

Research Paper

Development of Rural Areas: Strategies, Challenges and the Role of Agricultural Policy in Achieving Sustainable Rural Development

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ABSTRACT

Agricultural policy plays a vital role in achieving sustainable rural development. However, it requires detailed strategic planning based on regional issues and gaps in the implementation of previous sustainable development plans. This article aims to analyze the state and peculiarities of rural development in Bulgaria, the Czech Republic, and Hungary. Specifically, it examines the importance of agricultural policy strategies in achieving sustainable rural development. The research methodology is based on a comprehensive systematic analysis of the strategic plans of the Common Agricultural Policy Strategies of Bulgaria, the Czech Republic, and Hungary. Also, it includes structural indicators of regional development of the agricultural sector in these countries for 2017-2020. The results demonstrate that the Common Agricultural Policy Strategies of Bulgaria, the Czech Republic, and Hungary are aimed at stimulating sustainable rural development. In Bulgaria, the agricultural policy for achieving sustainable rural development included creating workplaces, diversifying and developing small enterprises, implementing local development strategies, developing social infrastructure, financing inputs and young farmers, and infrastructure projects (e.g., irrigation). The Czech Republic has the following policy priorities at the European level: sustainability, modernization, workplaces, innovation and quality, and diversification. Direct payments and rural development programs were the main financing mechanisms according to specific needs. The following rural development mechanisms were used in Hungary: farmland management contracts, water and land management measures, social inclusion, investment projects, and special subprograms for targeted support of young farmers. Structural indicators of regional development indicate support for the sustainability of the agricultural sector in 2017-2020.

HIGHLIGHTS

- ① Policies and strategies for sustainable rural development in developing countries, such as Bulgaria, the Czech Republic, and Hungary, have a positive impact on the entire economy, emphasizing the need for comprehensive policies to stimulate rural development and harness resources for socio-economic growth.
- ② The European Union's Common Agricultural Policy, implemented through financing mechanisms like the European Structural and Investment Funds, plays a crucial role in supporting rural development by allocating substantial funds, promoting environmental protection, and focusing on measures that contribute to sustainable ecosystem management, climate change adaptation, and the creation of job opportunities in rural areas.

Keywords: Development of rural areas, Common Agricultural Policy, sustainable development, sustainable development strategies, EU agricultural policy, agrarian policy, agribusiness, sustainable development, agricultural land, food safety

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In developing countries, policies and strategies for sustainable rural development have a positive impact on the entire economy (Zhao *et al.* 2021). Rural areas cover a significant part of the country and the available state land fund. They often remain outside the main processes of the state's innovative development. The foregoing requires the development of a comprehensive policy to stimulate the development of rural areas and attract their resources for socio-economic growth. Deprived regions have significant potential for growth, social inclusion, and environmental support. Implementing sustainable development strategies and concepts also requires the involvement of rural resources (Adamowicz & Zwolińska-Ligaj, 2020).

The article aims to analyze the state and peculiarities of rural development in the example of Bulgaria, the Czech Republic, and Hungary. In particular, it focuses on the importance of agricultural policy strategies in achieving sustainable rural development.

Literature Review

In recent years, at the scientific level, there have been several scientific works on the impact of agrarian policy on the development of rural areas, among which are the works of legal scholars and economists (Medvid *et al.* 2019; Pylypenko *et al.* 2022; Korniyenko, *et al.* 2023; Fedchyshyn, Ignatenko, Chyryk & Danilik, 2023). Economic sources emphasize the importance of the development of social responsibility in the agricultural sphere, as it will contribute to the realization of the competitiveness of agricultural products in various markets and will positively affect the development of the component of Ukrainian statehood, in particular social (Korniyenko, 2023). According to Korniyenko (2023), the social responsibility of agribusiness should be reduced not only to solving the problems of the relevant agricultural producers but also to state structures. At the current stage of agribusiness development, the balance of state and business interests must change. If previously only the state took an active part in the development of the agricultural social sector, over time some of the problems were transferred to agribusiness. However, a clear system of correlation of interests in the field of development and support of rural areas has not yet been established (Korniyenko, 2023).

