

The impact of adopting the euro on the Croatian economy: What can be learned from other countries?¹

Utjecaj usvajanja eura na hrvatsko gospodarstvo: što se može naučiti od drugih zemalja?

Abstract

In this paper the impact of adopting the euro in Croatia is analysed using experiences of other countries which have passed through this process in the last decade and which are comparable with Croatia in many aspects. The process of adopting a currency different from the one that has been used for more than twenty years presents a very important economic question for each country. In this period preceding to adopting the euro, there is an opportunity to analyse this process in the countries which went through it in the past. The result of this paper shows the impacts of adopting the euro in the European countries. The selected countries, which are adequate for analysing the effects of adopting the euro, are: Portugal, Ireland, Greece, Spain, Slovenia, Slovakia, Estonia, Lithuania and Latvia. These countries have been selected for different reasons. The majority of these countries have some similarities with Croatia, which are shown in this paper via relevant economic indicators. These results are significant for Croatia and show a positive influence on the Croatian market on a long-term basis. This paper is relevant and has a practical basis both for Croatia and other countries which will go through this process in the future.

Keywords: euro, European Union, Croatia

JEL classification: E31, E42

Sažetak

U ovom je radu utjecaj usvajanja eura na hrvatsko gospodarstvo analiziran putem iskustava drugih zemalja koje su u prošlom desetljeću već prošle kroz ovaj proces te su usporedive s Hrvatskom u mnogim aspektima. Proces usvajanja valute drugačije od one koja se koristila više od dvadeset godina predstavlja važno ekonomsko pitanje za svaku zemlju. U ovom razdoblju koje prethodi usvajanju eura leži prilika za analizu procesa u zemljama koje su kroz taj proces već prošle. Rezultat ovog rada prikazuje utjecaje usvajanja eura u europskim zemljama. Odabrane zemlje adekvatne za analizu utjecaja usvajanja eura su: Portugal, Irska, Grčka, Španjolska, Slovenija, Slovačka, Estonija, Litva i Latvija. Navedene su zemlje odabrane iz više različitih razloga. Većina ovih zemalja ima sličnosti s Hrvatskom, koje su prikazane u ovom radu putem relevantnih ekonomskih pokazatelja. Dobiveni rezultati su značajni za Hrvatsku te pokazuju dugoročno pozitivan utjecaj na hrvatsko tržište. Rad je relevantan i ima praktičnu podlogu za Hrvatsku i druge zemlje koje će prolaziti kroz ovaj proces.

Ključne riječi: euro, Europska unija, Hrvatska

JEL klasifikacija: E31, E42

¹ The views expressed in this paper are the views of the authors and do not necessarily express the views of the institution in which they are employed.

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1. Introduction

The impact of adopting different currency in any country has an enormous impact on the economy. Croatia has had its own currency since 1994. Becoming a member of the European Union, Croatia has made a strategic decision in its further development. Being a member of the Union does not mean to have an obligation to introduce the Union's currency. Therefore, adopting the euro in the Croatian market is one of extremely important strategic decisions and has to be discussed from different standpoints of economy members (the government, monetary policymakers, scientists, bankers and the public) because this strategic decision will have an impact on everybody. Croatia has actually been on the path to adopting the new currency for a long period. There is an opportunity to research the real impact of adopting the euro in the countries that are already using this currency and have had some important results from this process. Croatian policymakers should take advantage of this experience to make as precise predictions as they can. Croatian inhabitants are 0,83% of the European Union (EU) population, 1,2% as concerning the surface and Croatia presents a small and open EU member country.

The main topic of this research is analysing the effects of adopting the euro in Croatia. In this paper, some examples of some European and Monetary Union (EMU) Member states and their experience in the process of adopting the euro will be analysed. Ways of functioning of the Monetary Union and the procedures that have to be fulfilled to enter this Union will be researched. To do successful research, it is obligatory to set up multiple goals. The potential social benefits from adopting the euro in Croatia will be researched. To reach this goal, the level of euroization in Croatian economy, the effect of joining the eurozone in the selected countries' economic policy, the meaning of convergence for functioning of the Monetary Union and the level of convergence in Croatian economy compared with other EMU members have to be analysed and defined. Besides, the goal is to examine the utility of regional integrations in a small, open, EU member country on its way to introduce the new currency.

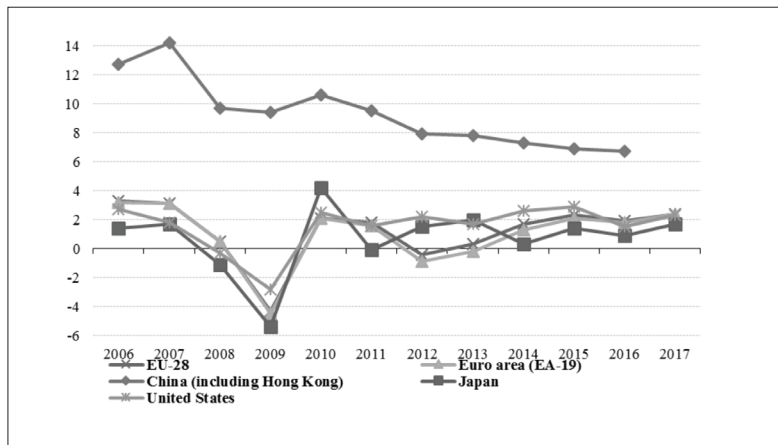
The main goal is to make applicable results

because the process of convergence and effects of adopting the euro in the selected members of the Economic and Monetary Union will be examined. In this paper, the cost and benefits of adopting the euro on the Croatian economic development will be determined. The experience of the countries that have passed this process can be analysed and the way of optimization can be found. To reach the main goal in this paper the concepts of euroization will be explained, the difference between euroization and dollarization will be described, characteristics of the countries that have been dollarized will be analysed in order to see the benefits of official euroization or dollarization. In addition, in order to justify this statement, the theory of optimum currency area and characteristics of monetary integration have to be taken into consideration. After introducing the theory of optimum currency area, monetary integrations, and the relation between convergence and functioning of the Monetary Union focusing on the European Monetary Union, its development and convergence criterium will be analysed and explained in detail.

