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WESTERN BALKAN COUNTRIES IN A MULTI-SPEED EUROPE

Jovan Zafiroski¹

Abstract: Sixty years after the start of the process of its creation, the world's biggest and richest economic space, the European Union, is facing many challenges. The Rome Declaration from 2017 offers a possibility for different forms of integration for the Members of the EU i.e. multi-speed Europe. This will have a major impact as on the current structure of the EU as well as on the enlargement process. As the EU is heading towards uncharted territory the candidate and potential candidate countries should continue to work on reforms. The paper explains the roots of the idea for a multi-speed Europe and analyses the possible consequences for the Western Balkan countries in the integration process for EU membership.

Key words: European Union, Western Balkan countries, multi-speed Europe, Eurozone, European integration process

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Introduction

In the last 25 years the EU has been an inspiration and a model for reforms. Europe is perceived as a target where all goals in terms of high living standards, economic prosperity and social welfare will be met. The EU is a unique example for a union of countries that were in never ending conflicts and wars and have realized the destructiveness of this approach. They have simply decided to settle their conflicts around a table rather than in battlefields.

Nowadays, the EU is facing difficult times. It is losing its geopolitical power while there are major problems within the Union. The economic imbalances are making serious tensions between the Members States while the EU institutions are unable to respond to systemic and permanent crisis whether it is a financial or a refugee crisis.

However, Europe has always been built on the back of different crisis. As one of the founding fathers and a key figure on the start of the European integration process Robert Schuman has said: "Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create a de facto solidarity." (La déclaration Schuman, 1950)²

Western Balkan countries have settled the EU membership as a highest priority. They may learn a lot from the EU but also the Union can learn from these countries. It is clear that the region will not play a role and might not influence the decisions on how the EU will be organized in future and what the relations between Member States will be. However, what these countries can do is to work on reforms for achieving better living conditions and sound economic environment for doing business. Also, they should follow the debate and promote themselves in the future European structure at best possible way.

The paper aims to contribute to the debate on the future of the EU (I) from the point of view of the effects on the current crisis on the EU (1) and to present different existing proposals for reorganization of the Union (2). Also, the Western Balkan countries' future in the EU (II) is examined from the point of view of the current state in the integration process (1) and the advantages of these countries in the light of the next EU reform (2).

²« L'Europe ne se fera pas d'un coup, ni dans une construction d'ensemble: elle se fera par des réalisations concrètes créant d'abord une solidarité de fait.», La déclaration Schuman du 9 mai 1950, available at : https://europa.eu/european-union/about-eu/symbols/europe-day/schuman-declaration_fr

1. An ever “changing” union

Since its beginning, the European integration project has been constantly changing. From the Coal and Steel Community and the Economic Community, through the Single European Act to the Treaty of Maastricht with all the treaties amending and changing the European political and institutional framework, EU has always been a battle of ideas for a better Europe, prosperous area of security, economic growth and social welfare. All the progress in the process of creation of an ever closer union among the peoples of Europe has been achieved during difficult negotiations and through many compromises when the Member States has always put the common values before the national interests. For example, the Maastricht Treaty was forged in turbulent periods after the fall of the Berlin wall and the unification of Germany (See: Van Middelaar 2013, pp. 186-202).

Brick by brick, step by step, the EU has arrived at the highest possible level of economic integration i.e. economic and monetary union. Nevertheless, yet much needs to be done on political level. The lack of further political unification endangers and threatens to abolish the achievements in the field of the economic integration. The lack of political will for changes and further integration may provoke economic disaster in Europe.

However, in several Member States, there is no clear political determination for further integration and transfer of powers to supranational level. On one hand, one-size-fits-all model does not work well and the European project needs changes, but on the other hand, there is no will and consensus for changes. The pressure from the low economic performance of the EU and gloomy prospects for its future, if reforms are not taken, has forced the European leaders to accept solutions that were unthinkable in the past. Thus, for example, even an exit from the Eurozone for Greece was on the table as a last possible solution to save the Eurozone and to provide smooth functioning of the currency block for other member's participants (German Council of Economic Experts, 2015, p.2).

