# FINANCING OF PUBLIC GOODS: EXPERIENCE OF THE EU AND UKRAINE COUNTRIES

### ФІНАНСУВАННЯ СУСПІЛЬНИХ БЛАГ: ДОСВІД КРАЇН ЄС ТА УКРАЇНА

The article studies the financing of public goods: European experience and Ukraine. Analyzed the total public spending in the countries of the European Union in accordance with the main socioeconomic functions (according to the Classification of the Functions of Government – COFOG). The tendencies of structural changes of public spending during recent years are revealed. It is concluded that in the part of expenditures, budget policy focuses not only on the production (provision) of public goods that contribute to accelerating socio-economic development, in particular health care and education, but also to increase their efficiency.

**Key words:** financing, public goods, public spending, European Union.

У статті досліджено фінансування суспільних благ, а саме європейський досвід та Україна. Проаналізовано загальні державні видатки у країнах Європейського Союзу відповідно до основних соціально-економічних функцій (відповідно до Класифікацій функцій уряду — СОГОG). Виявлено тенденції структурних змін державних видатків протягом останніх років. Зроблено висновок, що стосовно видатків бюджетна політика приділяє основну увагу не тільки виробництву

(наданню) суспільних благ, які сприяють прискоренню соціально-економічного розвитку, зокрема охороні здоров'я та освіті, але й підвищенню їх ефективності.

**Ключові слова:** фінансування, суспільні блага, державні видатки, Європейський Союз.

В статье исследовано финансирование общественных благ, а именно европейский опыт и Украина. Проанализированы общие государственные расходы в странах Европейского Союза в соответствии с основными социально-экономическими функциями (в соответствии с Классификацией функций правительства - COFOG). Выявлены тенденции структурных изменений государственных расходов на протяжении последних лет. Сделан вывод, что касательно расходов бюджетная политика уделяет основное внимание не только производству (предоставлению) общественных благ, которые способствую ускорению социально-экономического прогресса, в частности здравоохранению и образованию, но и повышению их эффективности. Ключевые слова: финансирование, обще-

**Ключевые слова:** финансирование, общественные блага, государственные расходы, Европейский Союз.

UDC 33.330.55

Zhuravlova Yu.O.
Candidate of Sciences in Public
Administration,
Doctoral Student
Odessa National Economic University

Formulation of the problem. Financing of public goods is of great importance for the national security of the state. Public spending, in particular, allows the provision of public goods. In Ukraine, recently, there is a problem of inefficient use of funds for the provision of public goods. So, for Ukraine, the experience of the European Union countries in financing public goods becomes relevant.

Analysis of recent research and publications. The features of the fiscal policy of the EU countries in the formation and use of public spending are considered in the writings of J. Buchanan, R. Musgrave [1], S. Blankart [2], A.O. Boyar [3], N.A. Dehtyar, I.M. Boyarko, O.V. Deineka [4; 5], S. Leitner, R. Stehrer [6], E. Ortiz-Ospina, M. Roser [7], G. Dudzevičiūtė, R. Tamošiūnienė [8], J. Correia da Cunha, C. Braz [9].

**Setting objectives.** The purpose of this article is to analyze the trends in the structure of general public spending in the countries of the European Union in accordance with the main socio-economic functions (according to the Classification of the Functions of Government – COFOG).

Presentation of the main research material. One of the main purposes of public spending is to improve the quality of life of the population. Quality of life includes quality of a person, quality of education, quality of culture, quality of environment, quality of social, economic and political organization of society. The quantitative characteristics of the quality of life include such indicators as the degree of

satisfaction of needs, material, energy, labor and financial costs to meet each type from a set of objective needs.

Public spending allows governments to produce and buy goods and services to fulfill their purposes, such as providing public goods. The level of public expenditure, ideally, should be the result of a conscious choice of citizens to provide public goods and services they want to receive at government expense [9].

The analysis of table 1 shows that during 2005–2017 practically all European Union member states show gross national income per capita growth, except for Italy (-0.1%), UK (-0.5%), Cyprus (-1.3%) and Greece (-13.7%). The largest increase is observed in Romania (+53.1%), Latvia (+49.2%), Bulgaria (+48.4%), Lithuania (+47.8%), Slovakia (+47.5%), Estonia (+44.4%).

