
ECONOMIC POLICIES OF THE EUROPEAN UNION – CONCORDANCE OR DISCORDANCE?

**Rositsa Atanasova Prodanova¹
Dimitar Dobrinov Kostov²**

^{1,2}D. A. Tsenov Academy of Economics – Svishtov, Bulgaria

E-mail: ¹prodanova.r@gmail.com; ²d.kostov@uni-svishtov.bg

Abstract: The series of severe global and regional crises of various nature in recent decades, as well as the erratic success of the various anti-crisis measures undertaken by the European Union raise the issue of examining the concordance among the Union's economic policies. This study examines the coordination between EU's monetary and fiscal policy to reveal that it is weak, which can be attributed to some crisis resolution shortcomings. The reasons for this incoherence can be found both in the institutional structure of the European financial institutions and in some rigid strategies of the Union (unwillingness to pursue a common fiscal policy, frugal budget spending policies, etc.)

Keywords: monetary and fiscal policy, coordination, anti-crisis policy, financial crises.

This article shall be **cited** as follows: **Prodanova, R., Kostov, D.** (2022). Economic Policies of the European Union – Concordance or Discordance? Economic Archive, (1), pp. 44-53.

URL: nsarhiv.uni-svishtov.bg

JEL: F36, G01, G28, H7.

* * *

Introduction

Regardless of the underlying ideology, economic policy aims to ensure growth, employment, and stability, to keep the system from “overheating” when the economy is expanding, or to mitigate the effects of and speed up the recovery from crises when the economy is in recession. Assuming that each country's economic policy consists primarily of a monetary

and a fiscal policy, we aim to examine the following two interrelated issues across the EU.

The **first** and most important is the institutional and regulatory (Zahariev, 2002) problem. As the EU member states have certain independency although they must adhere to the common regulations, the institutions that implement the Union's economic policy are partly national and partly supranational. A typical example for such institutions are the European Central Bank and the central banks of the member states. The ECB, the main regulator of the Union's economic policy, is in a very special situation. Its institutional powers are provided for in the Maastricht Treaty and in the Statute of the European System of Central Banks and of the European Central Bank. It was established as a politically independent central bank with clearly defined and very narrow functions related mostly to conducting monetary policy. According to some authors, the ECB's status is somewhat similar to that of the Bundesbank within the German banking system, but mainly in terms of its main objective, which is to maintain price stability (De Haan, 2012). However, it has to perform functions for which it has no explicit “mandate” and corresponding requirement to be responsible and accountable to the general public and the EU's political institutions. The strong political independence of the ECB is interpreted by some authors as a lack of accountability and a political irresponsibility. If we go back to the comparison with the German Bundesbank, whose management is appointed directly by the German government and is therefore accountable directly to it, the status of the ECB is completely different. In this respect, the ECB resembles central banks, such as the Federal Reserve, which is “independent within government”. (Lokdam, 2019).

It can be assumed that this discrepancy between the functions performed and the institutional statute of the ECB leads to the **second** major problem. And it is the degree of coordination between monetary and fiscal policy. In the context of the various crises that the EU has faced in the last few years, it is **pertinent** to examine whether this is not one of the problems of the euro area and the European Economic Area, especially regarding the mitigation of the effects of the various crises. Against this background, the **subject** of this study are the EU's economic policies and its **object** is the coordination of the monetary and fiscal policies within the Union. The main **thesis** that is defended is that over the studied period *the two policies were not sufficiently coordinated*.

1. Theoretical and methodological aspects of the problem of measuring the concordance between fiscal and monetary policies

This paragraph presents the measurement of monetary and fiscal policies coordination in Europe, and more specifically in the euro area, under the assumption that sooner or later the monetary union will encompass the countries that have not yet adopted the single currency. The tests follow the methodology of Arby and Hanif (2010). They examine the monetary-fiscal policy coordination in Pakistan over the period 1965–2009, citing earlier studies on the same topic concerning Europe (Beetsma, R. & Bovenberg, L., 2001), (Catenaro, 1999). The research method includes three interrelated stages:

1) Testing the co-integration of indicators representing monetary and fiscal policy, such as the ratio between the volume of money supply (monetary base, M0) to gross domestic product (GDP) and the volume of the budget deficit to GDP.