All this is an excellent basis to research the impact of introducing the euro in the selected countries, analysing the basic economic indicators, advantages and disadvantages of adopting the euro in these countries. Finally, all these aspects will be applied in the Croatian example. In this thesis, the level of euroization and the foreign currency exchange policy and convergence of Croatia breaking its path to the European and Monetary Union, and at the end specific advantages and disadvantages of adopting the euro in Croatia will be analysed. This paper deals with the good prospects of the future development due to the fact that it is of present interest. Different scientific methods will be used: the method of analysis, synthesis method, induction and deduction method, classification method, comparative method, descriptive statistics.

The paper is divided into four parts. After introduction, the second part analyses euroization in European countries, the optimum currency area theory, the main benefits and costs of adopting the euro, as well as economic convergence and effects of adopting the euro in EU member countries in order to discuss and ultimately find if there is a

Figure 1 Real GDP growth, 2006-2017 (% change compared to the previous year)



Source: Eurostat, OECD, World Bank, (2019).

relevant basis for introducing the euro in Croatia. The third part analyses the real effects of adopting the euro in Croatia by tackling two types of criteria related to the EU as well as the important five convergence criteria stipulated in Maastricht. The conclusions are laid out in the final, fourth part of this paper.

2. Optimum currency area theory and euro adaptation

For this paper, it is important to notice the cyclical trend between the EU countries and the other global force, which is the United States of America. In the period of crisis, the falling of real gross domestic product (GDP) is visible in the United States of America, the European Union, Japan, and even in China. It can be concluded that the theory of creating several large trade and currency areas exists in the real economy.

The optimum currency area theory has been defined as the expansion of the area where there is a domination of one currency and an increase in micro-economic efficiency, but at the same time there is a lower possibility of monetary policy to respond to an economic shock that will have different effects among the regions in this area (McCallum, 1999).

It is usually wider than the territory of one country,

although in theory, it could cover just a part of one country. For the optimum currency area, there are several criteria for optimum conditions. It includes the labour mobility and other production factors, price flexibility and labour wages, economic opening, diversification in production and consumption, similar inflation rates and fiscal and political integration (Belullo et al., 2000). This theory could be observed in the context of choosing the optimum exchange-rate regime.

The main benefits and costs of adopting the euro are shown in Table 1.

Analysing different authors as concerning advantages and disadvantages of adopting the euro, it can be concluded that euroization is economically approved in countries where there is less confidence in the policy creators, or where there is no full confidence in currency among the population. Euroization, in this case, presents dependability on the future economic policy. If there is a small and open economy well integrated with other neighbour countries, the effect of euroization is positively approved. In this point, it can be mentioned that there are new additional criteria for dollarization/euroization. In the first place, good relations with a country the currency of which is being adopted (the United States of America for dollarization, the European Union for euroization). Nevertheless, there is

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Table 1 Main benefits and costs of adopting the euro

Main benefits of adopting the euro	Main costs of adopting the euro
Reduction of transaction costs	Loss of monetary sovereignty
Reduction of exchange rate risk	Loss of the exchange rate policy
Prevention of speculative attacks	Direct costs of the euro adoption, conversion and accounting changes
Reduction of accounting costs	Short term effect on prices
Higher price transparency	Transfer of funds to the ECB
Improving countries' risk perception	Participating in providing financial assistance to other Member States
Improving economic integration with other countries	
Stabilization of capital flow	
Low inflation rate	
Higher level of foreign investment	

Source: Ćorić et al. (2017).

one more difference between the United States of America and the European Union. The United States of America is not defending dollarization of one country and the European Union considers euroization as the end of a long process (the exception of Kosovo or Montenegro), but the European Union is allowing the adopting of the Euro after being an EU member and a minimum of two years of ERM II and the convergence criterium stipulated in Maastricht. Each country is supposed to estimate the advantages and disadvantages and the interest in adopting euroization. Besides, there is a theory of Optimum Currency Areas by Robert Mundell (1961).

McKinnon (Bilas, 2005) defines the optimum currency area as an area with full employment, low inflation and balanced balance of payment. These are some conditions the country is supposed to have to become the optimum currency area. As McKinnon puts it, it is important to analyse the implications of different size and structure of the economy in choosing the optimum exchange rate. For small and open economy as it is with Croatia, there is a higher influence of the exchange rate on prices. Therefore, it can be concluded that it is better for Croatia to adopt the wide-area currency than to use its own currency. The criteria (Brkić and Šabić, 2018) speaking in favour of euro adoption in Croatia are trade and financial integration, the synchronisation of business cycles and political integration.

The analysis of the period from 1990 (Belullo et al., 2000) has proved that for countries such as Poland, Slovakia, Hungary, Austria, Slovenia and Croatia, the Middle Europe presents the optimum currency area. These countries are historically connected, they are

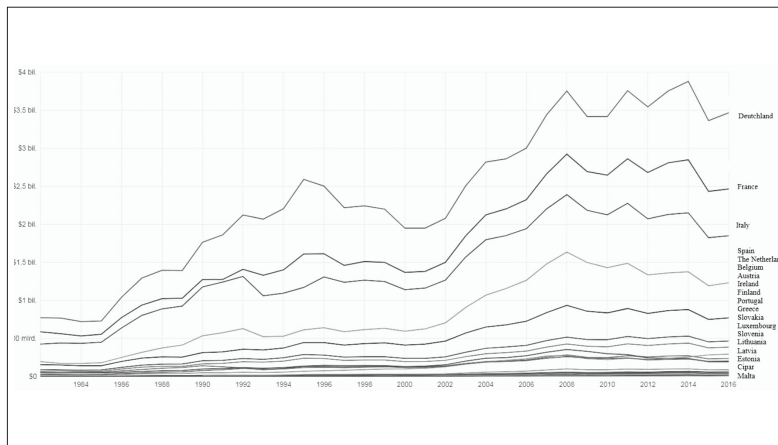
highly integrated with trade and labour mobility. Therefore, there is an interest in adopting the same currency and monetary policy. This is proof that these countries are integrated. However, if there is an economic shock in one country it will have a certain impact on other country/countries. It is known as convergence.