Kurman (2018) offers the author's definition of the category "state agrarian policy" as a legally regulated, stable, purposeful activity of state authorities, which includes a complex of legal, organizational-management, socio-economic, scientific, personnel and other measures aimed at ensuring sustainable development agricultural sector and ensuring food security (Kurman, 2018).

In the scientific literature, special attention is paid to the research of sustainable rural development. It relates to economic, social, and environmental challenges in rural areas in tourism, energy, and maritime industries (Long & Nguyen, 2018; Aceleanu *et al.* 2018; Adamowicz & Zwolińska-Ligaj, 2020; Lindsay *et al.* 2020; Mia *et al.* 2022). The article by Adamowicz & Zwolińska-Ligaj (2020) examines the potential for smart rural development in all regions of Poland. The results of an empirical study of the potential in three areas of Eastern Poland show the relevance of the "smart village" concept in promoting sustainable rural development (Adamowicz & Zwolińska-Ligaj, 2020).

Aceleanu *et al.* (2018) found significant potential for rural development in Romania through the use of renewable energy and the availability of a large amount of renewable resources (sun, wind, or water). As a result, the country has opportunities to reduce the level of internal market dependence on energy imports. Such research contributes to the development of policies and strategies to overcome the challenges of socio-economic development in rural areas and in the country at large.

In the case of local marine fisheries, Lindsay *et al.* (2020) identified an increase in the income of target households due to the implementation of a capital investment policy in this industry. At the same time, the authors identified side effects, such as a reduced ability to achieve the sustainable development goal of preserving the ecology of rural areas due to increased coastal fisheries. Therefore, strategies and policies for sustainable rural development should combine both incentives for agricultural growth and requirements for compliance with existing regulations within this industry. In addition, uneven socio-economic development of rural areas in the country should be considered (Zhao *et al.* 2021). Fan & Li (2022) argue about the importance of rural industrial integration and marketing systems for comprehensive sustainable development. Auty

R.M. & Brown K. (2021) propose an old-fashioned approach to renewable or streaming resources at the micro level in Bangladesh. The authors consider the need to preserve the natural environment while striving to improve low-income residents' well-being. Surówka, Popławski & Fidlerová (2021) propose the concept of a more systematic approach to enhancing technical infrastructure in the context of a strategy for cooperation and sustainable development in rural areas in Poland and Slovakia.

Another noteworthy strategy for China's urbanization is a new type of urbanization strategy aimed at building a positive identity and image of rural residents. The latter were seen as a source of land, capital, raw materials, and workforce. This new type of strategy aimed to overcome the traditional perception of rural areas, thus ensuring equal access to public services for the population of the regions (Li *et al.* 2018; Dvigun *et al.* 2022).

In general, the systematization and generalization of rural development strategies in different countries and regions (Table 1) prove the need

for a differentiated approach to strategy and policy development in achieving sustainable rural development. Digital technologies, ICTs, and digitalization strategies are also crucial in the context of integration, cooperation, and linking rural areas with other regions. The following components of development policy are innovations, science, and education, not only in the traditional sense but also, as in China's case, to create a positive image of rural areas.

Methodology

The study conducts a comprehensive systematic analysis of the strategic plans of the Common Agricultural Policy Strategies of Bulgaria, the Czech Republic, and Hungary and the structural indicators of regional development of the agricultural sector in these countries for 2017-2020:

1. Agricultural output in Bulgaria, the Czech Republic, and Hungary by regions, 2017-2020, EUR million, % 2.

Table 1: Rural development strategies for achieving sustainability

Strategy	Subject to which the strategy is applied	Region and/or country	Description
Cooperation strategy within the framework of cohesion policy	Regional infrastructure	Rural areas of Poland and Slovakia	Financial aid to less developed countries and their regions for their convergence and leveling of regional disproportions on equal terms. Experience and knowledge sharing for decision-making
"The smart growth of rural areas" as part of the smart regional specialization strategy	Management, Life quality, Economy, Society, Natural environment, Mobility	Three regions in Poland: Dolnośląskie, Opolskie, Wielkopolskie	Use of knowledge and innovations based on internal resources and advantages: a combination of traditional and new networks, innovation-based services, digital technologies, ICT, and more effective use of knowledge
Strategy of the country's recovery, strategy of innovative development	Land utilization	China	Use of scientific and educational achievements and innovations in land utilization. Its key components: «specialization,» «integration,» and «digitization»
"The new-type urbanization strategy"	Human capital of rural areas, their identity, and image	China	Changes in the identity of rural immigrants from a «floating population» in cities to urban citizens by providing them with access to public services and opportunities to improve their life quality and well-being. Changes in the image of rural areas and their population
Diversification strategy	Tourism sector	Rural areas of Cyprus	Consideration of values and promotion of different tourism forms in the policy of sustainable tourism development to ensure the use of its potential in the regions, the coexistence of varying tourism forms and their interaction, as well as a balanced impact on sustainable tourism development