Analysis of figure 1 shows that among the main functions of the expenditure of government administration in the European Union (EU) in 2016, "social protection" was the most important function of public spending (19.1% of GDP). The following most important functions of public spending in the EU countries were "health" (7.1% of GDP), "general public services" (6.0% of GDP), "education" (4.7% of GDP) and "economic affairs" (4.0% of GDP). Other functions are "defense" (1.3% of GDP), "public order & safety" (1.7% of GDP), "environmental protection" (0.7% of GDP), "housing and community amenities" (0.6% of

## ПРИЧОРНОМОРСЬКІ ЕКОНОМІЧНІ СТУДІЇ

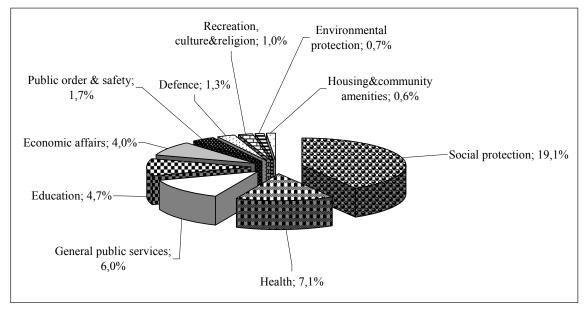


Fig. 1 General government expenditure by function in the EU, % of GDP, 2016

Source: [10]

Gross national income per capita by EU and Ukraine, \$

Table 1

Countries	Years									
	2017	2016	2015	2014	2013	2012	2011	2010	2005	
Luxembourg	76 660	74 490	65 234	78 744	75 935	74 026	80 342	75 777	75 537	
Denmark	56 730	55 115	54 741	64 455	62 872	59 625	62 917	58 915	49 172	
Sweden	54 630	52 849	51 548	60 537	61 574	58 415	60 803	53 533	43 693	
Ireland	52 560	53 304	48 900	46 958	43 443	39 386	41 624	40 186	43 502	
Netherlands	46 310	45 206	44 498	51 947	52 186	50 391	54 377	50 541	41 620	
Austria	45 230	44 834	43 701	51 252	50 273	48 117	51 132	46 989	38 201	
Finland	44 730	43 777	42 729	50 385	49 830	47 672	51 012	46 807	39 036	
Germany	43 660	43 174	42 075	48 686	47 220	44 742	47 601	43 073	35 475	
UK	42 390	39 333	43 148	45 523	41 821	41 129	41 376	38 872	42 587	
Belgium	41 860	40 728	40 333	47 649	47 410	46 020	48 335	45 598	37 158	
France	38 950	37 412	37 057	43 540	43 086	41 332	44 724	41 459	35 452	
France	31 590	31 349	30 627	36 113	35 645	34 652	37 990	35 507	31 550	
Spain	27 520	26 689	25 761	29 499	29 012	28 312	31 172	30 169	25 896	
Malta	24 140	24 036	23 080	25 127	22 913	20 976	21 978	20 120	15 157	
Cyprus	23 680	23 259	23 384	26 392	26 652	28 114	32 226	29 879	23 995	
Slovenia	21 660	20 836	20 144	23 893	22 955	22 292	24 779	23 258	18 099	
Portugal	19 850	19 322	18 615	21 554	21 185	19 952	22 604	21 619	18 386	
Greece	18 960	17 321	17 510	21 184	21 161	21 735	24 507	25 618	21 959	
Estonia	17 750	17 435	16 796	19 361	18 168	16 128	16 054	13 701	9 872	
Czech Republic	17 570	17 228	16 429	18 283	18 586	18 375	19 935	18 170	12 657	
Slovakia	16 810	16 062	15 782	18 220	17 983	16 914	17 489	16 190	8 818	
Lithuania	14 770	14 127	13 581	16 181	15 080	13 687	13 613	11 665	7 712	
Latvia	14 630	13 959	13 478	15 579	14 821	13 519	13 601	11 357	7 436	
Poland	12 680	11 870	12 021	13 710	13 225	12 570	13 301	12 060	7 841	
Hungary	12 570	12 396	11 857	13 599	13 327	12 386	13 496	12 511	10 560	
Croatia	12 110	11 789	11 594	13 264	13 053	12 617	13 867	13 220	10 021	
Romania	9 470	9 216	8 760	9 890	9 365	8 396	9 016	7 975	4 445	
Bulgaria	7 470	7 446	6 854	7 787	7 505	7 274	7 560	6 693	3 853	
Ukraine	2 310	2 078	2 014	2 940	4 161	3 982	3 533	2 969	1 816	