2) Testing the interdependence of these indicators using the Granger causality test.

3) Testing the coordination between monetary and fiscal policy by calculating by years the shocks in economic growth and inflation, on the one hand, and their corresponding effects of monetary and fiscal policy, on the other. Shocks to growth are defined as deviations of real GDP growth from sample average. A negative deviation represents a negative shock to growth, i.e. an economic crisis, and vice versa. Shocks to inflation are defined in a similar way considering the consumer price index. A positive deviation indicates a rise of the inflation level that corresponds to GDP growth and indicates an economic expansion. A negative deviation is considered an indicator of economic stagnation/contraction. Changes in monetary policy stance are measured with the deviations of the aforementioned indicator, i.e. the ratio of monetary base to GDP from the sample average. Changes in fiscal policy stance are measured in a similar way considering the deviations of the budget deficit to GDP from the sample average. The underlying logic is that certain shocks to the economic indicators should illicit reciprocal and concordant changes in monetary and fiscal policy stances. For example, when there is a negative shock to GDP growth and inflation, we should observe a coordinated monetary and fiscal policy response - an increase of the money supply volume and government spending at the expense of increasing the budget deficit. In the event of a positive shock to growth and inflation (a danger of "overheating" the economy), the relevant monetary and fiscal authorities must respond with restrictive measures.

To this end, a database was compiled for the years from the establishment of the euro area (1999) to 2019. It comprises deviations of the GDP growth rate from the sample average, deviations of the inflation rate from the sample average, deviations of monetary base (as a percentage of GDP) from the sample average and deviations of the budget deficit (as a percentage of GDP) from the sample average. The empirical data was retrieved from Eurostat and the ECB (for money supply). The indicators were grouped into two groups. The first group includes the years with the possible combinations of shocks to the two indicators, denoted as PP (positive/negative), NP (negative/positive), PN (positive/negative), and NN (negative/negative). The second group includes the years with the possible combinations of monetary-fiscal policy changes, denoted as EE (expansion/expansion), CE (contraction/expansion), EC (expansion/contraction), and CC (contraction/contraction). Then the years with the corresponding combinations of shocks/responses were grouped in the following matrices:

Table 1

Macroeconomic environment matrix

		Inflation rate	
		Positive	Negative
Economic growth	Positive	PP	PN
	Negative	NP	NN

Source: Arby and Hanif (Arby, M. & Hanif, M., 2010).

Table 2

Economic policy response matrix

		Monetary policy	
		Contraction	Expansion
Fiscal policy	Contraction	CC	CE
	Expansion	EC	EE

Source: Arby and Hanif (Arby, M. & Hanif, M., 2010).

Each cells of the above matrices contains the years in which the given shock/response combination is observed. The ratios between the number of years (n) in the respective cells is used to calculate the correlation between the two types of policies and their coordination with the respective shocks as:

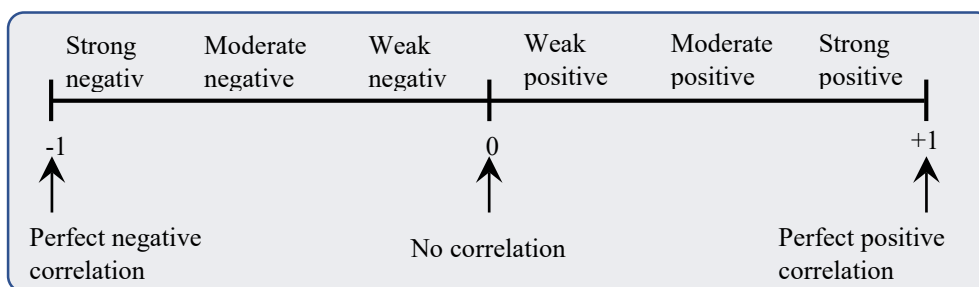
$$(1) \quad \rho = \omega / \sigma,$$

where:

$$\omega = n(\text{PP} \cap \text{CC}) + n(\text{PN} \cap \text{CE}) + n(\text{NP} \cap \text{EC}) + n(\text{NN} \cap \text{EC})$$

σ – total number of years.

