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# EFFECTS OF INTERNATIONAL MONETARY INTEGRATION ON INFLATION, ECONOMIC GROWTH AND CURRENT ACCOUNT

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There are various benefits which countries could derive from the renouncement of a national currency hallmarked by unstable external and internal values. The most evident one is the reduction of a long-term inflation rate. The objective of this paper is to test the hypothesis of the positive influence which monetary integration exerts on monetary stability and economic growth. On the other hand, monetary integration can also cause certain economic problems to countries' economies, such as the one of the balance-of-payments adjustment. Hence this paper surveys its influence on the current account balance of national economies. The hypotheses are tested empirically by examining the sample of 42 countries from different regions and of different development levels. The results suggest that the monetary integration influences the inflation reduction in developing countries, but not the achieved economic growth rates. At the same time, the results indicate that monetary integration contributes to an increase in the current account deficit of developing countries, but not of developed ones.

Keywords: international monetary integration, economic growth, inflation, current account

JEL Classification: F15, F31, F41, E31

### INTRODUCTION

Reducing the number of national currencies, as one of the features of the world economy, can be interpreted as a logical consequence of the growing integration of the international commodity and financial markets. In terms of a fierce currency competition, a number of weak national currencies were suppressed by the world's major currencies. Simultaneously to this, the so-called dollarization process, the growing integration of the economies of the European Union,

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led to the establishment of a monetary union and – the creation of the regional currency – euro. The practice of the renunciation of a national currency is presently the most common in Europe, among the former and current transition countries, either outside or within the European Union.

The distinction between the creation of the monetary union and dollarization can be observed from many different aspects. However, what they have in common is a loss of their national monetary sovereignty and, thus, inability to conduct the national monetary - and exchange rate policies.

To achieve an economic and productivity growth is the final goal an economic policy aims for, so the benefits

of monetary integration can also be seen as monetary integration's contribution to accomplishing these goals.

Monetary integration can directly be conducive to increasing the competition and investment. The benefits monetary integration brings arise from the macroeconomic stabilization and elimination of a foreign exchange risk between the members of the monetary integration. Through the effects of monetary integration, macroeconomic stabilization affects the reduction of the inflation rate, the reduction of the real interest rate and the strengthening of the budgetary discipline. The elimination of a currency risk and, therefore, currency conversion fees and a simpler price comparison lead to increased international trade and investments within the single currency area.

The above mentioned does not close the list of possible positive effects of monetary integration on a national economy. It can be expanded through support to the development of the financial sector, as well as

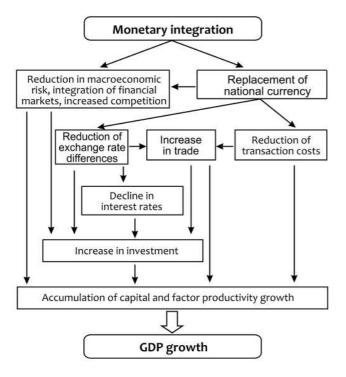


Figure 1 Effects of monetary integration (Stanišić, 2010)

through the advantage of the international use of the monetary union's common currency, realized only if the particular currency takes a significant place on the global financial market.

Beside all the benefits, the replacement of the national currency with foreign or regional money also brings certain costs to the particular country. First of all, the country loses an important mechanism of adaptation in case of balance-of-payments disturbances within the currency area – a possibility to change the exchange rate (Mundell, 1961). Through renouncing the national currency, a possibility to conduct an independent monetary policy also goes astray as there is a risk that the common monetary policy (in the event of a monetary union) or a foreign monetary policy (in the event of dollarization) will not suit the interests of the respective country at that particular moment. Both potential problems could have an effect upon an increase in inflation or causing barriers to economic growth.

The ultimate effect of monetary integration on inflation and economic growth depends on the extent of opposition between positive and negative influences. The objective of this paper is to empirically confirm the fundamental research hypothesis:

- 1. Monetary integration leads to the reduction of a long-term inflation rate;
- 2. Monetary integration leads to increasing a long-term economic growth rate;
- 3. Monetary integration leads to an increase in the current account deficit.

The paper consists of three sections, followed by the conclusion. The first section comprises the review of the main conclusions of previous researches dealing with the same set of issues. The subsequent section includes the description of the applied research methods, as well as data to be used within the research. The section presenting the project results is divided into three subsections due to the subject of the research resp. the fact that the paper surveys the impact of monetary integration on three macroeconomic variables: economic growth, the inflation rate and the balance-of-payments current account. The main

results and limitations of the study are presented in the Conclusion.