GDP) and "recreation, culture and religion" (1.0% of GDP) – totaled 5.3% GDP of EU-28 in 2016.

Analysis of table 2 shows that Croatia has the highest total expenditure for public goods in the EU member states -27.1% of GDP, Denmark (26.9% of GDP), Belgium (26.5% of GDP), France (26.2% % Of GDP).

In 2016, the cost of compulsory general public services at the level of the EU-28 and Eurozone-19, respectively, was 6.0% and 6.3% of GDP. The costs of "general public services" in Greece (9.2% of GDP), Croatia (8.8% of GDP) and Portugal (8.3% of GDP) were higher than in other countries. The lowest is Bulgaria (2.7% of GDP), Ireland (3.7% of GDP), Lithuania (4.1% of GDP), the Czech Republic (4.2% of GDP), and Estonia (4.2% of GDP).

"Defense" spending for the EU-28 amounted to 1.3% of GDP, while Eurozone-19-1.2% of GDP. The highest level of total defense spending is observed in Estonia (2.4% of GDP), Greece (2.1% of GDP), and UK (2.0% of GDP). Small defense spending is observed in Ireland (0.3% of GDP), Luxembourg (0.4% of GDP), Malta (0.6% of GDP) and Austria (0.6% of GDP).

The level of spending on "public order and safety" in 9 EU countries is equal to or greater than 2% of GDP: Bulgaria (2.4% of GDP), Slovakia (2.3% of GDP), Croatia (2.3% of GDP), Hungary (2.3% of GDP), Greece (2.2% of GDP), Latvia (2.2% of GDP), Poland (2.2% of GDP), Estonia (2.0% of GDP), Romania (2.0 % of GDP). The lowest is in Denmark, Ireland and Luxembourg (1.0% of GDP).

Table 2

Total expenditure on public goods in EU member states, 2016 (% of GDP)

	•						•	•	
Countries	Total	General public services	Defense	Public order and safety	Environmental protection	Housing and communal amenities	Health	Recreation, culture and religion	Education
EU-28	22.2	6.0	1.3	1.7	0.7	0.6	7.1	1.0	4.7
Eurozone-19	23.4	6.3	1.2	1.7	0.8	0.6	7.1	1.1	4.6
Croatia	27.1	8.8	1.2	2.3	0.6	1.1	6.5	1.8	4.8
Denmark	26.9	6.8	1.1	1.0	0.4	0.3	8.6	1.8	6.9
Belgium	26.5	7.9	0.8	1.7	0.8	0.3	7.4	1.2	6.4
France	26.2	6.1	1.8	1.6	0.9	1.1	8.1	1.2	5.4
Finland	25.8	8.1	1.3	1.2	0.2	0.3	7.2	1.4	6.1
Greece	25.3	9.2	2.1	2.2	1.6	0.2	4.9	0.8	4.3
Hungary	25.2	7.9	0.7	2.3	0.5	0.8	4.8	3.3	4.9
Sweden	24.6	6.5	1.2	1.3	0.3	0.7	6.9	1.1	6.6
Italy	24.4	7.9	1.3	1.9	0.9	0.7	7.0	0.8	3.9
Slovenia	23.9	6.6	0.9	1.7	0.6	0.4	6.7	1.4	5.6
Portugal	23.7	8.3	0.9	1.8	0.6	0.5	5.9	0.8	4.9
Austria	23.4	6.6	0.6	1.4	0.4	0.3	8.0	1.2	4.9
Netherlands	23.4	4.3	1.2	1.9	1.4	0.3	7.7	1.3	5.3
Estonia	22.9	4.2	2.4	2.0	0.6	0.4	5.3	2.1	5.9
Cyprus	22.8	7.7	1.5	1.7	0.3	1.5	2.6	0.9	6.6
UK	22.7	4.6	2.0	1.8	0.7	0.7	7.6	0.6	4.7
Slovakia	22.0	5.3	1.0	2.3	0.7	0.5	7.4	1.0	3.8
Germany	21.8	5.8	1.0	1.6	0.6	0.4	7.2	1.0	4.2
Malta	21.5	6.4	0.6	1.2	1.0	0.3	5.6	1.0	5.4
Spain	21.4	6.1	1.0	1.9	0.8	0.5	6.0	1.1	4.0
Czech Republic	21.1	4.2	0.7	1.7	0.7	0.6	7.4	1.3	4.5
Latvia	20.2	4.4	1.6	2.2	0.5	0.9	3.7	1.4	5.5
Poland	20.1	4.7	1.6	2.2	0.4	0.6	4.5	1.1	5.0
Lithuania	20.1	4.1	1.6	1.5	0.5	0.4	5.8	1.0	5.2
Luxembourg	18.3	4.7	0.4	1.0	0.9	0.5	4.8	1.2	4.8
Bulgaria	18.1	2.7	1.1	2.4	0.6	1.9	5.0	1.0	3.4
Romania	17.7	4.4	0.9	2.0	0.6	1.2	4.0	0.9	3.7
Ireland	14.8	3.7	0.3	1.0	0.3	0.5	5.2	0.5	3.3

