Evaluation of the EU Policy Concerning the Basic Economic Functions of a Modern Government in a Mixed Economy

Pavel Rousek^{1*}

¹Institute of Technology and Business, School of Expertness and Valuation, Okružní 517/10, 37001 České Budějovice, Czechia

Abstract. The paper analyses the budget of the European Union in terms of its redistribution power and stabilization efficiency. The redistribution of finance from rich regions to poorer ones is an important function of public budgets. The EU budget only partially fulfils this function. Stabilizing economic development is another important function of public budgets. Also, the effectiveness of the EU budget in this area is not sufficient and could be significantly strengthened.

Key words: macro-economy, policy, government, mixed economy

1 Introduction

There are some basic economic functions of a government in a modern mixed economy. The evaluation of the correspondence of theory with the practice of the European Union is the subject of this paper.

1.1 Macroeconomic Government Functions

Samuelson and Nordhaus [1] define the modern mixed economy as “a combination of private enterprise working through the marketplace and government regulation, taxation, and programs.” The importance of the public sector for the modern economy is also underlined by another Nobel Prize winner [2]. This shows that the importance of the public sector and large national economies are considerable. This applies to all the major economies of the globalized world, such as the United States, the European Union or China.

There are three basic macroeconomic functions of any government in a modern mixed economy [3]:

- Allocation function to achieve efficiency,
- Redistribution function to achieve equity,
- Stabilization function to achieve stability.

* Corresponding author: rousek@mail.vstecb.cz

1.1.1 Allocation Function

The allocation function means the amount and structure of funds directed to the production of public and private goods and services. Generally, it means public goods and services providing: national defence, government administration etc. These goods and services cannot be provided through the market mechanism. However, these goods are essential for consumers [4].

Broadway and Keen [5] deal with allocation efficiency and optimal direction of transfers. However, this is rather a microeconomic topic. From a macroeconomic perspective, redistribution and stabilization are more important.

1.1.2 Redistribution Function

The redistribution function means the degree of redistribution of public funds to reduce inequalities in the distribution of income and property. The tools to achieve these goals are taxes and subsidies.

Redistribution through public budgets is an important function of modern government. The influence of political rivalry on redistribution in society is investigated, for example, by [6]. In their article, they abstract from the influence of the voter-median and focus more on the rivalry of the two political parties. Other aspects of redistribution are dealt with by Wildasin, namely the results of redistribution in the labour market [7] or the interaction of redistribution and migration [8].

1.1.3 Stabilization Function

The stabilization function means the possibility of public finances to influence the main macroeconomic indicators such as stable economic growth, unemployment, inflation rate, external trade balance, etc.

The importance of stabilizing macroeconomic variables through public budgets shows the interest of experts in this area. The impact of fiscal rules on the stabilizing function of fiscal policy is examined by [9]. Their research is based on data from 21 OECD countries in almost thirty years. One of their most important findings is that „fiscal rules are unable to affect the inflation-destabilising nature of discretionary policy, if any, probably because of the higher importance of central banks in that respect“ [9].

2 European Union Policies

2.1 EU Policy of Redistribution

Following a policy of effective redistribution means allocating budget resources to the EU Member States with the low gross domestic product per capita. This allocation of funds enables the reduction of inequality in the product (or income) in various locations of the European Union.

Table 1. GDP per Capita in EU Member States (EUR per Capita in 2017).

Country	GDP
Austria	43,130.57
Belgium	38,833.46
Bulgaria	7,173.23
Croatia	11,594.40
Cyprus	23,106.04
Czechia	18,185.42
Denmark	51,059.28
Estonia	17,981.82
Finland	40,908.83
France	34,505.75
Germany	40,362.55
Greece	16,369.01
Hungary	12,586.79
Ireland	63,537.10
Italy	28,373.02
Latvia	13,611.12
Lithuania	14,442.73
Luxembourg	98,369.68
Malta	25,946.56
Netherlands	43,610.43
Poland	12,292.05
Portugal	18,758.30
Romania	9,458.17
Slovakia	15,651.27
Slovenia	20,844.71
Spain	25,109.36
Sweden	48,754.87
United Kingdom	35,947.30
European Union	30,190.86

Source: Author; Data: [10].

