

## **Some Relations Between the European Union Budget and the Budgets of Member Countries in the Context of the Two Crisis (Financial Crisis of 2008, Pandemic Crisis – Covid -19) - Data Analysis\***

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### **Abstract**

The paper pursues the experience of the economies of some European Union countries, in the context of the two crises - the financial one of 2008 and respectively, the pandemic – COVID 19, from the perspective of the analysis of some macroeconomic indicators.

The motive behind the study is given by the author's intention to observe some aspects regarding the evolution of the relationship between the European Union budget and the budgets of some Member States, in the context of the two types of crises.

The intention of the originality of the work can be considered from the chosen theme that aims to capture the effects of the two crises reflected in the indicator data over a certain time interval; the data are observed at the level of the budgets of the analysed Member Countries, in relation to the budget of the European Union.

The research methodology was the documentation from the specialty literature, for formulate ideas and interpretate in the author's own vision, as well as the analysis of statistical data referring to budget revenues and expenditures of Member States.

The findings of the paper capture some situations observed following-up the analysis of budget indicators regarding the relationship between the budgets of some Member States and the budget of the European Union.

One can observe the implications of the two crises on the revenue and expenditure budgets of each Member State in relation to the EU budget, a guiding element in taking recovery measures, as the case may be.

**Keywords:** European Union budget, Member Countries, expenditures, revenues, deficit, surplus.

**Jel Classification:** H20; H50; H60; H62

## Introduction

The economies of the countries of the world have been affected, since the beginning of this century, by the successive manifestation of two types of crises, experienced in the first two decades of the 21st century.

The origins of the two forms, respectively the financial crisis of 2008 and the pandemic crisis of 2020, were different, embodied in the deterioration of the financial system, which began in 2008, and the health crisis of 2020, respectively. (Canfranc M. R., 2020; Strauss-Kahn M.-O., 2020).

Aspects related to the effects and evolution of the two crises - financial from 2008 and pandemic - COVID-19, which started in 2020, were studied by different authors who signaled the way of propagation, evolution and their impact in the world's economies. Some of their observations regarding the emergence and evolution of the two crises can be described below:

Thus, authors such as Te Velde 2008; IDS 2008; Toporowski 2009 (quoted by Gurtner, 2021) [1], Ad Van Riet (Ed.) - ECB, 2010 observes the origin of the emergence of the financial crisis of 2008, in the large financial centers of developed countries, with the bankruptcy of the American investment bank Lehman Brothers, followed by a strong imbalance in the financial markets, from September 2008, with a significant impact on economic growth. (Ad Van Riet (ed.) et. al. - ECB, 2010; BCE, 2010).

Thus, on a macroeconomic level, they manifested themselves, through challenges at the economic-social level, related to the accentuation of the vulnerabilities felt at the level of some indicators from different economic branches, such as: the decrease in the volume of exports, the increase in the external deficit, the decrease in the profitability of companies, the degradation the situation on the labor market. (Izvorski, 2018; Ad Van Riet (Ed.) - ECB, 2010; BCE, 2010).

Izvorski, 2018; Ad Van Riet (ed.) et. al. - ECB, 2010 observes an increase in the interest given to the effectiveness of some fiscal incentives, in economic recovery efforts, in the framework of debates on the implications of fiscal policy in supporting the economy, in order to prevent the negative effects of an economic recession.

Zongyun Li, Farmanesh P., Kirikkaleli D. and Itani R. (2022) shows that the impact of the COVID-19 pandemic crisis has manifested itself through negative effects that have spread globally, affecting many economies, by worsening their situation, generating risks that can lead to recession or even economic depression. A series of constraints have appeared at the level of economies, in the field of public health, with an impact on social and economic life, both in the member states of the European Union and in other countries of the world.

Both crises have become global phenomena, generating imbalances that have affected the world's economies with severe repercussions on economic and social activities (Gao et al., 2021; Su et al., 2021a, quoted in Zongyun Li, Farmanesh P.; Kirikkaleli D. and Itani R., 2022., p.1) [2]; the form of propagation in the world's economies was different, relatively slow, in the case of the 2008 crisis and abrupt, large-scale, in the case of the 2020 crisis. (Ad Van Riet (ed.) et. al. - ECB, 2010; BCE, 2010; Canfranc M. R., 2020; Berger R. 2020; Billio M. and Caporin M., 2010; Gunay S., Can G., Segovia E. T., 2022).

