

## Assessing the Effects of CAP Implementation on Economic Growth in Croatia, Bulgaria and Slovenia

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**ABSTRACT:** This paper analyses the impact of the Common Agricultural Policy (CAP) on economic growth and performance of many economic sectors related to the agricultural sector in Bulgaria, Croatia and Slovenia. Comparing the main economic indicators before and after EU integration, the study identifies both positive and negative trends. The results show that in Bulgaria, economic growth slowed down slightly after the implementation of the CAP, while on the other hand unemployment decreased and agricultural exports and direct payments to this sector increased significantly, reflecting improved support and competitiveness in the agricultural sector. In Croatia, GDP growth strengthened, accompanied by a modest decrease in unemployment and a significant increase in agricultural production and subsidies, which were a result of the work carried out over the years and the long period of membership. Both countries experienced a decrease in the number of farms, but on the other hand increasing their productivity and size, while increasing efficiency in the agricultural sector. Overall, the findings show that CAP integration has contributed to improving agricultural performance and labor market conditions, although its effects on overall economic growth remain mixed as some sectors have experienced growth while others have experienced declines. The impact of the policy appears to be strongest in promoting modernization, investment, and export capacity within agriculture.

**KEYWORDS:** Common Agricultural Policy, economic growth, agriculture, employment, EU integration.

### 1 INTRODUCTION

The enlargement of the European Union to the countries of Central and South-Eastern Europe has brought new challenges and opportunities for the implementation of the Common Agriculture Policy (CAP), especially in economies that have moved from centralized systems to market economies, thus affecting the growth and development of the agricultural sector in most of these member states. In this context, Croatia, Bulgaria and Slovenia represent case studies of particular interest, as these countries have different levels of economic development, different structures of the agricultural sector and different experiences in the process of European integration and the implementation of CAP policies.

The overall economic health of a country is measured by looking at the economic growth and development of that country. Sustainable economic growth is a vital importance to the economy of countries, especially developing countries that are facing challenges of economic and political stability, where special attention is paid to the structural changes of these factors and their impact on economic growth. Countries that lack capital, infrastructure, isolation from other countries, a factor that would affect sustainable economic stability and maintaining low unemployment is the development of the agricultural sector.

The importance of the development of this sector is also highlighted by the Food and Agriculture Organization of the United Nations (FAO), which in its 2021 report acknowledges that, taking into account the latest forecasts, to meet the needs of one-

third of the population growth, where the global population is projected to reach 9.7 billion by 2050, it will be necessary to increase the production of consumer products in agriculture by almost 50% compared to 2012.

According to [1] targeted investments mainly require intensive development through the widespread implementation of innovative projects in this sector such as "Smart Agriculture" and "Digitalization of Agriculture", as well as the intervention of modern methods of state support in this direction.

The aim of this paper is to assess the effects of the implementation of the Common Agricultural Policy on the economic growth of Croatia, Bulgaria and Slovenia, by analyzing the impact of the CAP, the performance of the agricultural sector and macroeconomic growth indicators. Through a comparative and analytical approach, the study aims to identify similarities and differences in the impact of the CAP between these countries over the 20-year period from 2002 to 2022, as well as to provide conclusions that can serve as a basis for future policies, especially for countries aspiring to join the European Union.

## 2 RESEARCH METHODOLOGY

The main objectives of this research define:

- The role of the Common Agricultural Policy in economic growth
- The role of the Common Agricultural Policy in economic development

The research is focused on four questions for conducting statistical analyses:

1. Does the Common Agricultural Policy have an impact on economic growth in Bulgaria, Croatia and Slovenia?
2. Does the Common Agricultural Policy have an impact on the growth of agricultural product production?
3. Does the Common Agricultural Policy have an impact on the growth of the number of farms?
4. In which economic sectors do the implementation of the Common Agricultural Policy have the greatest impact?

Through a literature review, we will be able to analyze research regarding the impact of the implementation of the Common Agricultural Policy on the growth and economic development of developing countries, particularly Bulgaria, Croatia and Slovenia.

The Common Agricultural Policy (CAP), which sets rules for agriculture, environmental and rural development activities, and EU agricultural markets, has always played an important role in the EU budget.

In the paper of [2] who explain the reform ideas of this policy, where the main idea was the reduction of surplus, the replacement of price support with direct payments and the preparation of agricultural trade negotiations in the EU, led by the World Trade Organization (WTO).