The sign of readiness for a new approach in the European integration model came on the occasion of the 60th birthday of the EU when the European leaders have shown readiness to allow differentiated integration for Member States in the EU. In the joint declaration they highlighted that “...we will act together, at different paces and intensity where necessary, while moving in the same direction, as we have done in the past, in line with the Treaties and keeping the door open to those who want to join later. Our Union is undivided and indivisible.” (The Rome Declaration, 2017).

There are ongoing debates for the possible changes in the EU and for the question what multi-speed Europe will imply for the European policies and institutions. However, to understand the different proposals coming from either academics, politicians or from the officials and EU institutions offering different scenarios for the future of Europe (2) one has to present and to examine the roots of the current crisis in the EU (1). Thus, the full picture of the current state of the EU reform process will be provided.

The financial turmoil from 2008 has commenced an avalanche of crisis in different sectors in the European economy. The entire project of the monetary integration was under threat while the government's interventions with public money on the financial markets have increased the level of the public debt in majority of the Member States. The crisis has increased the gap in trade balance not only between the EU and the rest of the world but also between the EU Member States. The surplus countries as Germany (Le monde, 2017) are having good results while deficit countries, as France (Le monde, 2017a) for example, are marking minuses in the trade. The most recent data shows that Germany is increasing its trade surpluses vis-à-vis the rest of the EU which cannot contribute for faster recovery and return to steady growth. There are many other differences between France and Germany, such as preferences regarding inflation, labour unions, national champions etc. Those differences are historically rooted. (See: Brunnermeier and others (2016), pp.40-56). Also, the EU's share of the global GDP is shrinking. From 26% in 2004 to 22% in 2015. Moreover, considering the Brexit vote and the scale of the UK's economy this data will significantly change in future.

In addition, the refugee crisis from 2015 has also contributed for a surge of the anti-establishment mood resulting with the Brexit vote and many successes of the far right and far left parties in elections across the EU. Millions of people from the Middle East, North Africa, Pakistan and different regions under crisis were heading towards Western Europe. Germany, Austria, Sweden and the UK were the most desired destination for these people. This has a considerable impact as on the employment as well on the system of social welfare in those countries. Nevertheless, the refugee crisis has also challenged the European unity. The Mechanism for relocation which should help Italy and Greece in their problems with big numbers of the refugees was rejected by some Member States.

The Brexit talks are under way while there is a no clear timetable for completion of the talks. Different scenarios are on the table. As the positions of the two negotiating parties are far from being close, the possibility for no deal Brexit is also plausible. Brexit negotiations will have a considerable impact on the EU's future. The UK has strong economy while the City of London is an important global financial centre. The future relations with the UK will have significant effects on

the European economy. However, the outcome of the Brexit talks will send a “hidden” message to the countries, leaders or political groups that are supporting the efforts of countries for leaving the EU. Therefore, on the side of the UK the Brexit talks should provide best possible deal for the country whereas on the EU side it should assure a possibility for a smooth cooperation in the economic field while sending a strong message to those opposing to the European integration project.

Even though the EU was facing serious problems, different in nature and scope, the Union had strength to undertake profound reforms. As the crisis has shown, that the monetary union is not yet completed and further integration in the banking sector is required. The project for creation of the European banking union was launched. It includes a Single supervisory mechanism, Single resolution mechanism and Common deposit insurance schemes (see: Zafiroski, 2014, pp. 48-55). The reforms were also undertaken in the field of the public finances. The crisis has unambiguously shown that the monetary and fiscal policy are “two sides of the same coin”. A supranational monetary policy requires a common or coordinated fiscal policy. Thus, the Fiscal compact³ was put in place to strengthen the fiscal governance framework in the Eurozone. It includes provisions regarding the economic policy coordination and convergence of the Eurozone. The fiscal compact includes: a mandatory balanced budget rule, strengthening of the excessive deficit procedure, benchmark for government debt reduction and public debt issuance plans.