Source: Systematized by the authors based on (Adamowicz *et al.* 2020; Surówka *et al.* 2021; Liu, 2018; Fan, 2022; Atun *et al.* 2019).

2. The volume of total intermediate consumption of agricultural products in Bulgaria, the Czech Republic, and Hungary by region, 2017-2020, EUR million, %.
3. The volume of gross value added at basic prices of the agricultural sector in Bulgaria, the Czech Republic, and Hungary by region, 2017-2020, EUR million, %.
4. The volume of business income of the agricultural sector in Bulgaria, the Czech Republic, and Hungary by region, 2017-2020, EUR million, %.
5. The volume of gross fixed capital formation in the agricultural sector in Bulgaria, the Czech Republic, and Hungary by region, 2017-2020, EUR million, %.

RESULTS AND DISCUSSION

The EU's Common Agricultural Policy is aimed at supporting the rural development of Member States through financing and management at the national or regional level within the framework of multi-year programs. In particular, the policy is implemented through the European Structural and Investment Funds (ESIF) financing mechanisms.

In 2015, the European Commission adopted The Bulgarian Rural Development Program (RDP) to ensure the competitiveness and balanced development of the forestry and agri-food sectors. According to the RDP for 2014-2020, EUR 2.9 billion was allocated to finance 3,500 agricultural holdings and 120 forestry enterprises. The RDP allocated investment resources for the development of 4,000 farms and start-up support for 1,630 young farmers to start a business. Measures on 46,000 hectares of land (climate and agro-environmental measures) are planned to be implemented to ensure sustainable ecosystem management, protect the environment, efficient use of natural resources, mitigate and adapt to climate change, and support organic farming.

More than 4,200 workplaces were expected to be created for the socio-economic development of rural areas. For this purpose, the mechanism of diversification and development of small enterprises was used. Moreover, local development strategies were implemented to create an additional 600 workplaces. These measures also include infrastructure development, the main purpose of

which is social development (European Commission, 2023).

On December 7, 2022, the European Commission approved the strategic plan to implement Bulgaria's Common Agricultural Policy for 2023-2027 (Common Agricultural Policy's strategic plan, CAP) (European Commission, 2022). Within the CAP, it is planned to allocate EUR 4.1 billion (USD 4.3 billion) in direct payments to farmers. The European Agricultural Guarantee Fund (EAGF) will support the funding. Direct payments include:

- ◆ Transfers to support farmers' basic incomes.
- ◆ Proper income redistribution.
- ◆ Additional funds for young farmers.

Additional financing conditions are defined as follows: environmental protection obligations, namely support for ecosystem biodiversity, protection of water and land resources, and health protection). According to Bulgaria's CAP, financial resources have also been allocated to support and develop rural areas. These investments will be directed to support material and technical resources and other activities related to production, infrastructure projects (e.g., irrigation), and financing of young farmers. The strategic plan's budget only provides financing for activities with commercial effects: government advisory services, cooperation, and exchange of experience and knowledge (Global Trade Alert, 2023). According to Bachev (2017), state support ensures the growth of economic sustainability of Bulgarian farms through the following instruments:

- ◆ direct payments on a territorial basis;
- ◆ national allowances;
- ◆ modernization of agricultural holdings;
- ◆ green payments and farm support (Bachev, 2017).

The CAP will include measures to monitor and manage agrarian markets. This includes special support for the agri-food sectors (dairy, meat, fruit, and vegetables). However, the specific support form in Bulgaria still needs to be clarified. According to the Regulation (EU) 2021/2115, the measures will be implemented in the form of production aid (defined amounts of costs, reimbursement of eligible costs to beneficiaries), one-time financial grants, and

state loans (financing at a single rate) (European Commission, 2022).