A series of measures were taken by governments, in view to counteract the effects of crises and recover economies, consisting in monetary and fiscal policies, resource commitments (Zongyun, Panteha, Dervis, Itani, 2022; Bosco D., 2020; Dunn, G. et. al., 2020; Canfranc M. R., 2020; Strauss-Kahn, M.-O., 2020, Izvorski, 2018, BCE, 2010, Ad Van Riet (ed.) et. al. - ECB 2010, Berger, 2020).

In the following, a situation of the impact of the two crises is presented, from the perspective of the relationship between the budgets of the member countries and the budget of the European Union, with reference to budget expenditures and revenues [3].

## The relation between the European Union budget and the budgets of Member Countries

Following the evolution of the relationship between the budget of the European Union and the budgets of the Member Countries of the European Union expressed by the share of the expenditures and, respectively, of the revenues of each Member State, in the total of the expenditures as well as of the revenues of the budget of the European Union [4], the following is noted:

⇒ A number of countries registers *increase in the expenditure share in the total expenditure of the European Union budget, over longer periods*, respectively: Belgium, Bulgaria, Estonia, Latvia, Luxembourg, Malta, Romania, Slovakia.

It is noted that these countries also show *increases in the revenues share in the revenues of the European Union budget*, approximately, *in the same periods*, the disparities coming from the years in which the expenditure and revenue indicator, respectively, show oscillations:

**Table 1a) Periods of increases in the share of expenditure and revenue, respectively, of Member States, in total expenditure and revenue, respectively, of the European Union budget**

Current Number	Country	Increase		Deficit	Surplus
		Expenditure Years	Revenues Years	Years	Years
1					
2	Belgium	2007-2016	2007-2014	2011-2017 (decrease)	
3	Bulgaria	2007-2009 2011-2014 2016-2021	2007, 2008 2011-2015 2017-2021	2011-2013 (decrease)	2016-2019
4	Estonia	2007, 2008 2012-2021	2007-2009 2011-2021	2012 2016-2018 (increase) 2020, 2021 (decrease)	2013-2015 2019, 2021
5	Latvia	2007, 2008 2014-2021	2007-2009 2011-2021	2011-2015 2017-2019 (decrease) 2020, 2021 (increase)	
6	Luxembourg	2007-2020	2007-2021		2011-2019
7	Malta	2007-2015 2017-2021	2007-2021	2012-2015 (decrease)	2016-2019
8	Romania	2007, 2008 2011-2021	2007, 2008 2010, 2011 2013-2015 2017-2021	2011-2016 (decrease) 2017-2021 (oscillations)	
9	Slovakia	2007 2009-2015 2018-2021	2007-2015 2018-2020	2012-2018 (decrease) 2019-2021 (increase)	

Source: Data-based processing Eurostat Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Government revenue, expenditure and main aggregates [gov\_10a\_main] <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates[gov\_10a\_main], Total general government expenditure, [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_main&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_main&lang=en); Eurostat, Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government revenue, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: GDP and main components (output, expenditure and income), [NAMA\_10\_GDP], [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en)

As can be seen from the table data, as a rule, the growth years of the two indicators, with some deviations, comprise relatively the same periods. Following the evolution of the deficit, it was observed in those countries that during those periods, they show decreases in the interval, with some exceptions. Increases in the deficit are found in Estonia, between the years 2016 - 2018, Latvia, in the years 2020, 2021 and Slovakia, 2019-2021; in the last two situations there are years of the pandemic. Surpluses were also identified in a number of four countries, the longest interval being at Luxembourg, in the entire interval between the two crises (2011-2019).

⇒ Other countries also show increases in revenue share in the total revenues of European Union budget, over a longer period, compared to those of the expenditure, such as Germany and Ireland.

**Table 1b) Periods of increases in the share of expenditure and revenue, respectively, of Member States, in total expenditure and revenue, respectively, of the European Union budget**

Current Number	Country	Increases		Deficit	Surplus
		Expenditures Years	Revenues Years	Years	Years
1					
2	Germany	2007-2009; 2013-2015; 2017-2021	2007-2010; 2011-2020	2010	2012-2019
3	Ireland	2007-2008 și 2018-2020	2011-2019; 2021	2012-2017 (decrease)	2018, 2019

Source: Data-based processing Eurostat Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Government revenue, expenditure and main aggregates [gov\_10a\_main] <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government expenditure, [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_main&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_main&lang=en); Eurostat, Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government revenue, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: GDP and main components (output, expenditure and income), [NAMA\_10\_GDP], [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en).