It is sufficient to have a high level of convergence or a high level of integration to create the optimum currency area (Mongelli, 2002). If it is a lower level of convergence or integration, it will have an influence on a higher spread between incomes and consequently, domination will be taken over by the principles of monetary independence.

Except for all the benefits that have been mentioned before, there are many other advantages such as macroeconomic stability, the access to a higher range of financial market and a better financial possibility. The highest cost of monetary integration is losing monetary policy control. The fundamentals of the European Monetary Union lie in the theory of the optimum currency area. What is expected in the future is that the European Union Market will contribute to a higher competition between financial intermediaries and consequently, lower financial services prices.

Economic convergence (Halmai and Vasary, 2010) is a process of approaching economic indicators among countries in order to become highly industrial developed countries. Its impact is that regional parts will have greater benefits of creating the union if there is a high level of international trade, labour force mobility among them or where economic crises are highly connected etc.

Figure 2 Gross national product in countries using the euro in period from 1984 - 2016



Source: World Bank (2019).

The decision about joining the monetary union depends on the relation between costs and benefits reflected in relation among the members of the Monetary Union. Benefits are higher when there is an increase in trade among the countries. Besides all the mentioned above, it can be concluded that in order to have some benefits from creating the Monetary Union, economy has to be in convergence. If there were a low convergence level of new members it would cause many problems in the Monetary Union. In the process of accession to the monetary integration, the rate is fixed. Therefore, it would result in too high disparity inside the common currency area of the Monetary Union. Consequently, business could be slack in some member countries. Less developed countries would be exposed to high market competition that would be above their production possibility. In the developed countries there would be a fear of losing credit rating and currency outflow because of crediting a country where payments exceed receipts. The level of convergence has to be precisely stipulated. It is related to nominal, real and structural convergence. Real convergence is the most important factor for optimal functioning of the Monetary Union.

Each country that is preparing to adopt the euro has an advantage because of the previous experience

the other similar countries have passed. Therefore, in this part the effects of adopting the euro in EU member countries will be analysed, while it is important to consider the countries that are comparable with Croatia. Croatia's relationship to the single currency (Tokarski and Funk, 2019) is very special. The country's economy is largely 'euroised'. Around 75 % of assets and 67 % of liabilities are denominated in euros. So, the most likely candidates to introduce the euro are the EU's three poorest countries: Romania, Bulgaria and Croatia.

Figure 2 shows the gross national product in countries that have adopted the euro. The rising in gross national product after adopting the euro in the analysed countries can be seen here. Austria, Belgium, Finland, Luxembourg, Germany, Spain, France, Ireland, Italy, The Netherlands and Portugal introduced Euro in 1999. If we compare the period before introducing the Euro and period after introducing the Euro, we will see a more intensive rising of the GNP in those countries.

A large number of countries (11) adopted the euro in 1999. In the initial stage of this paper, it was considered which country could be observed to make a good comparison with Croatia. The selected countries which are adequate for analysing the effects of adopting the euro are; Portugal, Ireland, Greece,

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Table 2 Groups of analysed countries

Groups of analysed countries	Countries
Large countries	Spain
Middle-sized countries	Portugal, Ireland, Greece
Small countries	Slovenia, Slovakia, Estonia, Lithuania, Latvia

Source: Eurostat, ECB (2019).

Spain, Slovenia, Slovakia, Estonia, Lithuania and Latvia. These countries have been selected for different reasons. The majority of these countries have some similarity with Croatia, which is shown in this paper via relevant economic indicators.

The basic economic indicators of the selected countries show that one of the analysed countries is a large country, which means more than five percent of gross domestic products (GDP) of the European union (EU), the three of them are middle-sized, which means between one and five percent of GDP of the EU and six of them are small, below one percent of GDP of the EU.

All the mentioned countries are located on the edge of the European economic union and they were affected by the European crisis. Slovenia, Estonia, Lithuania and Latvia have a much smaller surface area and less population compared to Croatia. Slovakia has a similar area and a number of inhabitants. In order to analyse the mentioned

countries that have a certain similarity with Croatia, the real GDP, GDP ratio of the observed country and the GDP of other members of the EU will be used.

The basic benefits of introducing the euro are analysed in the previous chapters and considering the theory of the optimum currency area, it includes higher stability and better access to capital market. The basic indicator of economic growth is GDP per capita. Nevertheless, introducing the euro in some of the analysed countries came into being at the same time when they were experiencing the economic crisis. Adopting the euro is relevant for the growth of investments, but they were not spread equally (Ryan, 2011).