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In 2016, in the EU-28, the total "environmental protection" expenditures amounted to 0.7% of GDP. The largest expenditures are observed in Greece (1.6% of GDP), the Netherlands (1.4% of GDP), and Malta (1.0% of GDP). The smallest are Finland (0.2% of GDP), Ireland (0.3% of GDP) and Sweden (0.3% of GDP).

In 2016, in the EU-28 and Eurozone-19, the total cost of "housing and community amenities" amounted to 0.6% of GDP. The largest expenditures are Bulgaria (1.9% of GDP), Cyprus (1.5% of GDP), Romania (1.2% of GDP), Croatia (1.1% of GDP), France (1.1% of GDP); the lowest – in Greece (0.2% of GDP).

At the EU level, "health" spending remained the second largest state budget item after spending on "social protection". In 2016, in the EU-28 and Eurozone-19, the volume of public "health" expenditures for health amounted to 7.1% of GDP. The largest amount of public health expenditure is observed in Denmark (8.6% of GDP), France (8.1% of GDP) and Austria (8.0% of GDP), and the lowest of Switzerland (2.2% of GDP), Cyprus (2.6% of GDP) and Latvia (3.7% of GDP).

In 2016, spending on "recreation, culture and religion" in the EU-28 is 1.0% of GDP in the Euro-

zone (1.1% of GDP). The highest expenditures are observed in Hungary (3.3% of GDP) and Estonia (2.1% of GDP); the lowest – Ireland (0.5% of GDP), Great Britain (0.6% of GDP).

The total spending of government on education in the EU-28 amounted to 4.7% of GDP, while Eurozone-19 – 4.6% of GDP. Denmark (6.9%) spent the largest share in GDP, followed by Sweden (6.6% of GDP), Cyprus (6.6% of GDP), Belgium (6.4% of GDP), Finland (6.1% of GDP). The lowest is Ireland (3.3% of GDP), Bulgaria (3.4% of GDP), Romania (3.7% of GDP), Slovakia (3.8% of GDP), Italy (3.9% of GDP).

It should be noted that in 2016, Ukraine's health spending amounted to 7.62% of GDP, education -5.87% of GDP, which exceeds the average for EU-28 countries - by 0.52% of GDP and 1.17% GDP respectively.