The presentation in tables, also of some data referring to the level of deficit or surplus, was made with the intention of observing to what extent the increases or decreases recorded in the indicators regarding the share of expenditures and revenues, respectively, in the expenditures and revenues of the European Union budget, were indirectly reflected on the evolution of the deficit (increase or decrease) or surplus.

⇒ Comparing, by countries, the data from the pandemic crisis period with those of the financial crisis, concerning the change in the share of expenditure and of revenue, respectively, in European Union expenditure and revenue (increases, decreases), it is noted that countries can be grouped, according to the data in Table 3.

**Table 3: The variation in the share of expenditure and revenue, respectively, in European Union expenditure and revenue – the pandemic crisis compared to the financial crisis**

Current Number	The pandemic crisis versus the financial crisis				Notices		
	Expenditure Years 2020, 2021 versus 2009, 2010		Revenue Years 2020, 2021 versus 2009, 2010		Deficit (years 2020, 2021 versus 2009, 2010)		
	Higher	Lower	Higher	Lower	Higher	Lower	Oscillating
	Belgium		Belgium		x		
	Bulgaria		Bulgaria				x
	Czech Republic		Czech Republic		x		
		Denmark	Denmark			x	
	Germany		Germany				x
	Estonia		Estonia		x		
		Ireland	Ireland			x	
		Greece		Greece		x	
		Spain		Spain		x	

		France		France			x
		Croatia		Croatia			x
		Italy		Italy	x		
		Cyprus	Cyprus (they have the same level of income in both crises)				x
	Latvia		Latvia			x	
	Lithuania		Lithuania			x	
	Luxembourg		Luxembourg				x
	Hungary		Hungary		x		
	Malta		Malta		x		
		Olanda	Netherlands			x	
	Austria		Austria		x		
	Poland		Poland				x
		Portugalia		Portugal		x	
	Romania		Romania		x		
	Slovenia		Slovenia				x
	Slovakia		Slovakia			x	
	Finland			Finland	x		
	Sweden		Sweden		x		

Source: Data-based processing from Eurostat, Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Government revenue, expenditure and main aggregates [gov\_10a\_main] <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government expenditure, [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_main&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_main&lang=en); Eurostat, Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government revenue, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: GDP and main components (output, expenditure and income), [NAMA\_10\_GDP], [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en).

The table data reveals the following:

- ✓ A number of 16 countries, both for the indicator, share of expenditures and revenues in the expenditures and revenues, respectively of the European Union, show higher values in the pandemic crisis than in the financial crisis:
  - Eight of these countries show higher values of the deficit during the pandemic crisis compared to the financial one: Belgium, Czech Republic, Estonia, Hungary, Malta, Austria, Romania, Sweden;
  - Three countries show lower values of the deficit, during the pandemic crisis compared to the financial one: Latvia, Lithuania, Slovakia;
  - Five countries have an oscillating deficit, respectively, the years of the pandemic crisis are, each, different (higher and lower, respectively) compared to those of the financial crisis: Bulgaria, Germany, Luxembourg, Poland, Slovenia.

A higher level of the deficit, during the pandemic crisis, compared to the financial one, may show that in the case of the respective countries, the effort to support the expenditures generated by the pandemic crisis exceeded that generated by the financial crisis; and in the situations with a lower deficit, the expenditures were more easily supported by revenues levels. The situations reflect a stronger or lower impact of the pandemic crisis than the financial one.

- ✓ In the case of 6 countries, both the indicator of the share of expenditures and revenues have lower values in the pandemic crisis than in the financial one:
  - Italy has higher values of deficit during the period of the pandemic crisis compared to the financial one;
  - Greece, Spain and Portugal have lower values of deficit during the period of pandemic crisis compared to the financial one;
  - France and Croatia have oscillating deficits in the years of the pandemic crisis compared to those of the financial crisis, similar to those in the example of the first situation.

Similarly, in the case of these countries, the influence of the change, through decrease, of expenditures, respectively, of revenues, in the pandemic crisis, compared to the financial one, can be considered to have determined decreases or

increases, as the case may be, of the deficit, which reflects a more stronger or weaker impact of the pandemic crisis compared to the financial crisis.