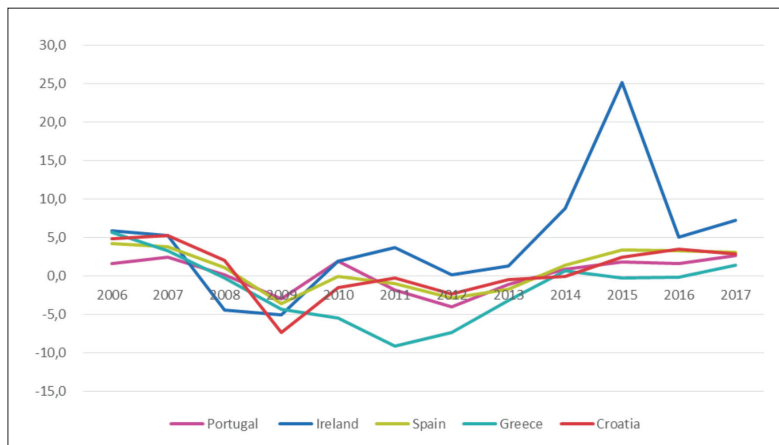
When Estonia was in the same period as Croatia is passing now, it showed a good preparation in economic indicators in the period of entering the Eurozone compared with Latvia (Becker, 2009), which was not so successful (Figure 3). In that period, Latvia was not a member of the eurozone, and it could

Figure 3 Real GDP growth, 2006-2017 (% change compared to the previous year, % per annum) – Estonia and Latvia vs. Croatia



Source: Eurostat (2019).

Figure 4 Real GDP growth, 2006-2017, (% change compared to the previous year, % per annum) – Portugal, Ireland, Spain and Greece vs. Croatia



Source: Eurostat (2019).

not get a loan from the EU funds. There was a high unemployment rate and some of the banks failed, it was strongly affecting the liquidity of the country and it almost became bankrupt. Latvia shows an example of stagnation in ERM II in the period of crisis, intensified by the wrong fiscal discipline and a great influence of crisis (Darvas, 2009).

At that time Ireland was in Eurozone despite of having similar economical problems Croatia is facing now. In the last ten years, Ireland has been mentioned as a role model for Croatia, and that is why it is important to mention its scenario. The country entered Eurozone, it reduced taxes and bureaucracy to a minimum, and became a European heaven for big investors and corporations. The famous Irish boom lasted (Bergin et al., 2009) for ten years, until the crisis of 2008 (Figure 4). Then corporations (Ryan, 2011) withdrew from the market, and Irish banks lost their big clients. They did not have capital from new loans, and they lost the possibility to charge existing debts from their citizens who were jobless. The problem of the Irish economy was too high dependence on financial and construction expansion, and at the same time, foreigners owned IT and pharmaceutical industries. In addition, their real estates were at too high a price level, which was excellent for renting, but in the short term,

because they were not realistic prices, they did not stimulate a new industry that would be a generator for developing the Irish economy.

Greece is facing a problem as well; there are protests against privatization, now there is a harmonized tax policy and many other problems that are the result of a long period of administrative neglect and misuse. It is reflected on its GDP (Figure 4). The problems of this country compared to the other countries analysed in this paper are the biggest. It is important to mention Portugal (Figure 4), also the country that was in the Aid program of the EU on 17 May 2011. Some structural problems like over importance of public sector are similar to the problems Croatia is facing.

Portugal (Voight, 2010) was a poor, underdeveloped country. In twenty years, it has become a modern country, but its economy could not fully adapt to modernization. There are many young, educated people working for minimal (Fernandes, 2011) wages and salaries. Many inhabitants have a lower degree of education. In Portugal having a cheap labour force is preferred; there are the examples of bad investments and the structure of society is polarized. There are high spreads between the poor and the rich with the same future prospects.

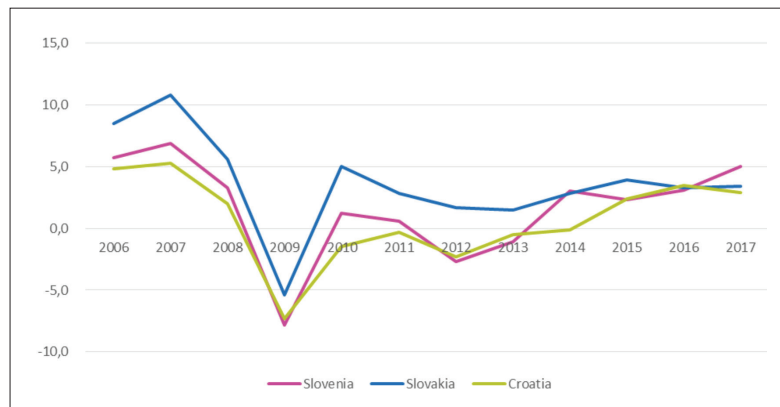
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Figure 5 Real GDP growth, 2006-2017, (% change compared to the previous year, % per annum) – Slovenia, Slovakia vs. Croatia



Source: Eurostat (2019).

Portugal also has a saving policy and there is a problem with the health system, pension system and educational system. There are many people employed in the public sector (Centeno, 2001). This is a negative circle because of a low employment policy and the educational system. It should be a generator for development and a fundamental part of creating a better society. In addition, the citizens are in debts; the average family in Portugal has taken loans to provide a basis for a decent living. Portugal refused Aid from the EU before their bankruptcy, and took less favourable loans. Portugal and Croatia share one more similarity, a high value-added tax.

Although the economic problems of Greece, Ireland and Portugal have different causes, fiscal consequences (Koczor and Tokarski, 2011) and their connection with Eurozone are the same, and they were the reason to look for EU Aid.