However, changes of the European framework which will reshape the relations between the Member States and the Union are inevitable. The real question is which is the most proper model for doing so. Many options are on the table.

2. Scenarios for the EU’s future

It is evident that in near future the entire project of the European integration will be revised. The door for a differentiated integration is open. However, the concept of differentiated integration consists of various models of integration. The main concepts include: multi-speed, variable geometry and a la carte integration. They illustrate an integration differentiated by time, space and mater. A multi-speed is a mode of integration where a core group of Member States pursuit common objectives while others will follow later when certain conditions are met. Variable geometry considers permanent separation between Member States with common

³Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, agreed at the EU summit of 30 January 2012, signed on 2 March by the Heads of State or Government of all EU countries, with the exception of the United Kingdom and the Czech Republic

objectives for all Members. A la carte integration includes common objectives for the member states participants in the union in which they can decide the policies in which they are willing to participate (Stubbs, 1996, pp.283-295).

The idea for a multi-speed Europe is neither new nor has been a constant proposal. Whenever a crisis occurs the EU recommends it as a solution. Differentiated integration has always been on the table. Thus, in 1975, as part of the Report that should help in overcoming the crisis and to propose a solution for improvement of the functioning on the institutions, Leo Tindemans who was the Prime Minister of Belgium at that time has recommended a new approach for the European integration. In other words, due to divergence of their economic and financial situations certain Member States should be allowed to go further with the integration. “Those States which are able to progress have a duty to forge ahead” (Report, Leo Tindemans, 1975, pp.20-21).

Today, the scenario for the future of the EU largely differs. From renegotiating of the founding treaties to continuing with the status quo. Jean-Claude Piris proposes four scenarios for the future of Europe (Piris, 2012). The first includes revision of the existing treaties with re-opening of every single EU policy and institutional mechanism. This is less likely option but might provide a profound reform of the EU. The second proposal is the development of the close co-operation between the Member States under the current legal framework. The two remaining scenarios include different speed Europe which are to be achieved by political or legal means.

The White paper on the future of Europe (European commission, 2017) includes five scenarios for the future of Europe. In the first scenario *caring on* EU should stick to its current course meaning work on the current projects and agendas. In the second scenario the single market is “raison d’être” of the EU. Thus, *nothing but the single market* scenario focuses on deepening certain key aspects of the single market while other forms of cooperation on different issues are conducted bilaterally. The third scenario, *those who want more to do more*, offers a possibility for cooperation in different fields by group of Member States that are willing to go further in the integration process. *Doing less more efficiently* is the fourth scenario which suggests that UE should be focuses on new priorities where all the resources will be dedicated. Finally, the forth scenario, *doing much more together*, Member States should share more power and resources while decisions are agreed faster and rapidly enforced. The cooperation between all the Member States goes further in all domains.

There are different ideas even on how the “new” Europe should look like. Jean Paul Guichard (Guichard, 2016, pp. 38-44) proposes five groups of European countries, In the first or British islands area there are two countries: the UK and the Ireland. The second i.e. German’s Europe includes: the Netherlands, Germany, three Scandinavian and the three Baltic states, Poland, the Czech Republic, Slovakia

Austria and Hungary. The third group includes Southern Europe or Portugal, Spain, France, Belgium, Luxembourg, Italy, Croatia and Slovenia. The “Orthodox Europe” is the fourth group with Greece, Cyprus, Bulgaria, Romania, BiH, Serbia, Macedonia, Montenegro, Kosovo, Albania and Moldova. The last group of countries is the “third Rome” and Russian federation, Ukraine, Belorussia, Georgia and Armenia. This proposal is based on the economic conditions, and historical heritage, linguistic and cultural preferences.

