output is associated with a 0.79 % increase in GDP per capita in the long run. This sizable elasticity underlines the continued importance of agriculture in Kosovo's economy, perhaps reflecting strong backwards and forward linkages between farm production and other sectors.

Third, human capital, proxied by the secondary education completion rate, contributes positively, with an elasticity of 0.63 ($p < 0.05$). While smaller in magnitude than the capital and agricultural elasticities, this result confirms that improvements in educational attainment bolster productivity and living standards over time.

The joint significance test ($p = 0.0000$) rejects the null hypothesis of insignificance, confirming that these three variables together form a meaningful long-run relationship with GDP per capita. Model diagnostics further support the validity of the specification: the absence of first-order serial correlation in the residuals ($p = 0.8157$) and the failure to reject homoscedasticity (ARCH test, $p = 0.5134$) indicate that the VECM is well-behaved and that inference is reliable.

Although the error-correction coefficients themselves are not reported here, the cointegration tests (using the Pantula principle) selected a specification that includes a deterministic trend, implying that deviations from the long-run equilibrium are systematically corrected over time. In policy terms, these findings suggest that sustained increases in both physical and human capital, along with support for agricultural development, are essential for accelerating per-capita income growth in Kosovo. Moreover, because the elasticities exceed unity for capital and approach unity for agriculture, prioritising investment-friendly reforms alongside sector-specific supports could yield powerful dividends for long-term prosperity.

Based on the obtained results, it is evident that the agricultural sector is of vital importance for the economic development of the Republic of Kosovo. The favourable climatic conditions, characterised by four distinct seasons with moderate winters and long summers, are very suitable for cultivating a wide range of agricultural products. The need to provide sufficient quantities of healthy food within the European Union, as well as globally, where there is a food shortage, indicates that there is adequate demand that needs to be satisfied, or that investment needs to be made in increasing supply. For these purposes, research on the needs of European and global markets is necessary to properly direct Kosovo's agricultural production, especially the planned production of products with comparative advantages (wheat, rice, fruits, wine production, meat, and tobacco).

Agriculture is crucial for providing sufficient quantities of high-quality food, maintaining economic activities, and employment in rural areas. The Republic of Kosovo has numerous potential areas with suitable geographical and climatic conditions, allowing for the production of various agricultural and food products. Agricultural production can be categorised into two main types: conventional and organic. Conventional production remains the most important economic sector, but there is great interest in organic production. Food needs to be of high quality, derived from natural agricultural produce, so organic products are increasingly available in stores and many households.

In summary, by focusing on these strategic areas and initiatives, the Republic of Kosovo can further capitalise on the potential of its agricultural sector, driving economic growth, enhancing rural livelihoods, and contributing to national food security.

CONCLUSIONS AND RECOMMENDATIONS

The study has explored the relationship between agriculture and economic development, with a particular focus on the Republic of Kosovo in the context of EU integration and alignment with the Common Agricultural Policy. The research examined theoretical foundations, empirical evidence, and policy analysis across both national and regional contexts, ultimately aiming to identify key drivers for enhancing the developmental role of agriculture in Kosovo’s broader economic trajectory. Based on the analysis, some conclusions can be outlined:

- The first part of the study provided a comprehensive overview of major economic growth theories—ranging from classical and neoclassical to endogenous growth models. A comparative analysis demonstrated that while neoclassical theories emphasise capital

accumulation and diminishing returns, endogenous growth theories highlight the central roles of innovation, human capital, and institutional quality. In the case of Kosovo, these insights underscore the importance of creating an enabling environment for investment in technology, education, and institutional capacity, as these are essential to sustaining long-term economic growth.

- The research highlights the relevance of agriculture in the early and middle stages of economic development, especially for rural economies like Kosovo. Agriculture plays a significant role in contributing to employment, food security, and rural livelihoods. However, for agriculture to catalyse structural transformation, it must be supported by targeted policy interventions. The study emphasised the importance of sustainable agricultural practices, the adoption of innovation, and integration into broader industrial trends, such as Industry 4.0, which could enhance productivity and competitiveness.
- The EU's Common Agricultural Policy is examined in detail as a cornerstone of rural and agricultural development in Member States. CAP reforms led to increased competitiveness, promoted environmental sustainability, and ensured the viability of rural areas. The analysis revealed that while the CAP has evolved toward greater market orientation and sustainability, implementation challenges remain, especially for newer or acceding Member States. Lessons from EU countries suggest that a coherent strategic framework, adequate funding, and administrative readiness are essential for the successful adoption of policies.
- The study critically examined the status of agricultural development and policy harmonisation in the Western Balkans and Turkey, highlighting regional issues such as fragmented farm structures, underdeveloped rural infrastructure, and limited access to finance.
- Kosovo has made measurable progress in aligning its agricultural policies and institutions with EU standards. Key achievements include the implementation of the ARDP 2014–2020, the establishment of key institutions (the Managing Authority and the Paying Agency), and the development of sector-specific strategies. However, shortcomings persist in the form of limited monitoring and evaluation capacities, insufficient environmental conditionality, and weak market orientation of subsidy schemes.