The resulting correlation coefficients would indicate a perfect coordination at values close to or equal to 1. Usually, absolute values from 0.90 to 1.00 indicate a very strong (positive or negative) degree of correlation, values from 0.70 to 0.90 – a strong degree, those from 0.50 to 0.70 – a moderate degree, values from 0.30 to 0.50 - weak and values below 0.30 – a negligibly low degree of correlation. Graphically, this ranking is illustrated in Figure 1 below.



Source: Wegner (2016).

Figure 1. Interpretation of correlation coefficient values

2. Empirical results

Figure 2 illustrates the behaviour of the two time series quantifying the fiscal and monetary policy of the euro area for the period 1999-2019.

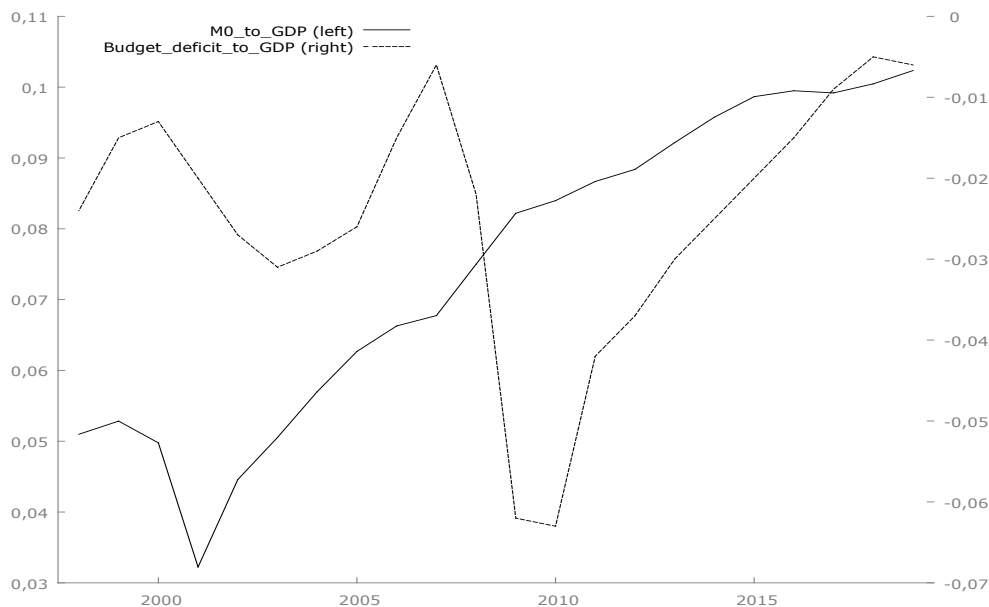


Figure 2. Time series of the EU's M0-to-GDP ratio (left scale) and Budget deficit-to-GDP ratio (right scale) – graphical representation

Although quite general, this chart gives an overall picture of the poor coordination between the two types of economic policy.

These indications can be confirmed by the standard Pearson correlation coefficient, which in this case is 0.004918. Zahariev (Захариев, 2018) (Zahariev, 2018) conducted a similar correlation analysis between the GDP levels and the balance sheet positions of central banks. However, this value is calculated from time series, which cover periods with large deviations, introducing anomalies in the data. In order to isolate potential non-stationarity in the time series, the cointegration between the two indicators described in Stage 1 of the methodology is tested. According to the approach proposed by Engle and Granger (Engle, R., Granger, C., 1987), two time series are considered cointegrated, when they are individually nonstationary but when a simple regression equation is applied from one of the time series to the other, the residuals are stationary. The (Gretl ®) software application was used for this test first by automatically unit root testing the two time series separately, and then unit root testing the regression residuals (Table 3). As can be seen from the results, the null hypothesis for a unit root (nonstationarity) of both time series cannot be rejected, just as the hypothesis of nonstationarity in the residuals cannot be rejected (Step 4, p-value 0.8966). Therefore, there is no cointegration, i.e. the two types of policy are uncoordinated (discordant).

Therefore, neither policy affects the other one, i.e. both policies are independent.