However, as far as the multi-speed Europe is concerned the most common proposal is that the EU should be organised on four level or speeds. At the centre, or the first tier should include the Eurozone countries. In the second there are the countries that are not members of the Eurozone. The third tier includes the countries that are willing to join the European single market but do not want a full EU membership. In this group of countries are Norway, Liechtenstein, Island and possibly the UK. The last group of countries, such as Turkey, some Western Balkan countries, will have a comprehensive free trade agreement with the EU (The Economist, 2017, pp.13-14).

Even it is presented on highest level this proposal has serious weaknesses. The proposal does not solve the imbalances within the Eurozone which are the main reasons for the crisis within the EU today. The differences between countries in the Eurozone are strong so the question is whether a single monetary policy might be applied. If today, we are evaluating the Eurozone members by the convergence criteria for EMU membership the result will be surprising. Many of the countries participating in the monetary union will fail on the test. On the contrary, there are countries outside the Eurozone and even outside the EU that are performing well on the convergence criteria while functioning in a harsh economic environment. This should be a strength in the future positioning of the Western Balkan countries in the upgraded European institutional and political framework.

3. Position of the Western Balkans in the “new” EU

As the EU institutions are focused on the reforms within the EU, as it might be expected, the process of the enlargement is not high on the EU’s agenda and depends on the choice of the future mode of functioning of the EU. That the enlargement is not a priority for the European Commission became clear in 2014 when the newly elected president of the European commission Jean-Claude Juncker has presented his team and the most important policies and projects for the Commission. Then he said that there will be no new enlargements in the next five years, but the Commission has extended that period several times (European commission, 2012a).

The same atmosphere is even today. In its speech on the future of Europe the President Emanuel Macron (Macron, 2017) hardly mentioned the Western Balkan region and the process of the enlargement and said that the Union will not be complete without the region and should be open for the countries when they will meet the membership criteria. It is well known that the EU is preoccupied with solving its own problems and agendas.

However, the Western Balkan countries should work on their agendas for achieving higher living standards which requires profound changes on the entire society, reforms in economy and promotion on the political culture. It is not much important if the EU will choose a “big bang” scenario for the Western Balkan countries or it will decide to accept the countries based on their individual performance. Also, the “tier” does not depend on the accession country but it will be decided by the existing members and by the EU institutions. Therefore, the countries should focus on the reforms and on the current framework in the relations with the EU (1) while using their advantages in future negotiations and positioning in the new European political and institutional framework (2)

4. Current situation in the integration process

Western Balkan is a small region in a post-transition and post-conflict period. Its population is as Romania or as half of Poland. Insignificant share in the global output and GDP per capita far below the EU average. In the pre-accession period the main objective are Copenhagen criteria while cooperation is made in the framework of the stabilisation and association process.

Different stages in the integration process. Since 2014 Albania is a candidate country for EU membership but has not yet started the accession negotiations. The relations between Albania and the EU are based on the Stabilization and Association Agreement that was signed with in June 2006 and entered into force in April 2009. In 2016 Bosnia and Herzegovina has submitted its application to join the EU, the SAA signed in 2008 and entered into force in 2015. Kosovo is a potential candidate for EU membership. The Stabilization and Association Agreement between the EU and Kosovo entered into force in 2016. Republic of Macedonia was the first country in the region that signed the Stabilization and Association Agreement which entered into force in 2004. It applied for EU membership in March 2004 and the Council decided in December 2005 to grant the country candidate status. Since October 2009, in each Report the Commission recommends opening of the accession negotiations with the country. In 2008, Montenegro applied for EU membership. In 2010, the Commission issued a favorable opinion on Montenegro's application and the Council granted it candidate status. The accession negotiations with Montenegro started on 29 June 2012. Serbia has also started the negotiation process for EU membership.