- The effective implementation of the Common Agricultural Policy in Kosovo is contingent on addressing both macroeconomic vulnerabilities and institutional readiness. Despite strategic alignment through the Stabilisation and Association Agreement and favourable agro-climatic conditions, Kosovo faces significant that hinder CAP harmonisation.
- To progress, Kosovo must prioritise institutional development by establishing an EU-accredited Paying Agency, improving farm and land data systems, and professionalising public administration. Policy design should be context-specific, targeting small-scale and informal producers through inclusive and flexible support schemes that cater to their needs. Given fiscal constraints, strategic investment should focus on capacity building and pilot programs, while leveraging private, donor, and diaspora funding to bridge financing gaps.
- Kosovo must integrate environmental sustainability and climate resilience into its pre-accession planning in line with the EU Green Deal and CAP reform objectives. Ensuring equitable distribution of support and preventing policy capture are essential for maintaining legitimacy and fostering inclusive rural development.
- Kosovo's macroeconomic performance in recent years has been characterised by moderate growth, high remittance inflows, and strong donor support, but also by persistent structural vulnerabilities, such as high unemployment, informality, and a weak export base.
- Broader macroeconomic challenges, including persistent trade deficits, rural unemployment, limited fiscal space, and institutional weaknesses, deeply constrain agricultural development in Kosovo. Despite agriculture's importance to employment and GDP, the sector remains characterised by low productivity, weak integration into value chains, and limited investment—issues rooted in structural economic vulnerabilities and policy fragmentation.
- To unlock agriculture's potential as a driver of inclusive growth, Kosovo must adopt a comprehensive policy approach. This includes addressing macroeconomic imbalances, expanding rural financial services, accelerating alignment with the EU’s Common Agricultural Policy, and strengthening institutional governance. Prioritising agriculture within national development strategies and improving public investment in rural infrastructure, extension services, and innovation are essential steps toward achieving sustainable sectoral transformation and long-term macroeconomic stability.

- Agriculture remains a key economic sector, yet its contribution to GDP has been declining. Nonetheless, its indirect contributions to rural employment, food security, and landscape preservation remain substantial. The study identified several limiting factors to growth, including land fragmentation, low productivity, inadequate research and extension services, and insufficient public investment in rural infrastructure.
- Strong potential exists in Kosovo's agri-food sector, driven by favourable agro-climatic conditions, traditions in farming, increasing government support, and growing consumer demand for local products. These factors represent a solid foundation for competitive and sustainable agricultural development.
- The agro-processing industry shows promise, with some enterprises reaching EU food safety standards. However, overall sector performance is constrained by low productivity, outdated technologies, and insufficient product diversification.
- Human capital remains underutilised, with significant weaknesses in education, training, advisory services, and low levels of youth involvement in agriculture. Although institutional structures exist, a lack of coordination and weak practical implementation limit their impact.
- The absence of strong horizontal and vertical integration, as well as weak producer organisations, hinders the value chain's efficiency and the market orientation of primary producers.
- Empirical evidence showed that Kosovo's agricultural sector has significant potential for improving productivity, competitiveness, and rural livelihoods, provided that institutional reforms, targeted investments, and evidence-based policy adjustments are pursued. Financial instruments, such as the Kosovo Credit Guarantee Fund and donor-supported projects, have begun to fill key gaps; however, further efforts are needed to ensure inclusive and sustainable sectoral development.

Based on the analysis, the following recommendations for the development of agriculture as a factor for economic growth can be highlighted:

- **Improvement in Agri-food Value Chain Competitiveness**

- Support diversification and innovation in agri-food products through subsidies, targeted R&D, and technology transfer programs.

- Upgrade agricultural machinery and infrastructure, focusing on post-harvest facilities, storage, and cold chains to reduce waste and improve product quality.
- Encourage clustering and cooperation among producers, processors, and marketers through strengthened producer organisations and legal incentives.

- **Modernisation of Production and Infrastructure, and support for small farms**

- Promote investment in irrigation, storage, transport, and agro-processing infrastructure to reduce post-harvest losses, increase marketability, and improve productivity.
- Support Small Farms and Cooperatives: Facilitate the formalisation, clustering, and cooperative organisation of small-scale farms to improve access to finance, technology, and markets, thereby enhancing economies of scale.

- **Strengthen Education, Training, and Advisory Services**

- Reorganise and empower the advisory system (DSHKT), ensuring full integration and operational support for municipal advisory centers
- Enhance cooperation between MAFRD, education institutions, and the private sector to identify training needs, set priorities, and improve the quality of extension programs.
- Increase investment in practical, field-based training, including model farms and digital learning tools accessible to young and tech-savvy farmers.