The main share of agricultural production in the Czech Republic is in crop production: the cultivation of grains and oilseeds (grain, potatoes, hops, sugar beets, fruits, vegetables, and grapes). Approximately 78% of the country's population lives in rural areas. Livestock production is mainly focused on cattle, poultry, and pigs (European Commission, 2023b).

Over EUR 8.3 billion was invested in the agricultural sector and rural areas in 2015-2020 as part of the Czech Republic's CAP strategic plan. The political priorities at the European level include sustainability, modernization, jobs, innovation, and quality. The Czech Republic proposed adapting the development plan by combining direct payments and rural development programs to specific needs (European Commission, 2014). The Czech Republic Common Agricultural Policy Plan is aimed at ensuring the sustainability of farming and sustainable competitiveness of the agricultural sector, protection of natural resources and climate, reasonable specialization, diversification, long-term food security, and creation of 1700 workplaces. The plan provides:

- ♦ A redistribution of financial support for small and medium-sized farms.
- ♦ Strengthening organic farming.
- ♦ Improving the life quality of rural areas through investments.

The plan envisages the implementation of support measures for training and consulting, expanding agricultural knowledge, and the Agricultural Knowledge and Innovation System (AKIS) by involving 40,000 beneficiary participants. These activities will include vocational training, information campaigns, and integrating research knowledge to provide innovative solutions to increase agricultural sustainability and productivity. It is planned to allocate EUR 1410.63 million from the EU budget and EUR 2356.16 million from the Czech budget for rural development (European Commission, 2023b). As shown by Šťastná *et al.* (2019), the Czech Ministry of Agriculture's subsidy program to help farmers included visual, practical demonstrations of integrated methods for sustainable agriculture. The final users were

supposed to implement the knowledge gained and strengthen the knowledge transfer system through such practical demonstrations of sustainable farming and soil protection systems. However, in practice, such display activities mainly contribute to technological development without affecting the sustainability of agriculture (Šťastná *et al.* 2019; Karpenko *et al.* 2019).

On August 10, 2015, the European Commission adopted The Rural Development Program (RDP) for Hungary. The RDP defines the priorities of the agricultural sector and rural development. The amount of funding was EUR 4.2 billion of state funds for 2014-2020 (EUR 3.4 billion of EU budget funds, EUR 740 million in national financing). The RDP identifies measures for restoration, ecosystem conservation, promotion of social inclusion, poverty reduction, rural economic development, and risk management in agriculture. The plan envisages the transfer of 538,000 hectares of agricultural land to management contracts to maintain biodiversity and measures to manage water and land resources (Bazaluk *et al.* 2020). The social inclusion measures provide for the provision of services to the population with a higher quality level. Within the RDP, the following projects were implemented:

- ♦ 2,600 investment projects to improve energy efficiency in the agricultural and food sectors.
- ♦ 5,500 investment projects in the processing industry.
- ♦ 4,800 projects to increase the competitiveness of farmers.

Special targeted support subprograms have been proposed for young farmers operating within the short supply chain (3,000 young farmers and 3,900 farms). 3.6% of state spending is allocated to innovation to implement activities under partnership projects within the European Innovation Partnership (European Commission, 2015).

As shown in Table 2, Bulgaria, the Czech Republic, and Hungary did not experience significant changes in agricultural output. In Bulgaria, it averaged EUR 4125 million in 2017-2020. In the Czech Republic - EUR 5,379 million with a slight increase of EUR 527 million, and in Hungary - EUR 8471 million. At the same time, the average share of output remained

Table 2: Agricultural output in Bulgaria, the Czech Republic and Hungary by regions, 2017-2020, EUR million, %