Table 3

Cointegration test results

Stage 1: Unit root testing in $I_M0_to_GDP$

Null hypothesis for the unit root: $a=1$

Empirical value of the criterion: -0.732987

Asymptotic **p-value: 0.835**

Stage 2: Unit root testing in $I_Budget_deficit_to_GDP$

Null hypothesis for the unit root: $a=1$

Empirical value of the criterion: $\tau_c(1) = -1.42904$

Asymptotic **p-value: 0.5696**

Stage 3: Cointegration regression

	coefficient	Standard error	t-test	p-value
const	-2.88090	0.412795	-6.979	8.98e-07***
$I_Budget_deficit$	-0.0605830	0.103995	-0.5826	0.5667

Stage 4: Unit root testing in the remaining *what*

Null hypothesis for the unit root: $a=1$

Empirical value of the criterion: $\tau_c(2) = -1.03351$

p-value: 0.8966

Source: Authors' calculations with Gretl ® .

At the next stage, the Granger causality test is applied to perform Stage 2 of the methodology. The aim is to further check whether either of the two policies is dependent on the other in its subsequent response to shocks. Table 4 summarizes the test results, which show that the null hypothesis for absence of Granger-causality cannot be rejected.

Table 4

Granger causality test
Sample: 1999–2019
Number of observations: 18, lags: 1

Null hypothesis:	F-test	P-value
Monetary supply is not Granger-causal in relation to budget deficit	1.1575	0.2962
Budget deficit is not Granger-causal in relation to monetary supply	0.4577	0.5073

Source: Authors' calculations.

However, as the above tests are more econometric in nature, it is appropriate to verify their results at Stage 3 of the methodology, which in particular checks the correspondence between macroeconomic shocks and regulatory responses in a more realistic economic context. Tables 4 and 5 present the results of this type of test. Each quadrant of the matrices contains the years with the same combination of macroeconomic shocks or policy responses.

Table 5

Macroeconomic environment matrix – empirical data

		Inflation (deviation from the sample average)	
		Positive	Negative
GDP growth rate (deviation from the sample average)	Positive	2000, 2001, 2004, 2006, 2007, 2018	1999, 2014, 2015, 2016, 2017, 2019
	Negative	2002, 2003, 2005, 2008, 2011, 2012	2009, 2010, 2013

Source: Authors' calculations following the approach of Arby and Hanif (2010).

Equation (1)¹ may be applied for consequent calculation of the following ratios and subsequent averaging of their values:

$$(2) \quad \begin{aligned} n(\text{PP} \cap \text{CC})/n(\text{PP}) &= 1/6 = 0.167 \\ n(\text{PN} \cap \text{CE})/n(\text{PN}) &= 4/6 = 0.667 \\ n(\text{NP} \cap \text{EC})/n(\text{NP}) &= 0/6 = 0 \\ n(\text{NN} \cap \text{EE})/n(\text{NN}) &= 2/3 = 0.667, \end{aligned}$$

In equation (2), $n(\text{PP} \cap \text{CC})$ is the number of years included in the upper left quadrant of the first matrix (i.e. years with positive inflation and GDP growth shocks => PP) and the upper left quadrant of the second matrix (i.e. years with contraction responses of both the fiscal and the monetary policy => CC). There is only one such year – the year 2000. This value is divided by the total number of years in the PP quadrant of the first matrix (7). The resulting value is 0.166667. The remaining quadrants are processed likewise. The results are averaged to obtain a correlation value of 0.357, which, according to Figure 1, is indicative for a weak degree of coordination between the two policies.

Table 6

Policy response matrix – empirical data

		Monetary policy (deviations of M0-to-GDP from the sample average)	
		Contraction	Expansion
Fiscal policy (deviation from the sample average)	Contraction	2000, 2017	1999, 2004, 2005, 2006, 2007, 2011, 2012, 2013, 2014, 2015, 2016, 2018
	Expansion	2001	2002, 2003, 2008, 2009, 2010, 2019

Source: Authors' calculations following the approach of Arby and Hanif (2010).