The analysis of figure 2 shows that during 2002–2016, the public expenditure of the EU member states on environmental protection and recreation, culture and religion does not change and make up 0.7% of GDP and 1.0% of GDP respectively. Decreasing spending on general public services (-0.8% of GDP), education (0.3% of GDP), defense

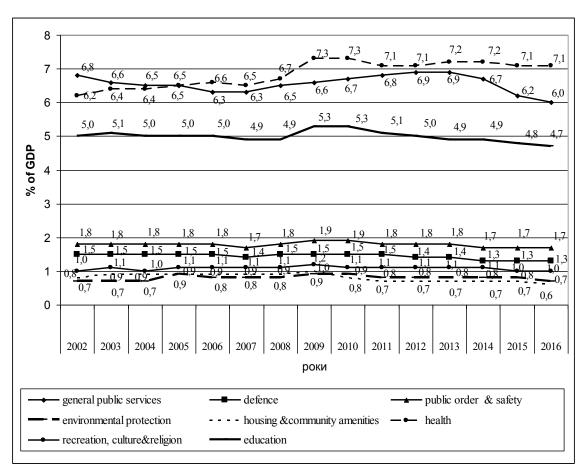


Fig. 2. Dynamics of general government expenditure by function in the EU, 2002–2016 years, % of GDP

(-0.2% of GDP), housing and community amenities (-0.2% of GDP), and public defense, and security (-0.1% of GDP). Expenditures on health increased significantly – by 0.9% of GDP.

Analysis of figure 3 shows that during 2002–2016, the percentage decreases of total public expenditures of EU member states for general public services (-2%), education (-0.9%), housing and community amenities (-0.5%), defense (-0.4%), public order and safety (-0.2%). The percentage of expenditures for recreation, culture and religion (-0.1%) is almost unchanged, and the percentage of environmental protection expenditures does not change (1.6%). Expenditures on health care are increasing (+1.6%).

At the same time, it should be noted that during the 2014–2016 period in the structure of expenditures of the Consolidated Budget of Ukraine, defense expenditures increased by 1.9% (5.2% in 2014, 7.1% in 2016). The percentage of education expenditures decreased by 3.6% (from 19.1% in 2014 to 15.5% in 2016), health care by 1.9% (10.9% in 2014, 9.0% in 2016). The percentage of expenditures for public order and safety during 2014–2016 has not changed and amounted to 8.6%.

Conclusions from conducted research. Thus, we can conclude that the priority of all levels of government should be to improve the quality of life of

each citizen. The state, having decided on the production of public goods, faces the problem of choice, which depends on the priority needs, economic, political, social and unforeseen circumstances. The ability to produce public goods is limited by the limited resources (the level of GDP). The need is determined by the degree of readiness of society to make choices from a limited set of different kinds of benefits in favor of collective consumption of public goods. In terms of expenditures, fiscal policy focuses not only on the production (provision) of public goods that contribute to accelerating socio-economic development, including health and education, but also to increase their efficiency.

In the countries of the European Union, "health" is a priority area of public spending. Thus, during 2002–2016, expenditures of "health" in the European Union increased by 0.9% of GDP and by 1.6% of total expenditures. In the EU-28 and Eurozone-19, in 2016, public spending on "health" accounted for 7.1% of GDP.

The total expenditures of Ukraine in 2016 for defense (7.1%), public order and safety (8.6%), education (15.5%) exceed the costs of the European Union countries for these articles (2.9%, 3.7% and 10.2% respectively). At the same time, Ukraine's health expenditures (9.0%) are lower than in the countries of the European Union (15.3%).

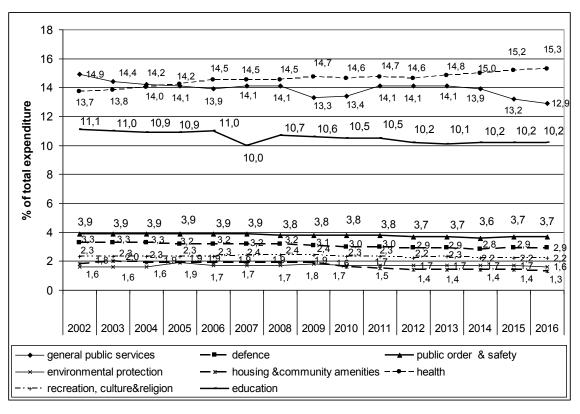


Fig. 3. Dynamics of general government expenditure by function of EU, 2002–2016, % of total expenditures

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