A high level of redistribution means a strong negative correlation between GDP per capita and EU budget expenditure. This would mean that the highest spending goes to countries with the lowest per capita GDP.

Table 2. Structure of the EU Budget per Capita by EU Member States (EUR per Capita in 2017).

Country	Total	Agriculture	Regional policy	R&D ¹	Citizenship ²	Outside the EU ³	Admin ⁴
Austria	203.23	140.70	9.91	42.16	7.51	0.00	2.94
Belgium	653.54	46.86	27.23	128.28	22.72	0.00	428.45
Bulgaria	263.21	140.89	87.11	25.90	7.76	0.01	1.54
Croatia	156.94	74.11	64.47	10.25	2.76	3.23	2.12
Cyprus	243.98	87.72	75.25	56.52	9.69	0.00	7.04
Czechia	369.58	107.03	245.08	14.46	1.50	0.00	1.51
Denmark	257.76	183.05	13.71	47.77	2.77	0.00	10.45
Estonia	493.26	179.11	214.94	45.92	46.75	0.00	6.54
Finland	274.25	159.58	47.07	55.44	5.63	0.00	6.52
France	203.34	137.79	18.48	39.04	2.58	0.00	5.41
Germany	134.57	74.75	25.39	29.24	2.00	0.00	2.81
Greece	472.47	262.47	143.21	29.31	34.90	0.00	2.56
Hungary	410.85	153.91	217.19	34.48	3.65	0.00	1.62
Ireland	392.81	325.85	10.99	39.19	5.61	0.00	11.18
Italy	161.12	81.15	26.84	24.08	5.29	0.00	4.57
Latvia	370.93	198.53	147.19	13.75	7.28	0.00	4.18
Lithuania	539.04	244.78	234.64	45.41	10.59	0.00	3.63
Luxembourg	3,245.55	67.50	84.43	408.01	60.50	0.00	2,625.12
Malta	468.88	32.26	239.25	30.56	151.18	0.00	15.63
Netherlands	143.02	53.34	11.36	55.71	15.76	0.00	6.86
Poland	313.67	107.29	197.72	5.66	2.23	0.02	0.76
Portugal	383.25	123.02	226.17	24.76	5.15	0.00	3.67
Romania	238.63	167.69	63.23	5.09	1.61	0.00	1.01
Slovakia	303.47	113.80	150.30	35.22	2.07	0.00	2.08
Slovenia	230.67	112.98	62.03	45.12	5.32	0.04	5.16
Spain	208.06	126.89	47.23	27.57	3.83	0.00	2.53
Sweden	154.27	77.09	22.05	37.65	13.52	0.00	3.96
UK	97.52	56.66	10.01	25.31	2.57	0.00	2.03
EU	219.50	111.09	100.05	25.63	3.81	0.27	14.66

¹Research and development / ²Citizenship, freedom, security and justice / ³Actions and programmes outside the EU / ⁴Administration

Source: Author; Data: [11].

The hypothesis of a negative correlation between GDP per capita and budget spending per capita has not been confirmed. The correlation coefficient is even positive (0.616). One of the possible causes is a high administrative expenditure in rich countries (Luxembourg and Belgium) due to the headquarters of many European Institutions. By excluding these countries (Luxembourg and Belgium) from the analysis, a negative correlation appears, but it is still not significant (-0.354).