- **Finance, Innovation, and Youth Engagement**

- Facilitate access to credit and insurance schemes, with targeted products for young farmers, women, and smallholders.
- Promote digital agriculture and precision farming by offering grants for ICT equipment, software, and training.
- Establish innovation hubs and incubators for agri-startups and pilot programs that integrate renewable energy and climate-smart practices into agriculture.

- **Policy Coherence and Institutional Strengthening**

- Ensure continuity and coherence in agricultural and rural policies through stable political commitment and stakeholder involvement.
- Introduce performance-based evaluations of advisory services and training programs, using measurable outcomes and regular feedback mechanisms.

- **Advancing Agricultural Policy Reform in Kosovo Aligned with the CAP**

- Use the CAP as a Strategic Policy Blueprint: Regardless of EU accession timelines, adopting CAP-aligned institutional and policy frameworks can lead to long-term benefits, including improved sector performance, governance, and delivery of public goods.
- Foster Inclusive Policy Planning: Before drafting the Strategic Plan, Kosovo should initiate a participatory process to determine the sector's development path.
- Engage the Private Sector and Farmers' Organisations: Successful CAP implementation requires coordination beyond government efforts. Active involvement of the private sector, producer groups, and civil society is essential for designing realistic, inclusive, and effective agricultural policies.

Agriculture plays a vital role in economic development, particularly in transitioning and rural-based economies, such as Kosovo. As a key source of employment, food security, and rural livelihoods, the agricultural sector has the potential to drive inclusive growth and structural transformation. Beyond its direct contribution to GDP, agriculture supports downstream industries, stabilises rural populations, and contributes to the trade balance. Strategic investment in agricultural modernisation, value chain development, and policy alignment with EU standards can significantly enhance productivity, resilience, and competitiveness. In conclusion, a dynamic and well-supported agricultural sector is essential not only for rural prosperity but also for broader national economic development and long-term socio-economic stability.

III. CONTRIBUTION OF THE PHD THESIS

1. Scientific- Theoretical Contributions

1. **Synthesis of Classical, Neoclassical, and Endogenous Growth Perspectives in the Context of Kosovo**- The research systematically bridges classical economic growth theories with modern endogenous growth approaches, providing a comprehensive conceptual framework to study small economies with significant agricultural sectors.
2. **Contextualization of the EU Common Agricultural Policy within the Western Balkan Economic Structure.** By comparing CAP principles and reforms with the agricultural policy environments of Kosovo and its neighbors, the study advances the theoretical understanding of policy harmonisation challenges for EU candidate and potential candidate countries.
3. **Linkage between Macroeconomic Stability and Agricultural Development**. The thesis conceptualises a structural connection between macroeconomic conditions and agricultural sector performance, highlighting agriculture as both a growth driver and a stabilising force during economic volatility.
4. **Multi-Dimensional Framework for Agricultural Competitiveness**. A theoretical framework is proposed that integrates innovation, sustainability, policy alignment, and market orientation into a single model for assessing agricultural competitiveness in transitional economies.

2. Scientific -Practical Contributions

1. **Empirical Evidence on Agriculture's Role in Kosovo's Economic Growth.** By employing the Johansen cointegration technique and Vector Error Correction Models (VECM), the thesis presents econometric evidence on the short-term and long-term effects of agricultural output, capital formation, and human capital on Kosovo's GDP per capita.
2. **Policy Recommendations for Agricultural Modernisation and EU Integration**. The study offers specific, evidence-based recommendations for aligning Kosovo's agricultural policies with the CAP 2023–2027 framework, focusing on strategic planning, competitiveness measures, sustainability, and rural quality of life.
3. **Identification of Structural Gaps in Agricultural Policy Implementation**. Through a comparative analysis with the EU and the Western Balkans, the research identifies key

institutional, financial, and infrastructural weaknesses that must be addressed to enhance sectoral performance.

4. **Framework for Monitoring and Evaluation**. The study proposes a set of measurable indicators to track progress in agricultural competitiveness, sustainability, and policy harmonisation, which can be integrated into Kosovo's Agriculture and Rural Development Strategy.

PUBLICATIONS RELATED TO THE PHD THESIS

1. Bytyçi, B., 2025, Economic challenges of the agricultural sector of Kosovo. The Journal of Bio based Marketing, vol.2, p.94-108, ISSN 2683-0825, **(10p.)**
2. Bytyçi, B., 2025, SWOT analysis on the economic development of Kosovo. The Journal of Bio based Marketing, p.109-116, ISSN 2683-0825, **(10p.)**
3. Bytyçi, B., 2025, Policies, challenges and achieved level of economic development of Kosovo after independence. The Journal of Bio based Marketing, vol. 2, p.63-74, ISSN 2683-0825, **(10p.)**