Even if every country has its own specifics which are sometimes perceived as advantages and disadvantages in the integration process there are many similarities and common problems for all candidates for EU membership. Firstly, the economic performance is low. The modest economic development is the most serious obstacle. The real convergence with the EU average is very difficult to be achieved even on medium term. Secondly, the rule of law and the level of corruption is considerable in all the Western Balkan countries. Thirdly, each country has unsolved bilateral problems either with EU countries or with neighbouring country which is a candidate for EU membership.

Nevertheless, besides many problems that the Western Balkans are dealing with there are certain aspects in their economic structure and macroeconomic performance which might be used as an advantage in the integration process in the future EU.

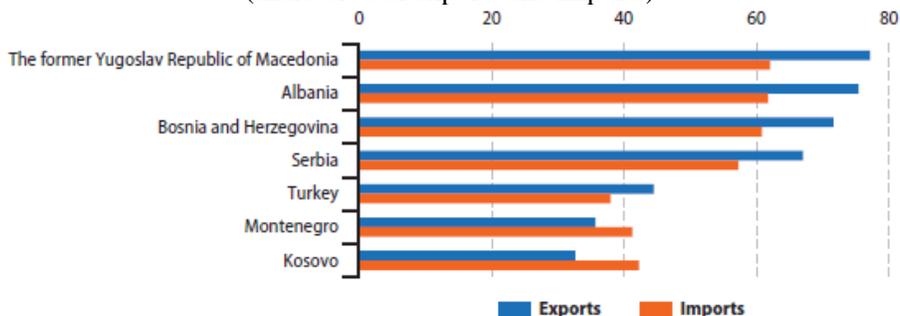
5. Advantages of the countries for the future integration

The Western Balkan countries are lagging behind the EU averages in terms of its GDP per capita which makes the process of achieving a real convergence a difficult task. Also, the countries need many reforms in the overall society in order a certain level of business culture to be reached. However, the countries have some characteristics which give them better negotiation positions in the future organisational structure of the EU. They have to be smart and to use it!

The advantages are related to: the trade or trading partners, public finances and exchange rate policy.

Thus, as it might be seen from Figure 1, all the countries from the region are strongly connected to the EU economy. Four countries (Albania, Bosnia and Herzegovina, Macedonia and Serbia) are having more than 60% of their imports in the EU while, what is more important, the exports to the EU participate with more than 70%. Kosovo and Montenegro are also very strongly connected to the EU's economy. Moreover, one should take into consideration the fact that the rest of the trade of these countries is between the Western Balkan countries in the trade relations between them. Thus, if they were members of the EU they will have more than 90% if their trade with or within the EU. This means that these countries are natural part of the European market, they have similar business cycles and can easily adjust to the changes in the EU and to different conditions of the EU economy.

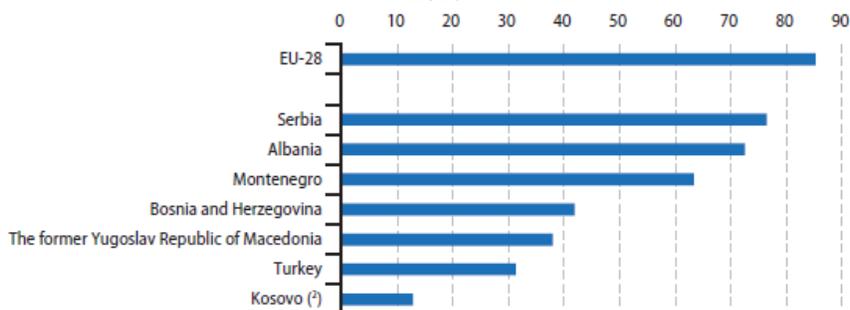
Figure 1. International trade in goods and services with the EU-28, 2015
(share of total exports and imports)



Source: Eurostat⁴

The second advantage of the Western Balkans countries is related to the level of public debt. Contrary to many Member States the countries from the region are having sound public finances with low or medium level of public debt. BiH, Macedonia and Kosovo are having public debt below 40% of GDP while the public debt of Serbia and Albania is around 70%. In comparison to the EU Members States they are below the average of the public debt. Also, countries from the Western Balkans are within the convergence criteria for the Monetary union membership.