#### REVIEW OF PREVIOUS RESEARCH

Accepting a foreign or the regional currency represents an extreme form of exchange rate fixing within the given group of countries. Therefore, the question of macroeconomic effects of monetary integration is related (but not equal) to the question of the fixed exchange rate effects.

In order to draw a comparison between different exchange rate regimes due to their impact on inflation and economic growth, in the first place it is necessary to properly classify the countries according to the exchange rate regime they are applying. Namely, one country's monetary policy is often opposite to the official exchange rate regime. For instance, many developing countries which, after having faced the currency crises in the 1990's, moved to the floating exchange rate, still conduct the monetary policy which often pursues the goal of the long-term exchange rate stabilization. In literature, such an attitude of monetary authorities, which is not completely consistent with the officially accepted floating exchange rate regime, is called «Fear of Floating» (Bayoumi & Eichengreen, 1994). On the other hand, despite the official application of the floating exchange rate regime, in some developing countries the external value of the currency persistently goes down, which is the consequence of frequent devaluations. Nevertheless, changes in the exchange rate can also be minor in the event of applying the fully floating rate of exchange, as is often the case with developed economies during the expansion of the world economy. All this indicates a gap that could be found between the official (de jure) and the real (*de facto*) exchange rate regimes.

The above mentioned inconsistencies between the official exchange rate regime and the actual monetary policy make every research of economic performances based on de jure regimes unreliable. Therefore, contemporary literature contains many attempts to provide a classification of countries according to the regime they conduct, based on observations of exchange rate movements over a longer time period

(Ghosh et al., 1995; Levy-Yeyati & Sturzenegger, 2003; Rogoff et al., 2004). Since 1990, within its reports, the IMF has also been publishing, the classification of countries according to the *de facto* exchange rate regime, placing them into one of the following eight categories: regimes without a specific national currency, currency board arrangements, conventional (adjustable) fixed arrangements, target zones, crawling pegs, crawling bands, the managed floating exchange rate and the freely floating exchange rate.

The classifications made by several authors, as the result of observing the long-time series of the exchange rate behavior of a large number of currencies, are frequently used in research projects, to name some: : Ghosh, et al. (1995, 1998), Rogoff, et al (2004) or Levy –Yeyati, & Sturzenegger (2005).

The first group of authors made a comparison between the official regimes of 147 countries with the exchange-rate movements of their currencies over a period of several decades. Only those countries whose exchange rate behavior is in accordance with the official regime entered the classification of the so-called «consensus pattern», where the countries are sorted out due to the classification of all regimes into three groups: the fixed, floating and intermediate exchange rates.

Unlike this classification, Rogoff, et al (2002) put the countiries into one of five categories of so-called «natural scheme»: fixed, limited flexibility, managed floating, freely floating and freely falling exchange rate behaviour (the last one includes countries in which the annual inflation rate exceeds 40%).

The number of countries according to the De Facto Exchange Rate Regime within the official IMF's classification (De Facto Classification of Exchange Rate Regimes and Monetary Policy Framework) is accounted for in Table 1.

Empirical studies almost always confirm the positive effect of the fixed exchange rate (and monetary integration) on monetary stability (IMF, 1997; Edwards, & Magendzo, 2002; Edwards, & Magendzo, 2006; Meller, &Nautz, 2009). The IMF's study (1997), conducted on a sample of 145 countries sorted out in three groups due to the officially applied exchange rate (the fixed, intermediate and floating exchange rates) and whose

**Table 1** The number of countries according to the De Facto Exchange Rate Regime applied in 2009.

Exchange rate regime	Number of countries
Without national currency	10
Currency board arrangements	13
Conventional fixed rate	68
Target zones	3
Crawling pegs	8
Crawling bands	2
Managed floating exchange rate	44
Freely floating exchange rate	40*
In total	188

Note: The EMU member states are, each, separately classified under the group of countries with the freely floating exchange rate.