Country: region		2017	2018	2019	2020	Average	Share, %
BG	Bulgaria	4 082,76	4 183,78	4 210,50	4 021,96	4 125	100%
BG3	Severna i Yugoiztochna Bulgaria	3 155,03	3 243,83	3 246,30	3 034,27	3 170	77%
BG31	Severozapaden	740,07	808,52	771,77	875,04	799	19%
BG32	Severen tsentralen	752,77	828,16	850,03	775,64	802	19%
BG33	Severoiztochen	887,69	939,03	886,36	678,97	848	21%
BG34	Yugoiztochen	774,51	668,12	738,15	704,62	721	17%
BG4	Yugozapadna i yuzhna tsentralna Bulgaria	927,73	939,94	964,20	987,69	955	23%
BG41	Yugozapaden	289,27	307,20	295,53	302,87	299	7%
BG42	Yuzhen tsentralen	638,45	632,74	668,67	684,82	656	16%
CZ	Czech Republic	5 085,03	5 304,33	5 495,35	5 632,71	5 379	100%
CZ0	Cesko	5 085,03	5 304,33	5 495,35	5 632,71	5 379	100%
CZ02	Strední Cechy	935,68	948,27	985,92	1 000,69	968	18%
CZ03	Jihozápad	914,04	969,03	1 011,97	1 043,80	985	18%
CZ04	Severozápad	365,33	367,71	384,71	392,58	378	7%
CZ05	Severovýchod	880,62	914,02	932,06	970,70	924	17%
CZ06	Jihovýchod	1 205,03	1 308,18	1 355,84	1 366,12	1 309	24%
CZ07	Strední Morava	551,12	552,22	567,78	592,00	566	11%
CZ08	Moravskoslezsko	233,21	244,90	257,08	266,82	251	5%
HU	Hungary	8 387,20	8 427,85	8 669,15	8 398,47	8 471	100%
HU1	Közép-Magyarország	621,01	601,57	638,17	587,29	612	7%
HU11	Budapest	114,28	98,95	136,68	110,23	115	1%
HU12	Pest	506,72	502,61	501,49	477,06	497	6%
HU2	Dunántúl	3 098,52	3 252,87	3 341,30	3 149,76	3 211	38%
HU21	Közép-Dunántúl	926,86	1 042,83	1 050,86	918,54	985	12%
HU22	Nyugat-Dunántúl	944,99	976,75	1 076,84	1 024,59	1 006	12%
HU23	Dél-Dunántúl	1 226,67	1 233,29	1 213,60	1 206,62	1 220	14%
HU3	Alföld és Észak	4 667,67	4 573,41	4 689,68	4 661,42	4 648	55%
HU31	Észak-Magyarország	693,49	641,81	660,00	666,54	665	8%
HU32	Észak-Alföld	1 915,81	1 845,49	1 907,14	1 960,09	1 907	23%
HU33	Dél-Alföld	2 058,37	2 086,11	2 122,54	2 034,78	2 075	25%

Source: Calculated by the author according to (Eurostat, 2023a).

stable in different regions, indicating that there were no significant positive changes in implementing the Strategic Plans of the Common Agricultural Policy. At the same time, the sustainability of the agricultural sector can be noted. It was one of the goals of the EU's agricultural policy strategies.

As found in the paper by Bachev & Terziev (2017), the environmental sustainability of Bulgarian farms is at a fairly high level. Nevertheless, there are issues with economic integral sustainability due to governance problems, which negatively affect the overall sustainable development of farming in Bulgaria (Bachev & Terziev, 2017).

The average amount of total intermediate consumption of agricultural output was EUR 2362

million in Bulgaria, EUR 3614 million in the Czech Republic, and EUR 4980 million in Hungary. This represented 57%, 67%, and 59% of the average output in 2017-2020. Hence, a larger share of production is directed to the domestic needs of agricultural producers. There were also no changes in the regional distribution of total intermediate consumption in 2017-2020.

The volume of gross value added (GVA) at basic prices of the agricultural sector in Bulgaria, the Czech Republic, and Hungary and its regional distribution remained unchanged. In 2017-2020, the average GVA amounted to EUR 1760 million in Bulgaria, EUR 1766 million in the Czech Republic, with an increase of EUR 260 million, and EUR 3490

Table 3: Total intermediate consumption of agricultural products in Bulgaria, the Czech Republic, and Hungary by regions, 2017-2020, EUR million, %