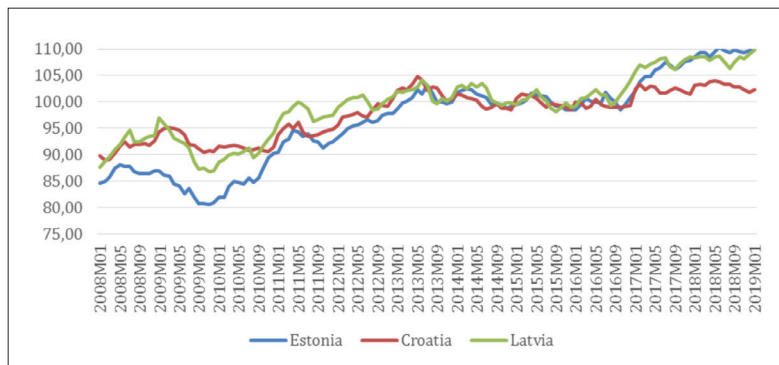
Spain (Hyde, 2017) is a country with a considerable rate of unemployment. There was a large increase in the real estate market, but after its failure it resulted in a considerable rate of unemployment, and a foreign investments slack (Figure 4). Spanish entrepreneurs (Becker and Jaeger, 2011) are not competitive compared to the European ones, as their administration is slow and ineffective (The Economist, 2011). There is no agility following cur-

rent economic changes.

The European Financial Stability Facility was established in 2010. Its main goal is to set up the financial stability within the European Union. Nevertheless, it created problems for some countries, such as Slovenia (Bloomberg, 2010), Germany and Slovakia. In addition, at the beginning of the creation of the unique common currency, there were predictions about divergent development of the central countries and the peripheral ones. This is the reason for establishing the Cohesion Fund. Portugal, Ireland, Greece and Spain have been the common users of this fund over a period between 2014 and 2020. The money from the Cohesion Fund from 2014 to 2020 was planned to be directed to Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Croatia, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovakia and Slovenia. The goal of the fund was to prevent problems similar to those in the analysed countries because that could be a generator of great problems in the European economic and monetary union.

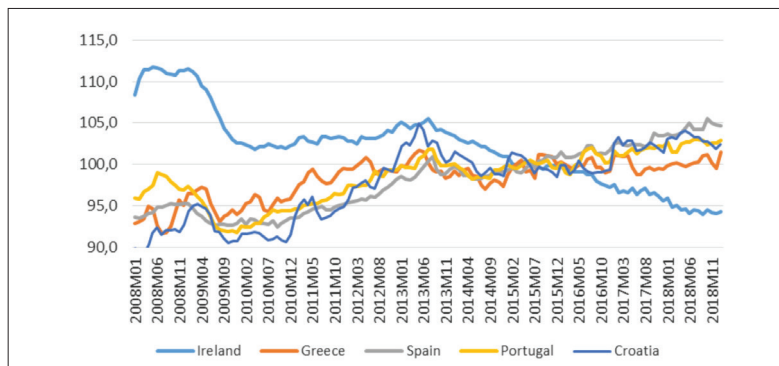
Too big investments in real properties, too much relying on financial speculations, and fewer investments in long-term projects cause the main mistakes in investments. At the end of this chapter, it can be concluded that adopting the euro should help to increase investments as well as GDP. This is obvious

Figure 6 Harmonised index of consumer prices – food for period 2008-2019; Estonia, Latvia and Croatia index, 2015=100



Source: Eurostat (2019).

Figure 7 Harmonised index of consumer prices – food for period 2008 - 2018; Portugal, Ireland, Spain, Greece and Croatia index, 2015=100



Source: Eurostat (2019).

from the analysis of the mentioned countries. Being a member of the Union has helped and improved stability, which countries on their own would not be able to achieve. Adopting the euro insured a higher development in the analysed countries up to 2008 and the period of the great economic crisis. The most important disadvantages occur on the domestic and local levels, varying from country to country. In general, they occur due to failed investments, the lack of a good strategy for the future and encumberment with debts without justifying the strategy of devel-

opment. The experience of the analysed countries should be used as a learning example. One of the negative effects of introducing the new currency is rising of prices. They are the most common negative effects because of their direct influence on consumers and citizens. There is no other topic of economic policy giving rise to so many confusions and considerations among the Member states of the European Union, then that of the introduction of the euro. Consumers are expecting a strong inflation and the official statistics show the price rises in the countries

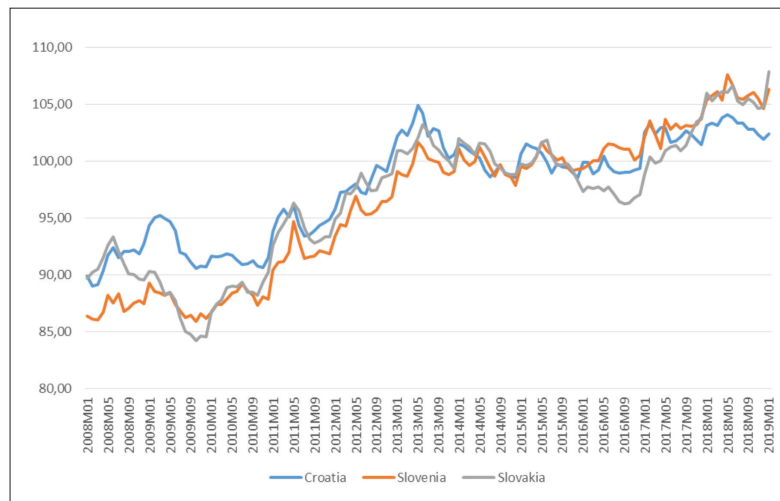
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Figure 8 Harmonised index of consumer prices – food for period 2008-2019; Slovenia, Slovakia and Croatia index, 2015=100



Source: Eurostat (2019).

that have adopted the euro.