On closer analysis we can see that the only item that confirms the assumption is the regional policy, which is targeting redistribution:

- Agriculture (-0.099).
- Regional policy (-0.503).
- Research and development (0.741).
- Citizenship, freedom, security and justice (0.176).
- Actions and programmes outside the EU (-0.180).
- Administration (0.688).
- **Total (0.606).**

2.2 EU Policy of Stabilization

Following a macroeconomic stabilization policy means allocating budget resources to the EU Member States with a high macroeconomic multiplier. This allocation of funds enables better control of macroeconomic output using fewer budget resources.

Table 3. Macroeconomic Multiplier in EU Member States (2007 to 2017)

Country	Marginal Propensity to Consume	Macroeconomic Multiplier
Austria	0.492	1.968
Belgium	0.535	2.153
Bulgaria	0.381	1.616
Croatia	0.418	1.719
Cyprus	1.926	N/A
Czechia	0.521	2.087
Denmark	0.429	1.751
Estonia	0.389	1.636
Finland	1.091	N/A
France	0.502	2.006
Germany	0.410	1.694
Greece	0.487	1.950
Hungary	0.283	1.395
Ireland	0.075	1.081
Italy	0.902	10.242
Latvia	0.704	3.382
Lithuania	0.655	2.897
Luxembourg	0.214	1.272
Malta	0.192	1.238
Netherlands	0.270	1.370
Poland	0.547	2.209
Portugal	0.647	2.835
Romania	0.538	2.165
Slovakia	0.517	2.071
Slovenia	0.640	2.778
Spain	0.668	3.013
Sweden	0.417	1.716
United Kingdom	0.703	3.365
European Union	0.490	1.961

Source: [12-13].

Focusing on stabilization brings a strong positive correlation between the macroeconomic multiplier and EU budget expenditure. This would mean that the highest spending goes to countries with the greatest impact.

Table 4. Structure of the EU Budget per Capita by EU Member States (EUR per Capita in 2017).

Country	Total	Agriculture	Regional policy	R&D ¹	Citizenship ²	Outside the EU ³	Admin ⁴
Austria	203.23	140.70	9.91	42.16	7.51	0.00	2.94
Belgium	653.54	46.86	27.23	128.28	22.72	0.00	428.45
Bulgaria	263.21	140.89	87.11	25.90	7.76	0.01	1.54
Croatia	156.94	74.11	64.47	10.25	2.76	3.23	2.12
Cyprus	243.98	87.72	75.25	56.52	9.69	0.00	7.04
Czechia	369.58	107.03	245.08	14.46	1.50	0.00	1.51
Denmark	257.76	183.05	13.71	47.77	2.77	0.00	10.45
Estonia	493.26	179.11	214.94	45.92	46.75	0.00	6.54
Finland	274.25	159.58	47.07	55.44	5.63	0.00	6.52
France	203.34	137.79	18.48	39.04	2.58	0.00	5.41
Germany	134.57	74.75	25.39	29.24	2.00	0.00	2.81
Greece	472.47	262.47	143.21	29.31	34.90	0.00	2.56
Hungary	410.85	153.91	217.19	34.48	3.65	0.00	1.62
Ireland	392.81	325.85	10.99	39.19	5.61	0.00	11.18
Italy	161.12	81.15	26.84	24.08	5.29	0.00	4.57
Latvia	370.93	198.53	147.19	13.75	7.28	0.00	4.18
Lithuania	539.04	244.78	234.64	45.41	10.59	0.00	3.63
Luxembourg	3,245.55	67.50	84.43	408.01	60.50	0.00	2,625.12
Malta	468.88	32.26	239.25	30.56	151.18	0.00	15.63
Netherlands	143.02	53.34	11.36	55.71	15.76	0.00	6.86
Poland	313.67	107.29	197.72	5.66	2.23	0.02	0.76
Portugal	383.25	123.02	226.17	24.76	5.15	0.00	3.67
Romania	238.63	167.69	63.23	5.09	1.61	0.00	1.01
Slovakia	303.47	113.80	150.30	35.22	2.07	0.00	2.08
Slovenia	230.67	112.98	62.03	45.12	5.32	0.04	5.16
Spain	208.06	126.89	47.23	27.57	3.83	0.00	2.53
Sweden	154.27	77.09	22.05	37.65	13.52	0.00	3.96
UK	97.52	56.66	10.01	25.31	2.57	0.00	2.03
EU	219.50	111.09	100.05	25.63	3.81	0.27	14.66

¹Research and development / ²Citizenship, freedom, security and justice / ³Actions and programmes outside the EU / ⁴Administration

Source: Author; Data: [11].