Country: Region	2017	2018	2019	2020	Average	Share, %
Bulgaria	2 290,38	2 451,27	2 442,69	2 273,55	2 364	100%
Severna i Yugoiztochna Bulgaria	1 839,38	1 968,57	1 974,98	1 697,77	1 870	79%
Severozapaden	317,19	363,25	355,24	373,62	352	15%
Severen tsentralen	520,44	538,22	557,51	413,00	507	21%
Severoiztochen	568,88	606,62	616,69	436,58	557	24%
Yugoiztochen	432,87	460,47	445,54	474,56	453	19%
Yugozapadna i yuzhna tsentralna Bulgaria	451,00	482,71	467,71	575,78	494	21%
Yugozapaden	112,05	107,38	98,06	155,46	118	5%
Yuzhen tsentralen	338,95	375,32	369,65	420,32	376	16%
Czech Republic	3 409,93	3 604,03	3 743,20	3 697,60	3 614	100%
Cesko	3 409,93	3 604,03	3 743,20	3 697,60	3 614	100%
Strední Cechy	628,73	663,73	861,87	664,63	705	20%
Jihozápad	624,06	658,07	640,24	715,13	659	18%
Severozápad	178,81	198,37	253,15	225,69	214	6%
Severovýchod	658,50	701,13	656,57	695,98	678	19%
Jihovýchod	821,34	855,47	802,56	883,99	841	23%
Strední Morava	358,61	364,57	339,27	346,94	352	10%
Moravskoslezsko	139,88	162,69	189,55	165,23	164	5%
Hungary	4 829,27	4 978,12	5 136,24	4 978,07	4 980	100%
Közép-Magyarország	405,39	401,00	460,81	459,02	432	9%
Budapest	96,55	86,69	137,77	107,25	107	2%
Pest	308,84	314,31	323,05	351,77	324	7%
Dunántúl	1 925,69	2 024,73	2 110,67	2 036,31	2 024	41%
Közép-Dunántúl	599,54	643,56	683,56	634,72	640	13%
Nyugat-Dunántúl	614,64	632,97	661,49	654,46	641	13%
Dél-Dunántúl	711,51	748,20	765,62	747,13	743	15%
Alföld és Észak	2 498,19	2 552,39	2 564,76	2 482,73	2 525	51%
Észak-Magyarország	349,50	342,50	348,41	326,90	342	7%
Észak-Alföld	1 000,48	994,83	1 001,86	1 002,90	1 000	20%
Dél-Alföld	1 148,21	1 215,06	1 214,49	1 152,93	1 183	24%

Source: Calculated by the author according to (Eurostat, 2023a).

million in Hungary. The average share of GVA in output was 43%, 33%, and 41%, respectively.

On average, in 2017-2020, the volume of entrepreneurial income in the agricultural sector amounted to EUR 1262 million in Bulgaria, EUR 676 million in the Czech Republic, and EUR 2156 million in Hungary, decreasing in all countries over the four years. The decline in revenues may be due to farmland prices. For example, in the Czech Republic, costs equal to one-third of land prices in Western Europe. Increased rents for farmers have a significant impact on their incomes, given that 80% of farmers lease their land for farming

(Seeman *et al.* 2020). For example, in Bulgaria, the price of agricultural land lease increased by EUR 22 per 1 hectare annually in 2017-2020, in the Czech Republic - by EUR 21 per 1 hectare in 2017-2020, in Hungary - by EUR 25 per 1 hectare in 2017-2020 (Eurostat, 2023b).

It is worth noting the difference between regions in terms of business income. In addition, the regions with the largest output receive the largest share of GVA and income. For example, Severna and Yugoiztochna Bulgaria's share of output was 77%, GVA - 74%, and income - 67%. The leader in terms of structural indicators of agricultural

Table 4: Gross value added at basic prices of the agricultural sector in Bulgaria, the Czech Republic, and Hungary by regions, 2017-2020, EUR million, %