*Source:* De Facto Classification of Exchange Rate Regimes and Monetary Policy Framework, IMF, Washington DC, 2010

economic features were observed during a thirty-year time period, indicates the following:

- 1. The inflation rate was the lowest in the group of countries with the fixed exchange rate, only to be followed by countries with the intermediate exchange rate, and finally those with the floating exchange rate.
- 2. Countries with the fixed exchange rate regime whose currency's parity frequently changed had higher inflation rates than those where the currency parity less often changed.
- 3. The growth of money supply is lower in countries with the fixed exchange rate than in those with the floating exchange rate.

The conclusions made are valid regardless of trade openness or of the level of country's development.

Also, the studies based on the previously described «consensus classification» of countries due to the *de facto* exchange rate regime have proven significant advantages of the fixed exchange rate in the sense of its contribution to monetary stability. The results of one

of the studies (Ghosh, Gulde, & Wolf, 2002) are shown in Table 2.

**Table 2** Inflation under different exchange rate regimes, time period 1970–1999.

	Average annual inflation	Median inflation
De jure classification		
Fixed exchange rate	13,3	8,0
Intermediate regimes	22,0	9,6
Floating exchange rate	24,3	9,0
De facto classification		
Fixed exchange rate	9,4	6,9
Intermediate regimes	30,2	11,4
Floating exchange rate	58,8	21,7

Source: Ghosh, A., Gulde, A., & Wolf, H. (2002).

The results indicate that, within fixed regimes, the rates of inflation are lower than in the case of other exchange rate regimes, no matter which classification is used: either *de jure* or *de facto*, and regardless of observing either the average inflation or the median value.

The advantage of the fixed exchange rate over the floating one in terms of achieving monetary stability has, as well, been proven by complex econometric studies in which many other variables that, beside the exchange rate regime, influence the inflation rate, were controlled, such as: money supply growth, the real GDP, the budget balance, the trade coefficient etc.

However, the advantage of the fixed exchange rate over alternative regimes is not sustainable in all cases when countries are grouped according to their income level, i.e. development. Using the «natural classification» of countries due to the de facto exchange rate regime, it is possible to bring to proof that the fixed exchange rate in industrialized countries is linked to a three-percentage-point higher annual inflation than in the countries from the same group which have the floating exchange rate. On the other hand, in the group of developing countries with a low *per capita* income,

the fixed exchange rate is related to lower inflation rates, while in the group of developing middle-income countries, different regimes do not show a statistically significant difference. Such differences in the results can be explained by different circumstances which different income-groups of countries are facing. The main difference reflects in the volume and stability of the foreign capital inflow. Countries at a low development level are not very attractive for the foreign capital, which, therefore, does not considerably reflect to the overall price level. Monetary stability in medium developed countries may be threatened by significant, but unstable, capital inflows. Despite their high amounts, international capital flows in developed countries do not have any destabilizing effects, due to the development of their financial markets and stability of flows. Accordingly, only in the group of countries at a medium development level has an important relationship between the foreign capital inflow and the overall price level been identified.

The relation between the applied exchange rate regime and economic growth is less clear and more difficult to prove than the one between the exchange rate regime and inflation. Various empirical research projects have not managed to disambiguate the question of the relation between monetary integration and economic growth (Bayoumi, & Eichengreen, 1994; Ghosh, et al., 1998; Edwards, 2001; Edwards, & Magendzo, 2001; Levy-Yeyati, & Sturzenegger, 2002; Rogoff, et al., 2004). The reason for that is probably the fact that the effects of monetary integration are difficult to isolate from many other effects influencing the growth of an economy. The already mentioned study, Ghosh, Gulde & Wolf (2002), came to a conclusion that the highest average annual growth rate had been achieved by the group of countries with a managed flexible exchange rate. Econometric methods more complex than those used in this research have not provided any clearer results, either. As a matter of fact, some studies produced contradictory results. For instance, Rogoff, et al. (2004) claim in their study that developed countries with the floating exchange rate achieve higher economic growth rates than those applying the fixed exchange rate, while, in the group of developing countries, there is no statistically noteworthy relationship. As opposed to this, the study conducted by Levy-Yeyati & Sturzenegger (2003) indicates the existence of a significant relationship between the floating exchange rate and economic growth exactly in the group of less developed countries, while in developed ones, this relationship disappears.