Based on [3] the Common Agricultural Policy (CAP) can affect not only directly the agricultural sector but also indirectly the participants of this sector and beyond starting from negative health effects such as the increase in antibiotic-resistant infections, poor health of farm workers and unhealthy diets leading to some non-communicable diseases. Based on this work and public health recommendations, countries should set minimum pesticide standards, reduce or abandon the use of pesticides and sustainably manage water quality in agriculture

Slovenia is a good example of agricultural policy adjustment before accession. Since there are some similarities between the Slovenian and Croatian agricultural sectors, this experience can be valuable for comparison. Based on the work of [4] the economy of these countries before accession was significantly behind the 15 member states at that time, starting from competitiveness, also the agricultural sector was recovering slowly after the transition period from the end of the 20th century which resulted in lost markets, sudden liberalization, decrease in domestic consumption due to real decline during the first years of transition, as well as frequent ideological decisions on agricultural policy, these are some of the reasons that caused the crisis in the agricultural sectors of these countries.

There is a lot of research for the country of Bulgaria to assess the real effects of the implementation of the CAP on farms and its importance in the development of the country, and in particular of farms and agriculture. According to [5] before the country's accession to the EU an attempt was made to assess the potential impact of the CAP on the development of farms where the potential effects of the application of this policy on their income, efficiency and sustainability were assessed.

According to [6] the effect of the CAP on the income of cooperatives, firms, medium and large farms, and farms specializing in agricultural crops is much greater compared to small farms, but the larger and more developed farm, the greater the effect on their development.

But on the other hand, there are also papers that show the negative sides of the implementation of this policy. Based on the [7] subsidies can help stabilize incomes in the short term, they may not encourage farmers to explore alternative sources of income or adopt more resilient agricultural practices. Excessive reliance on subsidies makes farmers vulnerable to future CAP reforms, as policy changes may reduce payments or change priorities.

Also, regardless of the Payment Scheme, farmers receive direct payments or subsidies, the perceived value of land increases, leading to higher land prices. Based on the work of [8] this trend of increasing the value of agricultural land has been particularly pronounced in countries that have recently joined the EU, because the flow of funds and the EU's focus on investing in CAP policy has contributed to a rapid appreciation of agricultural land values.

To explain the impact of the implementation of the Common Agriculture Policy on the growth and economic development of these 3 countries, the paper will use secondary data, where the database will be used from the World Bank, Eurostat, International Monetary Fund, etc. Publications from regulatory authorities and other sources of relevant institutions that provide us with appropriate data in our research field will also be used.

Panel data for the period 2002-22 will be used, in this model there are 15 variables that explain the impact of the implementation of the Common Agricultural Policy (CAP) on the economy of Croatia, Bulgaria and Slovenia, the variables as below:

*Table 1. Description of research variables*

Variables	Abbreviations	Unit of Measurement
Growth Domestic Product	GDP	%
Unemployment	UNE	%
Number of Farms	NF	Numeric
Agriculture Sector in GDP	AS_GDP	% of GDP
Total Crop Production	TCP	Tons
Direct Payments	DP	Thousands
Farm area	FA	Hectare
Agriculture sector revenues	ASR	%
Industry Sector	IS	%
Services Sector	SS	%
Agriculture Sector	AS	Thousands
Export of agricultural products	EAP	Thousands
Imports of agricultural products	IAP	Thousands
Arable land	AL	Hectare
Number of employees in the agriculture sector	NEAS	Numeric

### 3 RESEARCH RESULTS

To ensure that the results of the analysis are as clear and easily interpretable as possible, the data in this paper have been structured and presented in three separate tables, each representing one of the three countries analyzed. The tables contain detailed data that are explained in an analytical and comparative manner, reflecting the main changes between the period before the implementation of the Common Agricultural Policy (CAP) and the period after accession to the European Union.

The division of data according to these two time periods allows for a more accurate assessment of the impact of this policy on the economic growth and development of the respective countries. In particular, the effects of the CAP on the main macroeconomic indicators are analyzed, including economic growth, the development of the agricultural sector and its contribution to the national economy, etc. This comparative approach helps to identify trends, structural changes and concrete results that have resulted from the implementation of this policy in each country included in the study.