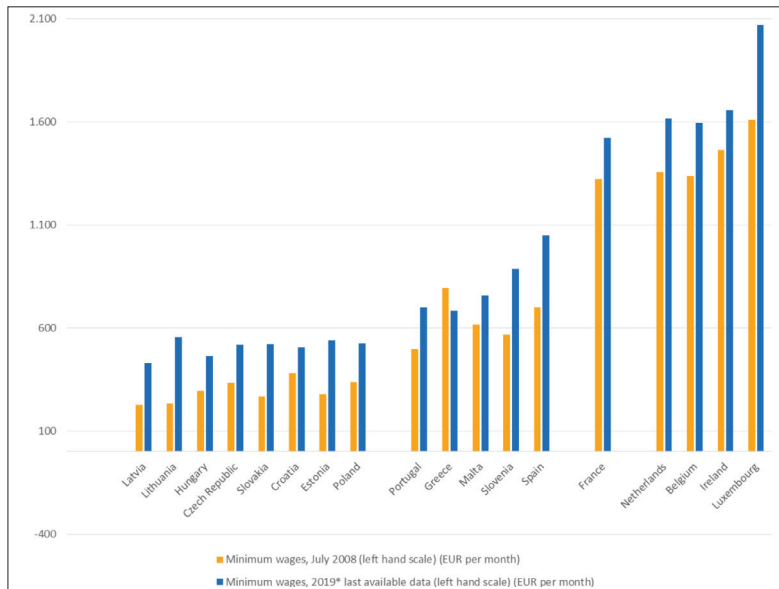
Consumer prices of food, being necessary to sustain life, have risen for the last ten years in almost all the analysed countries having adopted the euro. This is obvious in Estonia and Latvia where their rise of food prices was higher compared to this in Croatia. In addition, the same increase has occurred in Portugal, Spain and Greece. Taking into consideration the analysed countries, this rising of prices has not been recorded in Ireland. If compared with Slovakia, Slovenia and Croatia, the lowest price rising was in Croatia, which has not adopted the euro yet. So, it can be concluded that this negative effect is the real one Croatia will face after adopting the new currency; mild price rising (Pufnik, 2017) can be expected in Croatia. This is the result of the costs of conversion, rounding up prices or making wrong perceptions. This influence on HICP is around 0,1-0,6 percentage points. This effect is noticed in the service sector and products that are cheaper, such as restaurants and accommodation services, hair-dressing services, sporting services, books, bakery products etc. In addition, there is a possibility of prices falling because of higher competitiveness after

adopting the euro. Generally, prices are relatively high in Croatia, compared with other European countries. Therefore, as it has mentioned above, the impact on price increases will be mild. Croatia is intensively preparing (CNB, 2017) to adopt the euro and it has to figure out methods to protect customers from unnecessary price increase because of rounding up of prices, etc.

The minimum incomes in the European Union countries comparing two years, 2008 and 2019, have been analysed. In each country, with the exception of Greece, the rise of minimum wages has recorded.

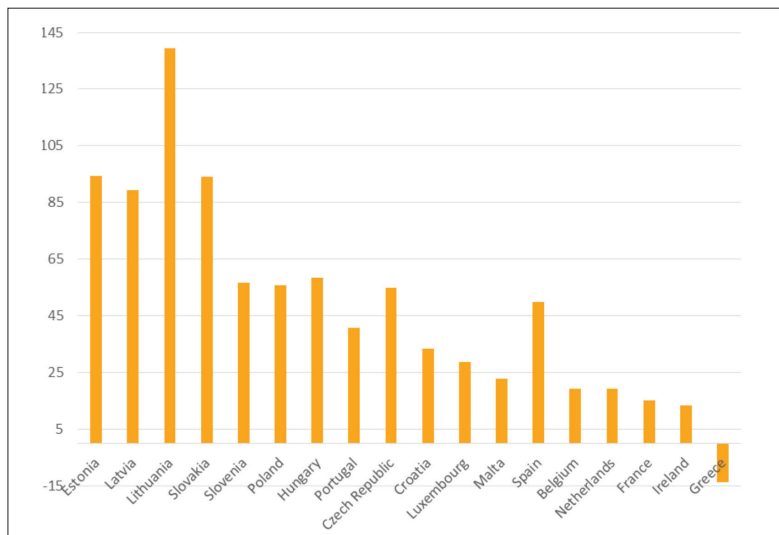
In Figures 9 and 10 it can be seen that the highest rate of change is recorded in Lithuania (140%), Slovakia (94%), Estonia (94%), Latvia (89%) and Slovenia (57%). These countries are those that adopted the euro in the period from 2007 (Slovenia) to 2015 (Lithuania). The rate of change of minimal incomes is lower in the countries that have not adopted the Euro: Poland (56%) and Hungary (58%), the Czech Republic (55%) and Croatia (33%). The lowest rate of change has noted in the group of countries having the highest minimum wages among the analysed countries. This is a very important indi-

Figure 9 Minimum wages 2008 vs. 2019 in EU member countries, EUR per month



Source: Eurostat (2019).

Figure 10 Rate of change (%) in minimum wages, 2008 vs. 2019



Source: Eurostat (2019).

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cator for Croatia, which has the most similarities with this group of countries.

Besides, this part of the analysis is related to the process of price rising and should be observed as a whole. Therefore, it is possible to conclude that price rising is expected with the coming of the euro in Croatia, but also, it is realistic to expect the rising of minimum incomes. In the long term, prices are expected to return on reasonable levels in many sectors. Wages should follow productivity. The theory of optimum currency area (Čehulić, 2012) shows that the introduction of euro for smaller European countries does not have a more serious long-term alternative.