	2017	2018	2019	2020	Average	Share, %
Bulgaria	1 792,38	1 732,50	1 767,81	1 748,41	1 760	100%
Severna i Yugoiztochna Bulgaria	1 315,66	1 275,27	1 271,32	1 334,02	1 299	74%
Severozapaden	422,88	445,27	416,53	487,92	443	25%
Severen tsentralen	232,33	289,93	292,52	405,96	305	17%
Severoiztochen	318,81	332,41	269,67	240,94	290	17%
Yugoiztochen	341,64	207,65	292,61	199,20	260	15%
Yugozapadna i yuzhna tsentralna Bulgaria	476,73	457,23	496,49	414,39	461	26%
Yugozapaden	177,22	199,82	197,47	132,95	177	10%
Yuzhen tsentralen	299,50	257,41	299,01	281,44	284	16%
Czech Republic	1 675,10	1 700,29	1 752,15	1 935,11	1 766	100%
Cesko	1 675,10	1 700,29	1 752,15	1 935,11	1 766	100%
Strední Cechy	306,95	284,54	124,05	336,06	263	15%
Jihozápad	289,98	310,96	371,72	328,67	325	18%
Severozápad	186,52	169,34	131,56	166,88	164	9%
Severovýchod	222,12	212,89	275,49	274,72	246	14%
Jihovýchod	383,69	452,70	553,28	482,13	468	27%
Strední Morava	192,51	187,64	228,51	245,07	213	12%
Moravskoslezsko	93,33	82,22	67,53	101,59	86	5%
Hungary	3 557,92	3 449,73	3 532,91	3 420,40	3 490	100%
Közép-Magyarország	215,61	200,57	177,36	128,27	180	5%
Budapest	17,73	12,27	-1,08	2,97	8	0%
Pest	197,88	188,30	178,44	125,29	172	5%
Dunántúl	1 172,83	1 228,14	1 230,63	1 113,45	1 186	34%
Közép-Dunántúl	327,32	399,28	367,30	283,82	344	10%
Nyugat-Dunántúl	330,35	343,78	415,35	370,13	365	10%
Dél-Dunántúl	515,16	485,09	447,99	459,50	477	14%
Alföld és Észak	2 169,48	2 021,02	2 124,92	2 178,68	2 124	61%
Észak-Magyarország	343,98	299,32	311,59	339,64	324	9%
Észak-Alföld	915,33	850,66	905,28	957,19	907	26%
Dél-Alföld	910,16	871,05	908,05	881,85	893	26%

Source: Calculated by the author according to (Eurostat, 2023a).

Table 5: Agricultural entrepreneurial income in Bulgaria, the Czech Republic, and Hungary by regions, 2017-2020, EUR million, %

	2017	2018	2019	2020	Average	Share, %
Bulgaria	1 311,70	1 237,15	1 266,65	1 234,24	1 262	100%
Severna i Yugoiztochna Bulgaria	810,41	769,67	895,60	889,84	841	67%
Severozapaden	349,96	379,50	248,62	373,77	338	27%
Severen tsentralen	73,89	157,02	231,08	244,38	177	14%
Severoiztochen	102,20	113,82	45,05	96,96	90	7%
Yugoiztochen	284,35	119,33	370,86	174,73	237	19%
Yugozapadna i yuzhna tsentralna Bulgaria	501,29	467,48	371,05	344,40	421	33%
Yugozapaden	183,75	200,47	56,27	54,90	124	10%
Yuzhen tsentralen	317,55	267,01	314,78	289,50	297	24%
Czech Republic	744,64	613,96	625,14	721,75	676	100%

Cesko	744,64	613,96	625,14	721,75	676	100%
Strední Čechy	131,06	85,37	-526,53	103,37	-52	-8%
Jihozápad	164,34	182,85	386,68	152,40	222	33%
Severozápad	206,08	167,69	27,92	99,88	125	19%
Severovýchod	16,53	-21,50	185,49	53,25	58	9%
Jihovýchod	79,80	124,75	453,05	128,62	197	29%
Strední Morava	73,86	32,80	140,58	121,34	92	14%
Moravskoslezsko	72,97	42,01	-42,05	62,90	34	5%
Hungary	2 317,21	2 181,10	2 111,86	2 012,01	2 156	100%
Közép-Magyarország	125,95	115,97	81,54	35,29	90	4%
Budapest	0,20	0,99	-15,37	-9,93	-6	0%
Pest	125,75	114,98	96,91	45,22	96	4%
Dunántúl	698,57	732,12	675,61	564,47	668	31%
Közép-Dunántúl	190,21	249,42	199,82	121,79	190	9%
Nyugat-Dunántúl	183,46	192,48	243,20	199,08	205	9%
Dél-Dunántúl	324,89	290,22	232,60	243,61	273	13%
Alföld és Észak	1 492,68	1 333,01	1 354,71	1 412,25	1 398	65%
Észak-Magyarország	172,13	123,58	119,34	148,46	141	7%
Észak-Alföld	668,81	602,23	625,04	675,90	643	30%
Dél-Alföld	651,74	607,20	610,33	587,89	614	28%

Source: Calculated by the author according to (Eurostat, 2023a).