*Table 2. Comparison of descriptive statistics before and after integration into the CAP for Slovenia*

Variables	Before CAP (2002 - 2003)		After CAP (2004 - 2022)	
	Mean	Std. Dev.	Mean	Std. Dev.
GDP	3.233	0.386	2.252	3.863
UNE	6.2	0.424	6.547	1.924
NF	40121.5	193.04	41275.26	2368.054
AS_GDP	2.55	0.481	1.903	0.227
TCP	14123000	190918.8	26040053	7941801
DP	503559	30271.24	774262.3	153467.2
FA	505000	1414.214	482759.6	10863.63
ASR	635000	21213.2	901842.1	85686.94
IS	4.55	1.768	2.332	5.603
SS	3.45	0.212	2.526	3.042
AS	-5.6	27.577	1.332	10.266
EAP	144025	13031.98	613652.4	217193.4
IAP	377320	53994.67	890481.1	179339.4
AL	170500	3535.534	181744.6	3232.452
NEAS	100792.5	7336.233	80589.26	5137.794

Table 2 shows the changes before and after Slovenia's integration into the Common Agricultural Policy (CAP). After integration, the data show a decrease in GDP from 3.23% to 2.25%, which reflects a smaller impact of economic growth on the agricultural sector after the transition to the CAP, although this may be related to changes in the economic structure and adaptation challenges. Also, the number of farms (NF) has slightly increased, from 40,121 to 41,275, suggesting a stabilization of the farm sector after integration into the CAP. The share of GDP coming from agriculture (AS GDP) has decreased from 2.55% to 1.90%, which indicates a change in the involvement of the agricultural sector in the economy, reflecting the transition from a more agricultural to a more diversified economy.

Other sector indicators, such as direct payments (DP) and exports of agricultural products (EAP), have experienced a significant increase. Direct payments to farms have increased from 503,559 thousand euros to 774,262 thousand euros, while exports have increased from 144,025 thousand euros to 613,652 thousand euros, showing the benefits of CAP policies in supporting the agricultural sector and increasing competitiveness.

*Table 3. Comparison of descriptive statistics before and after integration into the CAP for Bulgaria*

Variables	Before CAP (2002 – 2006)		After CAP (2007 – 2022)	
	Mean	Std. Dev.	Mean	Std. Dev.
GDP	3.298	4.017	2.486	4.131
UNE	12.381	2.713	9.104	3.915
NF	245503.1	250638.4	186429.8	131261.5
AS_GDP	5.237	2.18	3.781	0.749
TCP	22642375	5102841	48142346	26718113
DP	617422.9	97614.47	1273936	607132.3
FA	1922414	1050535	2881965	1157538
ASR	2116875	452323.2	2328462	547640
IS	2.075	6.02	2.127	5.149
SS	4.094	3.635	2.942	4.208
AS	-1.019	8.074	1.412	12.132
EAP	323674.4	131227.9	521941.5	231208.7
IAP	225067.5	50086.67	360357.3	83010.69
AL	1619219	1143222	2401810	1260752
NEAS	251826.1	34575.42	173005.9	49674.12

Table 3 shows the statistical changes for Bulgaria before and after integration into the Common Agricultural Policy (CAP). After integration, the GDP has decreased from 3.30% to 2.49%, indicating that the economy has experienced lower growth after integration. At the same time, unemployment (UNE) has decreased significantly from 12.38% to 9.10%, which may indicate an improvement in the labor market after CAP support. The change in the number of farms (NF) has decreased significantly, from 245,503 to 186,430, reflecting a consolidation of the agricultural sector and possibly a smaller number of farms, but more specialized and productive.

Other data, such as direct payments (DP) and exports of agricultural products (EAP), have increased significantly after integration. Direct payments have increased from 617,423 thousand euros to 1,273,936 thousand euros, while exports have increased from 323,674 thousand euros to 521,942 thousand euros, showing that integration into the CAP has had a positive impact on financial support for the agricultural sector and has increased the export opportunities of agricultural products. However, the services sector (SS) has experienced a decrease from 4.09% to 2.94%, while the industry sector (IS) has remained relatively stable.