3. Analysing the real effects of adopting the euro in Croatia

At the beginning of this paper, it was necessary to discuss if there is a relevant basis for introducing the euro in Croatia. This has been explained in the previous part of this paper. For the present topic of adopting the euro in Croatia, the background or the basis of the Croatian economy for adopting the new currency will be discussed and whether the euro is the right strategic decision for Croatia will be finally concluded. Croatia's top five (Čorić and Deskar-Škrbić, 2017) import and export trading business partners are Italy, Germany, Slovenia, Austria and Hungary, all eurozone members. These findings mean that the euro adoption in Croatia would significantly reduce the costs of transactions in trade with these partners. In addition, to have some long-term benefits for Croatia, implied by joining the euro area, it is important that trade and economic relationships be increased, as well as international capital flows. This benefit occurs if economy is strongly synchronized with the euro area. There are findings where the correlation of Croatia with euro area can be seen. This correlation is 71,2% with the European area and 79,8% with EA12 (cyclical component of real GDP, percentage deviations of long-term trend). A high level of euroization in Croatia began before its independence because of inflation. The exchange rate policy in Croatia at the beginning of its independence was the legacy of an unstable system. This period was marked with hyperinflation, decrease in investments generally, a change in centralized revenue. After achieving independence and the organization of a central bank

in 1990, the institution for stability of the Kuna was established. In the period from the year 1992, there has been a high unemployment rate. After that a stability program was created the goal of which was to reduce inflation. Nevertheless, this goal affected the price competition. All of the mentioned above affected informal euroization and the introduction of foreign currency.

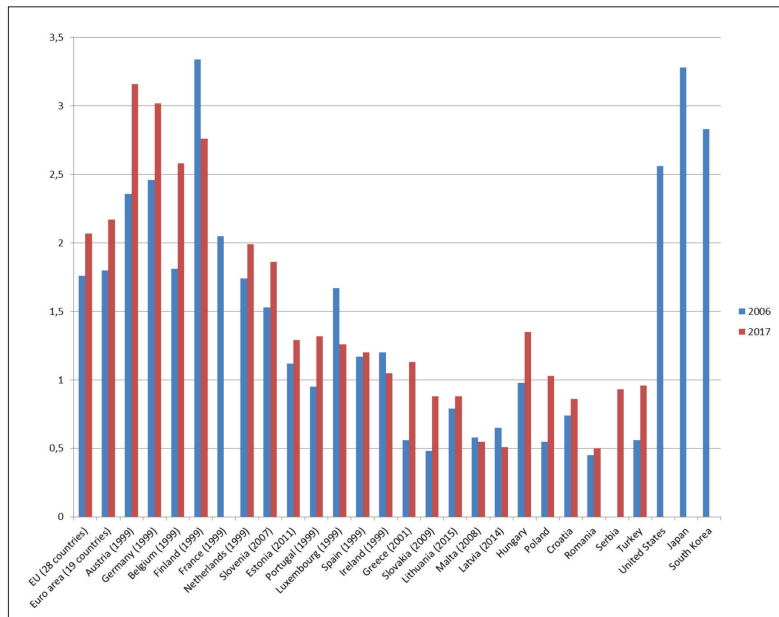
After achieving its independence, Croatia became highly dependent on import. The structure of banking sector shows a high level of presence of foreign banks. The banks present on the Croatian market belong to the European Union area. Savings and loans are mostly in foreign currencies. The structure of loans in Croatia shows that in the first place, loans are related to foreign currencies. There is a high level of foreign deposits because of the banks that approve loans related to other currencies. Therefore, it can be concluded that there is still a high level of euroization in Croatia. If the Croatian type of euroization with other East or Middle European countries is compared, it is noticeable that there is a difference. In other countries, savings are mostly in the domestic currency and the banks are gaining loans from abroad. The Croatian economy is highly affected by deficit and the rising of external debt and there was a long period of the appreciation of the kuna. In this situation, every change of monetary policy presents a high risk. In Croatia, there has been a low inflation rate since 1994 because of the currency policy. With high euroization, citizens have already opted for the euro in some way.

Before entering the European Union, many reforms need to be realized. They include the pension reform, the labour reform, the privatization of banks.

In the optimum currency area theory mentioned in the previous part of this paper, Croatia should have the most trade relationships with the European Union countries. In reality, the main characteristic of the international trade among Croatia and other European countries is a high level of trade between them, in the structure of both export and import, even more than 60%.

In the previous part of the paper, two types of criteria related to the EU have been mentioned. In this period, there are the important five convergence criteria stipulated in Maastricht. These criteria are

Figure 11 Research and development expenditure, % of GDP in the EU and in non-EU countries; 2006 vs. 2017



Source: Eurostat (2019).

required to be met in order to adopt the euro. The main purpose of these criteria is to achieve the price stability within the eurozone and that there is no negative impact on the current members when the new member states accede. These criteria are related to HICP inflation, the Government budget deficit, the Government debt to GDP ratio, the exchange rate stability and the long-term interest rates. Croatia is considered a market economy country with macroeconomic stability, low inflation rate and economic stability. All these criteria are good for the Croatian economy, no matter the result of adopting the euro. The Croatian economy should become strengthened for the European competition. In addition, adopting the euro should not be considered the main goal of a long-term process, the same as the access to the Union. It should just present a means to better economic results reflected in economic indicators but also in a better standard of living. The economic growth is possible only with using all opportunities the country has

and to invest in human resources and technology. The practical example of that is the STEM (Science, Technology, Engineering, and Maths) revolution. These are the backbone of the plan for creating a sustainable and long-term growth.

Croatia is the smallest EU member country not using the Euro. It is very hard to be competitive in the conditions of new integrations. Integration in itself is not a goal or it does not present a tool for solving problems of any economy. It could be a good start position, but later on, problem solving will depend on the measures undertaken in each country.