Table 6: Gross fixed capital formation in the agricultural sector in Bulgaria, the Czech Republic, and Hungary by regions, 2017-2020, EUR million, %

	2017	2018	2019	2020	Average	Share, %
Bulgaria	159,66	381,62	388,24	436,33	341	100%
Severna i Yugoiztochna Bulgaria	112,66	297,45	312,82	323,16	262	77%
Severozapaden	36,93	68,14	69,21	88,29	66	19%
Severen tsentralen	-9,41	82,70	96,79	87,48	64	19%
Severoiztochen	46,34	75,13	69,22	60,02	63	18%
Yugoiztochen	38,81	71,49	77,59	87,37	69	20%
Yugozapadna i yuzhna tsentralna Bulgaria	46,99	84,17	75,42	113,17	80	23%
Yugozapaden	20,34	25,19	19,80	34,35	25	7%
Yuzhen tsentralen	26,65	58,98	55,62	78,82	55	16%
Czech Republic	853,72	886,26	962,80	972,94	919	100%
Cesko	853,72	886,26	962,80	972,94	919	100%
Strední Čechy	136,87	157,28	172,27	158,94	156	17%
Jihozápad	172,08	186,49	202,15	210,33	193	21%
Severozápad	61,75	56,67	61,60	50,56	58	6%
Severovýchod	136,80	130,78	141,40	169,03	145	16%
Jihovýchod	204,22	220,72	239,37	258,04	231	25%
Strední Morava	87,42	88,76	95,97	85,65	89	10%
Moravskoslezsko	54,57	45,56	50,05	40,39	48	5%
Hungary	872,30	1 080,72	1 176,45	1 148,20	1 069	100%
Közép-Magyarország	56,94	65,84	72,43	70,74	66	6%
Budapest	9,50	8,11	10,70	10,76	10	1%
Pest	47,44	57,72	61,73	59,99	57	5%
Dunántúl	355,25	446,39	483,90	468,05	438	41%

Közép-Dunántúl	99,43	128,26	141,30	130,85	125	12%
Nyugat-Dunántúl	120,04	149,23	159,56	157,01	146	14%
Dél-Dunántúl	135,77	168,91	183,04	180,19	167	16%
Alföld és Észak	460,11	568,49	620,12	609,40	565	53%
Észak-Magyarország	101,90	131,35	151,53	150,00	134	13%
Észak-Alföld	174,41	210,49	224,25	223,63	208	19%
Dél-Alföld	183,80	226,66	244,34	235,77	223	21%

Source: Calculated by the author according to (Eurostat, 2023a).

sector development in the Czech Republic is the Jihovýchod region (29% of revenue), and in Hungary - the Dunántúl, Észak-Magyarország, Észak-Alföld, and Dél-Alföld regions.

The volume of gross fixed capital formation in the agricultural sector in Bulgaria, the Czech Republic, and Hungary by regions also remained stable in 2017-2020 (Table 6).

CONCLUSION

The strategies of the Common Agricultural Policy of Bulgaria, the Czech Republic, and Hungary are aimed at stimulating sustainable rural development. In Bulgaria, the agricultural policy for achieving sustainable rural development includes:

- ♦ Creation of workplaces.
- ♦ Diversification and development of small enterprises.
- ♦ Implementation of local development strategies.
- ♦ Development of social infrastructure.
- ♦ Financing of inputs and young farmers.
- ♦ Infrastructure projects (e.g., irrigation).

The Czech Republic has identified the following policy priorities at the European level: sustainability, modernization, workplaces, innovation and quality, and diversification. Direct payments and rural development programs were the main financing mechanisms according to specific needs (Bazaluk *et al.* 2022). The following rural development mechanisms were used in Hungary:

- ♦ Farmland management contracts.
- ♦ Water and land management measures.
- ♦ Social inclusion.
- ♦ Investment projects.
- ♦ Special subprograms for targeted support of young farmers.

Structural indicators of regional development indicate that the agricultural sector will be sustainable in 2017-2020. Further research should focus on changes in the population's life quality and well-being due to the implementation of the Common Agricultural Policy.

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