**Table 4. Comparison of descriptive statistics before and after integration into the CAP for Croatia**

Variables	Before CAP (2002 – 2012)		After CAP (2013 – 2022)	
	Mean	Std. Dev.	Mean	Std. Dev.
GDP	1.935	4.178	2.689	5.496
UNE	12.291	2.431	11.22	4.426
NF	83935.64	1058.743	71715.5	5438.223
AS_GDP	3.918	0.407	3.11	0.213
TCP	25209727	3958846	35316900	3184121
DP	657573.9	82146.3	910144.6	242119
FA	1237346	53297.98	1455500	103784.2
ASR	2028182	482220.2	1889000	311607
IS	0.291	6.402	2.86	4.568
SS	2.727	3.268	2.57	5.555
AS	-1.291	9.272	1.79	6.416
EAP	382153.6	114121.8	778819	134152.9
IAP	236926.4	38829.95	313262	72627.02
AL	873772.7	20777.44	846289.9	30383.09
NEAS	235434.1	22843.07	117885.8	26358.31

Table 4 shows the statistical changes for Croatia before and after integration into the Common Agricultural Policy (CAP). GDP has increased from 1.94% before CAP to 2.69% after CAP, however there is a high increase in variance (5.50) after integration, indicating greater variability in economic growth. Unemployment (UNE) has decreased slightly from 12.29% to 11.22%, indicating a possible improvement in the labor market after CAP support. While the number of farms (NF) has decreased significantly from 83,935 to 71,715.

The agricultural sector has improved after integration into the CAP, with an increase in crop production (TCP) from 25,209,727 tons to 35,316,900 tons and an increase in direct payments (DP) from 657,573.90 thousand euros to 910,144.60 thousand euros. This shows that financial support has had a positive impact on increasing production and stabilizing the agricultural sector. However, the services sector (SS) has had a decrease in variance after the CAP, going from 2.73% to 2.57%, while the industry sector (IS) has shown a large increase from 0.29% to 2.86%.

#### 4 CONCLUSION

Through this paper, the impact of the implementation of the Common Agricultural Policy not only on the agricultural sector but also on economic growth and other macroeconomic indicators in Slovenia, Bulgaria and Croatia has been analyzed in detail by comparing the periods before and after the accession and integration of these countries into the European Union. Based on statistical data for a period of 20 years, which is the research period, and with a comparative approach, the research has clearly reflected the structural, economic and sectoral situation and changes that have resulted from the implementation of the CAP policy.

From the results of the research, we can understand that the impact of the CAP policy on economic growth was not uniform or the same in all the countries that were taken into analysis, where in the case of Slovenia, a decrease in the average GDP growth rate after integration is observed, as well as a decrease in the participation of the agricultural sector in GDP. However, this does not mean a weakness of the agricultural sector, but a sectoral economic transformation of the country, in sectors that are more productive or the development of other sectors in the economy was higher compared to the agricultural sector after integration. On the other hand, the increase in direct payments or subsidies, the increase in exports of agricultural products and the increase in investments in the agricultural sector prove that the CAP has contributed to the increase in productivity, competitiveness, and the modernization of the agricultural sector in this country.

As in Slovenia, in Bulgaria, the results show that there is a decrease in economic growth after EU integration and the implementation of the CAP policy, but with a noticeable improvement with the growth of the labor market, which results in a decrease in the unemployment rate. One of the most significant findings is the significant reduction in the number of farms, which indicates a process of consolidation of the agricultural sector, which has led to an increase in the number of larger, more specialized and potentially more productive farms. On the other hand, the significant increase in direct payments and exports of agricultural products shows that the CAP agricultural policy has played a key role in financially supporting the sector and in the integration of Bulgaria into European markets.

Unlike the other two countries included in the research, Croatia presents an increase in the average GDP rate after the CAP integration, although with a higher variance, which indicates greater economic instability. According to the results of the research, there is a decrease in unemployment and an increase in agricultural production, accompanied by a significant increase in direct payments and agricultural exports, which shows that the CAP has had a positive impact on the stabilization and development of the agricultural sector in this country. On the other hand, the reduction in the number of farms and the changes in the sectoral structure show that Croatia has also gone through a deep process of agricultural restructuring.

In conclusion, the impact of the Common Agricultural Policy on economic growth is different from one country to another, which depends on the economic structure, but this policy should not be seen as an instrument for increasing the GDP of a country, but as a mechanism that serves for long-term transformation by modernizing agriculture, increasing competitiveness, improving production standards and strengthening ties with the European market. For countries aspiring to integration into the European Union, the experiences of Slovenia, Croatia and Bulgaria offer valuable lessons on the importance of structural reforms, building institutional capacities and the strategic orientation of agricultural policies towards sustainable economic development.

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