### RESEARCH METHODS AND DATA

This paper tends to test the effects of monetary integration on inflation and economic growth by comparing the long-term average of the mentioned economic indicators in the two groups of countries: countries without their own national currency and countries with their respective currencies applying the flexible exchange rate. Countries applying dollarization, currency board or monetary union membership belong to the first group. The classification of countries based on the applied exchange rate regime has been made according to the data from De Facto Classification of Exchange Rate Regimes and Monetary Policy Framework (IMF, 2010). Data on actual inflation and economic growth rates, as well as those on the current account balance of the observed countries, are taken from the publication World Economic Outlook (IMF, 2010).

Testing the hypothesis on the influence of monetary integration on raising monetary stability and increasing inflation rate and economic growth rate will be conducted due to comparison of average inflation rate and economic growth rate, in the period 2005-2009, between the group of countries which have their own currency and the group of countries without a national currency, so that the analysis belongs to so-called "cross sectional" researches. Statistical significance of a observed difference in average values obtained is being tested through using an appropriate statistical tool - two-sided Student's t-test for unpaired data. Since application of the t-test is justified only in case that the data are sampled from a normal population which follows a normal distribution, this assumption is tested using the method of Kolmogorov and Smirnov. All calculations and statistical tests in this paper is done in the Statistical Package for the Social Sciences -SPSS.

According to the experience acquired on the previously mentioned analyses, a sample of countries must be chosen taking into account the differences in their development levels, so this analysis consists of two complementary parts. The first part is devoted to testing the difference in actual inflation rates between developing countries and transition economies, while the second part provides the same analysis conducted on a sample of developed countries.

There are 23 countries applying dollarization or the currency board against a group of 40 countries with the freely floating exchange rate. If observing only developing and transition countries, 21 countries apply dollarization or currency board arrangements and 10 countries have freely floating exchange rates. With an aim to properly sample and make a better comparison,

Table 3 Sample

	Countries with national currency	Countries without national currency
Developed	Australia	Austria
countries	Canada	Belgium
	Israel	Finland
	Japan	France
	Republic of Korea	Germany
	New Zealand	Greece
	Norway	Ireland
	Sweden	Italy
	Switzerland	Luxembourg
	Great Britain	Netherlands
	USA	Portugal
		Spain
		Hong Kong*
Developing	Albania	Ecuador
and transition	Brazil	El Salvador
countries	Chile	Panama
	Mexico	Dominica
	Philippines	Bosnia and Herze-
	Poland	govina*
	South Africa	Bulgaria*
	Turkey	Estonia*
	Congo	Lithuania*
	Zambia	

<sup>\*</sup> Hong Kong, Bulgaria, Estonia, Lithuania and Bosnia and Herzegovina have their own respective currencies but apply the currency board regime.

very small, mostly island, countries with insufficiently diversified economies have been excluded from the group of countries without their national currencies. The 40 sampled countries include 18 developing and transition economies and 24 developed countries. There are 21 countries with their own national currencies with freely floating exchange rates, while a foreign or the regional currency (euro) is used as a legal tender or the currency board is effective. The structure of the sample is demonstrated in Table 3.

# IMPLICATIONS OF MONETARY INTEGRATION ON SELECTED ECONOMIC INDICATORS

### The influence of monetary integration on the inflation rate

As far as the sample of developing and transition countries is concerned, the average annual rates of inflation in a four-year time period (2005-2009) have been observed. The parameters for the sample are presented in Table 4.

**Table 4** The parameters for the sample of developing and transition countries

	Freely floating exchange rate	Currency board and dol- larization
Average value	6,129%	3,373%
Sample size	10	8
Standard deviation	4,001	1,146
Standard error	1,265	0,4052
Minimum value	1,77	1,53
Maximum value	13,43	5,40
Median	4,870	3,335
Lower limit of the confidence interval (95%)	3,267	2,414
Upper limit of the confidence interval (95%)	8,991	4,331

According to the data obtained, the mean value of the average inflation rates in the group of countries with the freely floating exchange rate is 6.13% versus 3.37% in the group of countries implementing dollarization or the currency board. The statistical significance of the difference can be tested using the two-sided Student's t-test for unpaired data. The test result (statistics P=0.0448) suggests a statistically significant difference in average inflation rates; thus it can be concluded that monetary integration contributes to monetary stabilization of developing and transition countries.

When speaking about developed countries, in the time period 2005-2009, the average inflation rate in countries without the national currency was 2.19%, and 1.95% in the group of countries with the freely floating exchange rate. The other parameters are presented in Table 5.