Figure 2. General government consolidated gross debt relative to the GDP (in %), 2015



Source: Eurostat⁵

⁴Eurostat, Statistical books, Key figures on enlargement countries, 2017 edition, pg.67, available at: <http://ec.europa.eu/eurostat/documents/3217494/7774688/KS-GO-16-001-EN-N.pdf/26107237-ec5d-4b1e-87f2-7bac279fb00a>

⁵Eurostat, Statistical books, Key figures on enlargement countries, 2017 edition, pg. 57, available at: <http://ec.europa.eu/eurostat/documents/3217494/7774688/KS-GO-16-001-EN-N.pdf/26107237-ec5d-4b1e-87f2-7bac279fb00a>

The third and possibly the strongest point for a closer integration of the Western Balkan countries in the future “core” of the EU is the exchange rate stability. Exchange rates of the currencies in the region are stable vis-a-vis the euro. Thus, two countries, Kosovo and Montenegro are using the euro as a national currency while Bosnia and Herzegovina has currency board with a fix exchange rate vis-a-vis the euro. Macedonia has *de jure* flexible but *de facto* pegged exchange rate regime. Since 1997, Macedonian denar was pegged to the German Mark and afterwards to the euro. Albania has also stable exchange rate vis-a-vis the euro while in the last ten years Serbia shows stability with certain volatility of the exchange rate. The Figure 3 presents euro exchange rates of the national currencies of the Western Balkan countries.

Figure 3. Euro exchange rates, annual averages, 2005-2015, (1 euro = ...national currency)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Montenegro (°)	1	1	1	1	1	1	1	1	1	1	1
The former Yugoslav Republic of Macedonia	61.30	61.19	61.18	61.27	61.27	61.52	61.53	61.53	61.58	61.62	61.61
Albania	124.2	123.1	123.6	122.8	132.1	137.8	140.3	139.0	140.3	140.0	139.7
Serbia	83.0	84.1	80.0	81.4	94.0	103.0	102.0	113.1	113.1	117.3	120.7
Turkey	1.670	1.800	1.778	1.896	2.151	1.989	2.322	2.314	2.534	2.906	3.026
Bosnia and Herzegovina	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956	1.956
Kosovo (°)	1	1	1	1	1	1	1	1	1	1	1

Source: Eurostat⁶

Even in difficult times with many political turbulences and security challenges the Western Balkan countries have succeeded to preserve the stability of the national currency while at the same time maintaining fiscal stability and low or medium level of public debt. This should be a good example for many Member States of the Union where the level of public debt is more than 100% of GDP.

Conclusion

The largest economic space in the world, promotor of liberal democracy and free market principles i.e. the European Union is facing difficult times. The financial crisis from 2008 has shown that the European monetary union is an unfinished project while fiscal coordination is necessary in order financial and monetary stability to be provided. Also, disbalances in trade not only with the rest of the

⁶Eurostat, Statistical books, Key figures on enlargement countries, 2017 edition, pg. 11, available at: <http://ec.europa.eu/eurostat/documents/3217494/7774688/KS-GO-16-001-EN-N.pdf/26107237-ec5d-4b1e-87f2-7bac279fb00a>

world but also between Member States of the Union have contributed for different preferences in terms of the monetary policy. The level of public debt surged in recent years making it unsustainable in some Member States. All this has contributed for a rise of anti-establishment sentiment and rise of popularity of anti-EU groups parties across Europe. This was a clear signal that changes are inevitable. At the 60th anniversary of the EU, in the Rome declaration European leaders have opened the door for the possibility of differentiated integration in the EU which means EU at different speeds. The concept of differentiated integration is a vast one. It might be differentiated in time, space and matter. However, there is an ongoing debate but there is no concrete proposal coming from the EU institutions or Member States on how the future EU should be organized.