Nor has the second hypothesis assuming the implementation of an effective EU stabilization policy been confirmed (-0.172). In this case, most funds would have to be invested in countries with the highest macroeconomic multiplier (such as Italy), where public spending will be reflected in GDP ten times.

Similar results as for the overall budget also apply to each of its components, as can be seen in the overview of partial correlation coefficients:

- Agriculture (-0.117).
- Regional policy (-0.128).
- Research and development (-0.160).
- Citizenship, freedom, security and justice (-0.202).
- Actions and programmes outside the EU (-0.078).
- Administration (-0.131).
- **Total (-0.172).**

3 Conclusions

The analysis has shown that the overall EU budget does not target redistribution, mainly because of the reimbursement of the costs associated with the seat of major authorities in Belgium and Luxembourg. The regional policy sub-item is redistributive. This implies two proposals, either to relocate some European institutions to poorer regions or to strengthen the importance of the regional policy.

Furthermore, the analysis showed that neither the overall EU budget nor its components are targeting effective stabilization. This would be achieved if expenditure were made in countries with a high marginal consumption rate and therefore with a high macroeconomic multiplier that would ensure a significant impact of the funds spent. The proposal is, therefore, to change targeted budgetary expenditure to such countries.

References

1. P. Samuelson, W. Nordhaus, *Economics*. 19th ed. New Delhi: Tata McGraw Hill (2010)
2. J. Stiglitz, *Economics of the Public Sector*. 3rd ed. New York: W. W. Norton and Company (2000)
3. S.K. Singh, D. Tripathi Rao, Is monetary policy symmetrical in its effect on sectoral output? *Economics, Management, and Financial Markets*, **13**(1), 11-31 (2018)
4. P. Garcia-Duran, L.J. Eliasson, Squaring the circle: Assessing whether the European union's pursuit of bilateral trade agreements is compatible with promoting multilateralism. *Journal of Self-Governance and Management Economics*, **6**(1), 7-32 (2018)
5. R. Boadway, M. Keen, Efficiency and the optimal direction of federal-state transfers. *International Tax and Public Finance*, **3**(137), 137-155 (1996)
6. A. Lindbeck, J. Weibull, Balanced-budget redistribution as the outcome of political competition. *Public Choice*, **52**(3), 273-297 (1987)
7. D. Wildasin, Income redistribution in a common labor market. *The American Economic Review*, **81**(4), 757-774 (1991)
8. D. Wildasin, Income redistribution and migration. *The Canadian Journal of Economics*, **27**(3), 637-656 (1994)
9. A. Sacchi, S. Salotti, The impact of national fiscal rules on the stabilisation function of fiscal policy. *European Journal of Political Economy*, **37**(C), 1-20, (2015)
10. Eurostat [online], Available at: <https://ec.europa.eu/eurostat> (2019)
11. European Parliament [online], Available at: <https://www.europarl.europa.eu/portal/en> (2019)
12. P. Rousek, M. Vochozka, M. Psárska, Analysis of the consumption on the goods and services market in the cybernetic model of the 15 older EU member states. *AD ALTA: Journal of Interdisciplinary Research*, **9**(1), 252-254 (2019)
13. P. Rousek, Analysis of consumption on the goods and services market in the cybernetic model of selected country. *SHS Web of Conferences: Innovative Economic Symposium 2018 – Milestones and Trends of World Economy* (2019)