**Table 5** The parameters for the sample of developed countries

	Freely floating	Without na-
	exchange rate	tional currency
Average value	1,953%	2,189%
Sample size	11	13
Standard deviation	0,9806	0,6979
Standard error	0,2956	0,1936
Minimum value	0.10	0,98
Maximum value	3,15	3,43
Median	2,00	2,18
Lower limit of the confidence interval (95%)	1,294	1,767
Upper limit of the confidence interval (95%)	2,611	2,611

The result of the t-test (P=0.4982) suggests that the observed difference in the actual inflation rates is not statistically significant. In other words, different exchange rate regimes in the two defined groups of developed countries did not have an impact on the difference in inflation rates.

The results obtained through the analysis lead to the conclusion that monetary integration can serve as a means of stabilizing the overall price level in less developed economies; however, it cannot influence differences in inflation rates amongst developed countries.

## The influence of monetary integration on economic growth

By analogy with the conducted statistical analysis of the influence of monetary integration on inflation, its impact on the average growth rate of the real GDP can also be tested. This time as well, the development level of countries should be taken into account, so the first part of the analysis includes developing countries and countries in transition, and the second one developed countries. The average growth rate of the real GDP observed relates to the time period 2005-2009.

**Table 6** The parameters for the sample of developing and transition countries

Freely floating exchange rate	Dollarization and currency board
5,00%	5,50%
10	8
1,099	2,010
0,3475	0,7107
3,30	3,13
6,73	9,10
5,315	5,600
4,214	3,827
5,786	7,188
	5,00% 10 1,099 0,3475 3,30 6,73 5,315 4,214

In monetary integrated developing and transition countries, the mean value of average inflation rates is slightly higher (5.5%) than in countries with freely floating exchange rates (5%). The statistical significance of the difference was tested based on Welch's correction. The resulting P value (0.5356) indicates a statistically insignificant difference in the achieved GDP growth rates, which is not the proof of a clear impact of monetary integration on economic growth in this group of countries.

The second part of the analysis is related to the group of developed economies. The parameters for the sample are given in Table 7.

**Table 7** The parameters for the sample of developed countries

	Freely floating exchange rate	Without national currency
Average value	3,11%	2,97%
Sample size	11	13
Standard deviation	0,8017	1,708
Standard error	0,2417	0,4737
Minimum value	2,23	0,98
Maximum value	4,63	6,85
Median	3,08	2,38
Lower limit of the confidence interval (95%)	2,575	1,942
Upper limit of the confidence interval (95%)	3,652	4,006

The difference observed in the achieved average growth rates of the real GDP at an annual level in the four-year time period, 3.11% against 2.97% in favor of countries with freely floating exchange rates is not statistically significant (P=0.8060), so that no clear link between the applied exchange rate regime and economic growth was found this time, either.

No impact of monetary integration on economic growth has been proved in any one of the observed groups of countries; a lack of a clear empirical link between monetary integration and the growth rate seems to speak more about the impossibility of modeling the complex influence of various direct and indirect

variables on economic performances rather than about the absence of such a link.

### The influence of monetary integration on the current account balance

The influence of monetary integration on the current account will be tested in the same way as in the case of the two previous parameters, inflation and the real GDP growth. This time, too, developing and developed countries will separately be observed in order to remove the influence of the different development levels and take into account all the differences existing between these two groups of countries in terms of foreign trade performances and current transfers of income.

The first part of the analysis is related to developing and transition countries. The current account balance (% GDP) is observed in the time period from 2005 to 2009. The parameters for the sample are accounted for in Table 8.

Both groups within developing and developed countries are faced with the current account deficit

**Table 8** The parameters for the sample of developing and transition economies

	Freely floating exchange rate	Dollarization and currency board
Average value	-2,57%	-10,40%
Sample size	10	8
Standard deviation	3,506	9,031
Standard error	1,109	3,193
Minimum value	-7,27	-24,13
Maximum value	2,17	2,60
Median	-2,385	-9,420
Lower limit of the confidence interval (95%)	-5,079	-17,956
Upper limit of the confidence interval (95%)	-0,063	-2,854

and there is an important difference in their values. In the group of countries applying dollarization or currency board arrangements, the average deficit is 10.4% of the GDP, whereas in the group of countries with freely floating exchange rates, the deficit is much lower, 2.57% of the GDP.