All the countries from the Western Balkans are at different stage in the EU integration process. Since the EU is focused on its reforms and problems the enlargement is low on the EU's agenda. However, the Western Balkan countries should focus on reforms on their society and economy creating better living standard for the people. There are some areas such as trade, public finances and the exchange rate policy which are substantial elements in the decision on the future EU where the countries from the region are performing and even much better than many Member States. That should be used as an argument in the positioning and in the future negotiation process about the place of the region in the "new" EU.

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DEVELOPMENTS IN THE BANKING SECTOR OF EUROPEAN TRANSITION ECONOMIES

Behare Sholla Avdiu⁷

Abstract: Since the early 1990s, European Transition Economies⁸ went through a tough and long process of transforming their economies from centrally-planned to market-oriented economies. The transformation of the banking system was quite a difficult process, accompanied by several episodes of crises that threatened the overall stability of countries. Descriptive research is used to examine the development of the banking sector and its main challenges in the countries under investigation. The article is divided into eight sections. The first section is dedicated to introduction. In the second and third section, macroeconomic developments and main structural reforms are briefly represented. The fourth section is dedicated to challenges and turmoil which accompanied the initial years of banking in transition. Subsequently, the privatization process of state-owned banks and foreign bank entry are discussed. The sixth section represents financial deepening and strengthening of the banking sector. The seventh section addresses the uncertainty after the Global Financial Crisis and challenges with the level of non-performing loans. The final section is dedicated to conclusions. All TEs have made significant progress in reforming their banking sector, however access to finance is not at a desirable level and presents one of the main obstacles to the private sector, meanwhile some countries still face high levels of non-performing loans. Finally, the strengthening of supervisory and regulatory authorities proved to be vital to maintain the stability of the banking sector.

Key words: transition banking, foreign banks, financial deepening, non-performing loans

JEL classification: P34

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⁸Throughout the article, Transition Economies (TEs) consist of: South-East Europe (SEE): Albania, Bosnia and Herzegovina, Kosovo, Macedonia FYR, Montenegro and Serbia; Central-Eastern Europe (CEE): Bulgaria, Croatia, Czech Republic; Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia.

Introduction

This paper presents some of the main features and developments in the banking sector in transition countries⁹. It begins with an overview of the developments in the macroeconomic environments that in some instances hampered the progress in the banking system. Developments in the macroeconomic environment are generally focused in the first decade of transition that was quite turbulent for most countries, then in optimistic trends that started since the early 2000s until the beginning of the Global Financial Crisis, and finally the post-crisis period where the latest challenges faced by TEs are discussed. The paper continues with the progress achieved in structural reforms to demonstrate the compliance with the standards and performance of advanced industrial economies. These reforms had a varying degree of success in creating the preconditions for financial development. In general, SEE countries lagged behind CEE early reforms, particularly in the area of competitiveness, integration and resilience. The development of a stable market-oriented banking sector has proved to be a hard and long process. In the early transition years, the banking sector was poorly regulated and the success of reforms in banking was weak. Lack of experience with market-based banking and fragile legal framework hampered to a large extent the development in the banking sector. Changes for good began with the entry of foreign banks into the market bringing stability through better banking practices. The increase in foreign bank participation has been considered as very important in supporting the improvement of bank performance as well as increasing firms' access to credit. While stability has been attained and financial depth increased, lack of finance still continues to be one of the biggest obstacles for the development of the private sector and economic growth. Despite the benefits from the foreign banks entry, the Global Financial Crisis of 2008 proved that quality of credit and sound monitoring framework are vital to ensure financial stability.