Figure 11 shows the unfavourable position of Croatia in research and development expenditure compared to other countries. This expenditure is a „flywheel“ for economic growth. Adopting the euro has to be considered as an opportunity for increasing investment in education and the science, research and development field. It is a foundation for higher competitiveness, technology and production which lead to export growth and rising of the

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Table 3 Annual growth of the HICP (in % to previous year) for period from 2006 - 2018

HICP	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estonia	4,4	6,7	10,6	0,2	2,8	5,1	3,9	3,6	0,5	0,1	0,8	3,6	3,5
Croatia	3,3	2,7	5,8	2,2	1,1	2,2	3,0	2,7	0,2	-0,3	-0,6	1,3	1,7
Latvia	6,6	10,0	15,3	3,3	-1,2	4,2	2,2	0,1	0,7	0,2	0,1	2,9	2,8
Lithuania	3,8	5,8	11,1	4,2	1,2	4,1	2,9	1,4	0,3	-0,7	0,7	3,7	2,4
Slovenia	2,6	3,8	5,5	0,9	2,1	2,1	2,6	2,2	0,4	-0,8	-0,2	1,6	2,1
Slovakia	4,3	1,9	3,9	0,9	0,7	4,1	3,5	1,8	-0,1	-0,3	-0,5	1,4	2,5

Source: Eurostat (2019).

Table 4 Annual growth of the GDP and the HICP difference (in % with relation to the previous year) for period from 2006 - 2018

GDP-HICP	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Estonia	5,9	1,0	-16,0	-14,9	-0,5	2,5	0,4	-2,2	2,3	1,3	0,8	1,3	0,4
Croatia	1,5	2,5	-3,7	-9,6	-2,8	-2,5	-5,2	-3,8	-0,7	1,9	3,5	1,5	0,9
Latvia	5,3	-0,1	-18,9	-17,6	-2,6	2,2	1,8	2,5	1,4	2,5	1,9	1,6	2,0
Lithuania	3,6	5,3	-8,5	-19,0	0,4	1,9	0,9	2,1	3,3	2,5	1,6	0,1	1,0
Slovenia	3,1	3,1	-2,2	-8,7	-0,9	-1,5	-5,3	-3,3	2,7	3,1	2,7	3,4	2,4
Slovakia	4,2	8,9	1,7	-6,3	4,3	-1,3	-1,8	-0,3	2,7	4,1	3,8	2,0	-

Source: Eurostat (2019).

Table 5 Longer term predictions (2019-2022) of the annual growth of GDP, HICP and their difference (in % to previous years)

GDP	2019	2020	2021	2022
Estonia	3,2	3,0	3,0	2,9
Croatia	2,6	2,4	2,3	2,2
Latvia	3,3	3,1	3,0	3,0
Lithuania	2,9	2,7	2,4	2,2
Slovenia	3,4	2,8	2,6	2,3
Slovakia	4,1	3,8	3,7	3,5
HICP	2019	2020	2021	2022
Estonia	2,5	2,3	2,2	2,1
Croatia	1,5	1,5	1,7	1,8
Latvia	2,4	2,4	2,4	2,3
Lithuania	2,2	2,3	2,4	2,5
Slovenia	2,0	2,0	2,0	2,0
Slovakia	2,2	2,0	2,0	2,0

Source: Statista (2019), adjusted by the authors.

GDP and finally, to the main economic goal - the higher standard of living. Adopting the euro is not the main goal of a country like Croatia. It is just a medium to achieve higher standards of living. It is visible that the countries who are investing more in R&D are having higher economic indicators and better standards of living. Adopting the euro would not solve the economic problems by itself. The Croatian policymakers should increase the research and development expenditure at least to achieve the standard seen in other European countries. This means that investing in R&D should be more than 2% of the country's GDP. Croatian policymakers

have an important role in this period. They have to be good leaders (Hrbić, 2012) because at this moment, changes are unavoidable. This role is more pronounced in the period of changes and, first has to be efficient to reduce eventual losses. Leaders have to take action in the period of adopting the euro and that way they will benefit the country after the completion of the process.

The consumer prices in observed countries grew until 2015, with minor exceptions of Latvia in 2010 and Slovakia in 2014. In the Baltic countries, Estonia, Latvia and Lithuania continued their growth, although in smaller numbers (below one percent,

near stagnation 0,1-0,2 in Latvia and with 0,7 correction in Lithuania in 2015), while in Croatia, Slovenia and Slovakia it started to fall, but below one percent.

The numbers show as that at the end of the observance period, there is about 1% real growth for Croatia and Lithuania, 2% for Latvia and Slovenia and half percent for Estonia. Data for Slovakia 2018 was not available on the Eurostat during the making of this article.

Most of the predictions are highly positive with predictions of slower, but still sizeable GDP growth (about 2-3%), which would be followed by HICP (about 2%).

Predictions of slower, but still sizeable GDP growth (about 2-3%), which would be followed by the HICP (about 2%), leave space for higher growth in most countries (Slovenia is a notable exception).

Stabile growth is predicted for observed countries in the coming years.

4. Conclusion

The subject of this study were the possible effects of adopting the euro in Croatia. An analysis of the selected Member states has been done and their experiences in the Euro integration process have been studied (study of monetary unions and integration rules for the participant countries). The role and the importance of real, structural and nominal convergence in terms of current and potential members of the monetary union has been exam-

ined. The Eurozone in economies of the selected member countries have been analysed and it has been found that joining leads to increased stability and accelerated economic growth. The conclusion would be that the Republic of Croatia should make maximal use out of adopting the euro to achieve a stable and competitive economy that will be able to take advantage of expanding markets and strong competition. Croatia is in the European Union, so adopting the euro is a logical part of this process. There is a high level of euroization that means that citizens have decided by themselves to have the foreign currency as a dominant one. Adopting the euro will be followed by benefits in business. The increase in costs is the main negative effect for all of the countries analysed in this paper. Introducing the euro will increase stability, and the process in itself will be helpful also for showing the shortcomings of the Croatian institutions. This is the reason why a comparison with other countries has been used and their problems have been analysed. These are countries that are similar to Croatia in many aspects because they are peripheral among the EU economies. It can be concluded that administrative reforms should be undertaken as well, to set up the strategy of investments in order to take advantages of using resources and finances of the EU and foreign capital inflows. The effects of adopting the euro in Croatia will be positive short-term, but the long-term effects will depend on the country's capability and changes in the terms of economy.

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