That this difference is the consequence of the applied exchange rate regime is confirmed by the t-test's results. Because of unequal variances, Welch's correction was performed. The value of P statistics (P=0.0491) indicates that there is a small possibility of the observed difference in deficit to be random, i.e. that the observed difference is the result of sampling rather than a real difference between the observed groups.

The study results suggest that the lack of the national monetary and exchange rate policies in countries implementing dollarization or currency board arrangements influences the current state of balance to a great extent. The reason for this lies in the fact that the monetary policy of a country whose currency is used in countries with dollarization or the currency board, does not often correspond to the economic situation in countries that have renounced their national currencies. This is the result of dissimilar economic structures and their inconsistent movements in the economic activity, on the one hand, and, on the other, it is the consequence of the poor flexibility and ineffectiveness of other adjustment mechanisms.

When speaking about developed countries, other results can be expected, considering the fact that the EMU member states (comprising the major part of the sample) conduct an active regional monetary policy and along with it are at a similar development level. The economic cycles of these countries, their openness to foreign trade and the commodity structure of exports are much more consistent than in the event of developing and transition economies. Nevertheless, despite many limitations, the balance of payments adjustment mechanisms in these countries function much more efficiently.

The parameters for the sample of developed countries from the aspect of the size of the current account deficit are given in Table 9.

**Table 9** The parameters for the sample of developed countries

	Freely floating exchange rate	Without na- tional currency
Average value	2,21%	0,85%
Sample size	11	13
Standard deviation	8,213	6,326
Standard error	2,476	1,754
Minimum value	-8,58	-9,00
Maximum value	18,13	9,35
Median	1,93	1,15
Lower limit of the confidence interval (95%)	-3,309	-2,976
Upper limit of the confidence interval (95%)	7,726	4,670

The difference noticed in the amount of the current account deficit in the two observed groups of countries (2.21% vs. 0.85%) is not statistically significant (P=0,6510), which confirms the initial assumption that, in developed countries, the difference in deficit is not related to differences in the applied exchange rate regime.

#### CONCLUSION

The research on the effects the renunciation of national monetary sovereignty has on the inflation rate confirms that renouncing the national currency in favor of a strong foreign currency contributes to establishing monetary stability in developing and transition economies, whereas using a foreign or the regional currency within the group of developed countries does not affect a decrease in the inflation rate.

Considering the level of development, the difference noticed in the results can be explained by the fact that, in general, developing countries have unstable national currencies, i.e. a long history of high inflation in the time period prior to the renunciation of the national currency. Moreover, exactly this can be seen as the main reason why some of these countries decided

to officially accept a foreign currency. On the other hand, developed countries which have renounced their monetary sovereignty (first of all the Eurozone member states), had in most cases had relatively low inflation rates (with the exception of Ireland, Italy, Portugal, Greece and Spain) before the introduction of the euro, too, so the effect of monetary integration is statistically insignificant.

In regard to the effect of monetary integration on the economic growth rate, the conducted analysis did not prove its existence in developed countries, nor did it prove its existence in developing ones. However, this conclusion should be interpreted with caution, having in mind the difficult isolation of some effects in a variety of factors determining the rate of economic growth.

The study results are also indicative of the fact that the lack of a national exchange rate policy in developing countries which decided to officially implement dollarization affects the current state of balance, thus causing a sharp increase in deficit. The conclusion is not surprising since the monetary policy of the most developed countries cannot suit the countries at a considerably lower level of development and weaker economic and export structures and the lower productivity growth rate. It is also often the case that, although reduced, inflation in developing countries applying dollarization is at a higher level than inflation in the country whose currency is used (Balassa-Samuelson effect), so it comes to a steady loss of price competitiveness on the world market.

Unlike the group of developing countries and countries in transition, the impact of monetary integration on deterioration in the current account balance has not been proven in its member states, i.e. in developed countries. The reason is that the Eurozone member states (making up the largest portion of the sample) pursue an active common monetary policy, as well as that they are at a relatively similar development level, so the economic cycles of these countries and their openness to foreign trade and the commodity structure of exports are much more consistent than developing and transition economies are.