- ✓ Other 3 countries record lower values for the expenditure indicator and, respectively, higher values for the revenue indicator, during the pandemic crisis, than during the financial crisis. All these countries have smaller deficit, in the pandemic crisis: Denmark, Ireland, Netherlands; in the case of these countries, the impact of the pandemic crisis was less than that of the financial crisis.
- ✓ Finland shows higher values of the share of expenditures in European Union expenditures and lower values of the share of revenues in European Union revenues, in the pandemic crisis compared to the financial crisis. Its deficit is higher in the pandemic crisis, thus, a stronger impact of the pandemic crisis.
- ✓ Cyprus shows shares of expenditures in European Union expenditures, lower, in the pandemic crisis compared to the financial one and, respectively, shares of revenues in European Union revenues, equal in both crises. This country has a higher deficit in 2020 than in 2009 and a lower deficit in 2021 than in 2010.

## Conclusions

Following the relationship between the budget of the European Union and the budgets of the Member States, the following are worth noting:

- ⇒ In the case of countries that present, on longer time intervals, increases in the indicator of the share of budget expenditures in EU budget expenditures, it is, also, produced, approximately in the same time interval, increases in the indicator of the share of budget revenues of these countries, in EU budget revenues;
- ⇒ The increase in a greater share of expenditures, in relation to that of revenues, and vice versa, of revenues, in relation to expenditures, is reflected in the evolution of the deficit, expressed by an increase or decrease, as the case may be, as well as the appearance of a surplus;
- ⇒ In some Member States, the indicator of the share of expenditures and revenues in the expenditures and revenues of the European Union budget, shows higher values during the pandemic crisis compared to the financial crisis and, indirectly, determines a higher or lower level of the deficit, during the pandemic crisis period compared to the financial one;
- ⇒ A higher level of the deficit, during the pandemic crisis compared to the financial one, can show that in the case of the respective countries, the effort to support the expenditures generated by the pandemic crisis exceeded that generated by the financial crisis; in the situations with a lower deficit, expenditures were more easily supported by revenue levels;
- ⇒ In other cases, the indicator of the share of expenditures and revenues in the expenditures and revenues of the European Union budget, shows lower values in the pandemic crisis compared to the financial one. The change in expenditures (decreases) and, respectively, revenues can be considered to have determined changes in the deficit (decreases, increases); the situation reflects a stronger or weaker impact of the pandemic crisis compared to the financial one.

## Endnotes

[1] Te Velde 2008; IDS 2008; Toporowski 2009 quoted in Gurtner B. (2021), "La crise économique-financière et les pays en développement" Translated by: David Fuhrmann. p. 201-227, <https://doi.org/10.4000/poldev.131>; <https://journals.openedition.org/poldev/131/> "The Financial and Economic Crisis and Developing Countries", Translated by Jacqueline Gartmann, p. 189-213, <https://doi.org/10.4000/poldev.144>, *International development policy Revue internationale de politique de développement* 2021, <https://journals.openedition.org/poldev/144>;

[2] Gao et al., 2021; Su et al., 2021a, quoted in Zongyun Li, Farmanesh P.; Kirikkaleli D. and Itani R. (2022), "A comparative analysis of COVID-19 and global financial crises: evidence from US economy", *Economic Research-Ekonomska Istraživanja*, Volume 35(1): 1-15, Issue 1, 2022, p. 2427-2441, (pag. 1-43), 23 July 2021, DOI: <https://doi.org/10.1080/1331677X.2021.1952640>; <https://www.tandfonline.com/doi/full/10.1080/1331677X.2021.1952640?scroll=top&needAccess=true> ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/rero2>; <https://doi.org/10.1080/1331677X.2021.1952640>.

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[3]Eurostat Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, 2022, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Government revenue, expenditure and main aggregates [gov\_10a\_main] <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government expenditure, [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_main&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_main&lang=en); Eurostat, Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government revenue, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: GDP and main components (output, expenditure and income), [NAMA\_10\_GDP], [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en);

[4]Eurostat Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Government revenue, expenditure and main aggregates [gov\_10a\_main] <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>. Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government expenditure, [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov\\_10a\\_main&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_main&lang=en); Eurostat, Data Explorer, Percentage of Gross Domestic Product, Government revenue, expenditure and main aggregates, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: Government revenue, expenditure and main aggregates [gov\_10a\_main], Total general government revenue, <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>; Eurostat: GDP and main components (output, expenditure and income), [NAMA\_10\_GDP], [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama\\_10\\_gdp&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_gdp&lang=en).

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