¹ $\rho = \omega/\sigma$
 $\omega = n(\text{PP} \cap \text{CC}) + n(\text{PN} \cap \text{CE}) + n(\text{NP} \cap \text{EC}) + n(\text{NN} \cap \text{EE})$
 σ – total number of years in the sample

Conclusion

Considering the obtained results, we can claim that there is inconsistency and even contradiction between the policy targeting aggregate money supply (the ECB's monetary policy aimed at price stability) and the fiscal policy affecting demand. Similar results have been found in older studies (Von Hagen, J., & Mundschenk, S., 2002), which show that coordination has been disregarded as a factor of lesser importance in the long run and that has to become the focal point of the European Monetary Union's efforts. Short-term coordination is needed both between the common monetary and fiscal policies as well as across the fiscal policies of the individual member states. In a national economy, such coordination is easier to achieve because both the fiscal and the monetary policy are largely a function of the general government (despite the independence of the Central Bank). The common fiscal policy of the EU, which is an alliance of independent national states, is not as uniform and cannot be regarded as a mechanical aggregate of the fiscal policies of its member states. At the same time, the ECB is the common regulator for all euro area countries (as well as to countries whose currencies are pegged to the euro). In order to "avoid" the need to actively maintain the short-term coordination in the European Monetary Union, it would be better if all member states abstain from active implementation of their individual fiscal policies and rely on the so-called "automatic regulators" (common progressive tax rates, inversely progressive unemployment benefit programs, etc.). However, according to Von Hagen & Mundschenk, this would only work if the "built-in" automatic regulators were uniform in all Member States. Otherwise, it would only make matters worse. Moreover, these automatic regulators are effective only within certain normal levels of deviation from the business cycle. At an abnormal level (as in the current COVID-19 crisis), they need to be complemented with some specific fiscal measures. (Ryan, 2018).

References

- Захариев, А. (2018). Балансови позиции на БНБ в условията на членство в ЕС. *Алманах "Научни изследвания"*, 17-44.
- Arby, M. & Hanif, M. (2010). Monetary and fiscal policies coordination - Pakistan's experience. *SBP Research Bulletin*, 2-13. Извлечено от <https://mpr.ub.uni-muenchen.de/24160/>

- Beetsma, R. & Bovenberg, L. (2001). The Optimality of a Monetary Union without a Fiscal Union. *Journal of Money, Credit and Banking*, 33(2), 179-204.
- Catenaro, M. (1999). A Case for Fiscal Policy Co-ordination in Europe. *Working Papers 23, University of Milano-Bicocca, Department of Economics*.
- De Haan, J. (. (2012). *The history of the Bundesbank: lessons for the European Central Bank*. London & New York : Routledge.
- Engle, R., Granger, C. (1987). Co-integration and error correction: Representation, estimation and testing. *Econometrica*(2), 251.
- Lokdam, H. (2019). *Banking on Sovereignty: A Genealogy of the European Central Bank's Independence*. London School of Economics and Political Science (LSE). Извлечено от <https://ethos.bl.uk/OrderDetails.do?did=8&uin=uk.bl.ethos.806992>
- Ryan, J. (2018). Is the European Central Bank “Too Big to Succeed”? *The Future of the European Central Bank*, 3-9. Извлечено от <https://lseideas.atavist.com/future-ecb>
- Von Hagen, J., & Mundschenk, S. (2002). Fiscal and monetary policy coordination in EMU. *Monetary Union: Theory, EMU Experience, and Prospects for Latin America* (стр. 1-39). Vienna: Oesterreichische Nationalbank.
- Wegner, T. (2016). *Applied Business Statistics*. Cape Town: Juta & Company Ltd.
- Zahariev, A. (2002). Financial Sector Legislation, Regulation and Infrastructure: Implications for Pre-Accession Countries. *“Dialogue” Electronic Journal*. doi:dx.doi.org/10.2139/ssrn.2940092

Rositsa Prodanova is Doctor of Philosophy in Economics (World Economy and IER) from D. A. Tsenov Academy of Economics in Svishtov, Bulgaria. **Scientific interests:** financial institutions of the European Union, euro area, economic stabilization policies.

ORCID ID: 0000-0003-1447-631X

Dimitar Kostov, PhD (Finance, Money Turnover, Credit and Insurance) is a Chief Assistant Professor at the department of Finance and Credit at D. A. Tsenov Academy of Economics in Svishtov, Bulgaria. **His scientific interests** are in the fields of monetary policy, international finance, and currency systems.