Finally, the basic limitations of the presented study and avenues for future research on the influences of monetary integration should also be stressed. This is primarily related to the statistical tool applied for testing the hypotheses. Although frequently used in literature and appropriate for the comparative analysis carried out in this paper, in certain cases, the applied methods cannot clearly identify and isolate the impact some variables have on inflation, the current account and, above all, economic growth. Namely, macroeconomic indicators are the ones affected by an indefinitely large number of variables whose influences intertwine, as is the matter with any social system, which makes every modeling difficult and results unreliable. The goal of future research in this field is to specify more complex econometric models that will «control» the impact of a greater number of independent variables, not just economic development, as it is the case in this study.

Also, the conclusions of the conducted analysis make room for future research which would be a scientifically and methodologically valid way to predict the effects of the introduction of the euro in Serbia, which in recent years has been an increasingly discussed topic among experts.

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### REFERENCES

Bayoumi, T., & Eichengreen B. (1994). Economic performance under alternative exchange rate regimes: some historical evidence. In T. Bayoumi, B. Eichengreen, P. Kenen, F. Papadia, & F. Saccomanni (Eds.). *The International Monetary System* (pp. 257-297). Cambridge, England: Cambridge University Press.

Berg, A., & Borensztein, E. (2000). *The Pros and Cons of Full Dollarization*, IMF Working Paper WP/00/50, Washington, DC.

- ECB (2003), Exchange Rate Regimes for Emerging Market Economies, ECB Monthly Bulletin, February, pp. 51-62.
- Edwards, S. (2001). *Dollarization and Economic Performance:* An Empirical Investigation, NBER Working Paper No. 8274, Cambridge, MA.
- Edwards, S. (2002). The Great Exchange Rate Debate after Argentina, NBER Working Paper No. 9257, Cambridge, MA.
- Edwards, S., & Magendzo, I. (2001). *Dollarization, Inflation and Growth*, NBER Working Paper No. 8671, Cambridge, MA.
- Edwards, S., & Magendzo, I. (2002). *A Currency of One's Own?*. Paper presented at the conference organised by the Swedish Riksbank, Stockholm, Sweden.
- Edwards, S., & Magendzo, I. (2002a). *Dollarization, Inflation and Growth*, NBER Working Paper, No 8671, Cambridge, MA.
- Edwards, S., & Magendzo, I. (2006). Strict dollarization and economic performance: an empirical investigation, *Journal of Money, Credit and Banking*, 38(1), 269-282.
- Ghosh, A., Gulde, A., Ostry J., & Wolf H. (1995). Does the Nominal Exchange Rate Regime Matter?, IMF Working Paper 95/121, Washington, DC.
- Ghosh, A., Gulde, A., Ostry J., & Wolf H. (1998). Does the Exchange Rate Regime Matters for Inflation and Growth? *Economic Issues*, No. 2, IMF, Washington, DC.
- Ghosh, A., Gulde A., & Wolf, H. (2002). Exchange Rate Regimes: Choices and Consequences. Cambridge, USA: MIT Press.

- IMF (1997). Exchange Rate Arrangements and Economic Performance in Developing Countries. Washington, DC.
- IMF (2010). De Facto Classification of Exchange Rate Regimes and Monetary Policy Framework. Washington, DC.
- IMF (2010). World Economic Outlook. Washington, DC.
- Levy-Yeyati, E., & Sturzenegger, F. (2003). To Float or to Fix: Evidence on the Impact of Exchange Rate Regimes on Growth. *American Economic Review*, 93(4), 1173–1193.
- Marković, D., & Furtula, S. (2009), Unilateralna evroizacija kao monetarni fenomen. *Ekonomski horizonti*, 11(2), 33-46.
- Meller, B., & Dieter, N. (2009). The impact of the European Monetary Union on inflation persistence in the Euro Area. Retrieved April 2, 2010, from: http://ssrn.com/abstract=1362580
- Mundell, R. (1961). A theory of optimum currency areas. *American Economic Review*, 51(3), 653-678.
- Mundell, R. (1991). *Do Exchange Rates Work? Another View,* IMF Working Papers 91/37. Washington, DC.
- Rogoff, K., Husain, A., Mody, A, Brooks, R., & Oomes, N. (2004). *Evolution and Performances of Exchange Rate Regimes*, Occasional Paper 229, IMF. Washington, DC.
- Stanišić, N. (2010). *Izazovi međunarodne monetarne integracije*. Neobjavljena doktorska disertacija, Ekonomski fakultet Univerziteta u Kragujevcu, Srbija.

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