ORCID ID: 0000-0001-8282-7754

ISSN 0323-9004

Economic Archive

Svishtov, Year LXXV, Issue 1 - 2022

**Bulgaria's Coverage with Local Initiative Groups –
a Spatial Analysis**

**The Financial Literacy of Clients – an Important
Factor for Banks' Successful Digitalization**

**The Relationship between Food Production Prices
and Inflation in Bulgaria**

**Economic Policies of the European Union –
Concordance or Discordance?**

**Economic Growth Effect of Government
Expenditure on Education**

D. A. TSENOV ACADEMY OF ECONOMICS
SVISHTOV



EDITORIAL BOARD:

Prof. Andrey Zahariev, PhD – Editor-in-chief
Prof. Yordan Vasilev, PhD – Deputy Editor
Prof. Stoyan Prodanov, PhD
Assoc. Prof. Iskra Panteleeva, PhD
Assoc. Prof. Plamen Yordanov, PhD
Assoc. Prof. Svetoslav Iliychevski, PhD
Assoc. Prof. Plamen Petkov, PhD
Assoc. Prof. Anatoliy Asenov, PhD
Assoc. Prof. Todor Krastevich, PhD

INTERNATIONAL BOARD:

Prof. Mihail A. Eskindarov, DSc (Econ) – Financial University under the Government of the Russian Federation, Moscow (Russia).
Prof. Grigore Belostechnik, DSc (Econ) – Moldovan Academy of Economic Studies, Chisinau (Moldova).
Prof. Mihail Zveryakov, DSc (Econ) – Odessa State Economic University, Odessa (Ukraine).
Prof. Andrei Krisovatiy, DSc (Econ) – Ternopil National Economic University, Ternopil (Ukraine).
Prof. Yon Kukuy, DSc (Econ) – Valahia University, Targovishte (Romania).
Prof. Ken O'Neil, PhD – University of Ulster (Great Britain)
Prof. Richard Thorpe, PhD – Leeds University (Great Britain)
Prof. Olena Nepochatenko, DSc (Econ) – Uman National University of Horticulture, Uman (Ukraine)
Prof. Dmytro Lukianenko, DSc (Econ) – Kyiv National Economic University named after Vadym Hetman, Kyiv (Ukraine)
Assoc. Prof. Maria Cristina Stefan, PhD – Valahia University of Targoviste (Romania)
Assoc. Prof. Anisoara Duica, PhD – Valahia University of Targoviste (Romania)
Assoc. Prof. Vladinir Klimuk, PhD – Baranovichi State University, Branovic (Belarus)

Support Team

Rositsa Prodanova, PhD – Technical Secretary
Anka Taneva – Bulgarian Copy Editor
Ventsislav Dikov – Senior Lecturer in English – Translation from/into English
Petar Todorov, PhD – Senior Lecturer in English – Translation from/into English

Editorial address:

2, Emanuil Chakarov street, Svishtov 5250
Prof. Andrey Zahariev, PhD – Editor-in-Chief
☎ (+359) 889 882 298
Rositsa Prodanova, PhD – technical secretary
☎ (+359) 631 66 309, e-mail: nsarhiv@uni-svishtov.bg
Blagovesta Borisova – computer graphic design
☎ (+359) 882 552 516, e-mail: b.borisova@uni-svishtov.bg

In 2022, the journal will be printed using a financial grant from the Scientific Research Fund – Agreement № KP-06-NPZ-69 from Bulgarska Nauchna Periodika – 2022 competition.

© Academic Publishing House “Tsenov” – Svishtov
© D. A. Tsenov Academy of Economics – Svishtov

ECONOMIC ARCHIVE

YEAR LXXV, BOOK 1 – 2022

CONTENTS

Stoyan Prodanov, Dimitrina Prodanova

Bulgaria's Coverage with Local Initiative Groups – a Spatial Analysis /3

Reneta Dimitrova

The Financial Literacy of Clients – an Important Factor for Banks' Successful Digitalization /23

Lachezar Borisov

The Relationship between Food Production Prices and Inflation in Bulgaria /34

Rositsa Prodanova, Dimitar Kostov

Economic Policies of the European Union – Concordance or Discordance? /44

Raya Dragoeva

Economic Growth Effect of Government Expenditure on Education /54