The paper is divided into eight sections. In the next two sections, macroeconomic developments and main structural reforms in TEs are briefly represented. Section I.4 is dedicated to challenges and turmoil which accompanied the initial years of banking in transition. Section I.5 considers the privatization process of state-owned banks and foreign bank entry in the market of TEs. Section I.6 represents financial deepening and strengthening of the banking sector in the countries under investigation. Section I.7 addresses the uncertainty after the Global Financial

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Crisis, and the level of NPLs that persistently presented a burden to banks in many TEs. The final section I.8 is dedicated to conclusions.

1. The Macroeconomic environment in European TEs

The macroeconomic environment in TEs has been challenging. Many countries are still struggling to improve the business environment, reduce persistent unemployment and increase productivity. TEs went through major political and economic changes that in many cases threatened their overall stability. The transition process began at the early 1990s with the aim of shifting to open market-oriented economies, promoting private sector development and redefining the role of state on the change and creation of new market-oriented institutions. The early transition years have been identified with turbulence in most countries. Economic activity in general slowed down and there was a sharp output decline, high inflation and increase in unemployment levels. The recovery was weak and thus critical actions were required to tighten macroeconomic policy, liberalize prices and foreign trade, reform the financial sector and complete the privatization process. Experience and progress in the transition process varies enormously across countries. TEs initially started the reform process and adopted comprehensive programs to reach economic stability and attract domestic and foreign investments. During this stage, most of the countries went through several periods of high inflation and increase in unemployment. The political situation was often the dominant factor controlling monetary and fiscal policy selections. Moreover, in the early stage of transition, the liberalization of prices and trade was the source of many shocks (Anderson & Kegels, 1998). Many enterprises were forced to reduce their production activity as the change in relative prices following the trade and price liberalization generated competitive difficulties and led to financial losses. The unemployment rate increased as countries moved from a guaranteed employment to open labor markets. Success in reaching macroeconomic stability was closely linked to the pace and the progress in reforms undertaken. Countries that initiated broader structural reforms and took more successful stabilization actions were linked with better results during the early years of transition (Fischer and Sahay, 2000). In general, CEE countries have managed to reform their economies and reach macroeconomic stability faster compared to SEE region. Macroeconomic environment in SEE relied heavily on political changes. For example, countries that were former Yugoslav republics have gone through a difficult and complicated transition process. The break-up of former Yugoslavia, accompanied with destructive wars, influenced destabilization and affected the transition process all through the region. These countries experienced major drawbacks and economic contraction at that time. The break-up has had subsequent negative effect on trade relations, international sanctions, resulting in the loss of

important markets for many businesses and increase in unemployment. Enterprises had to adapt to a significant reduction in their access to financial assistance from state budget and banks. These countries experienced macroeconomic and political instability, high fiscal deficits and loss of the confidence of investors. After the war in Kosovo in 1999, these countries made remarkable progress as a result of favorable political and economic developments. The reform was encouraged by the expectations of joining the EU and also by conditions imposed by the IMF and World Bank programmes. Economies began to grow and inflation declined. Reforms have proceeded steadily and the gap between these countries and other TEs started to narrow. Significant progress has been made also in improving business environment, important for gaining investors' confidence and developing private sector.

The success of stabilization programmes, varied as the macroeconomic conditions were unique in each country. For example, Albania represents the case of an economy that needed deep changes to stabilize and thus very soon adopted the comprehensive stabilization programme. The introduced radical economic reforms were successful to bring down the inflation to a one-digit rate in 1995. Croatia also adopted a macroeconomic stabilization policy in 1993 and reached considerable success in reducing inflation, and price and trade liberalization. Hungary proceeded more carefully with the reforms, as the country had more features of the market economy at the beginning and less of a need for immediate transformation. Poland is one of the countries that adopted bold reforms and soon experienced fast economic recovery. By 1992, the macroeconomic stability was reached and the country began to grow. Slovenia has had a quite easier transition process compared to other TEs as it was a more developed country prior to the transition. The outcome of stabilization programmes, relied on the soundness of established institutions. In some countries, weak institutions soon led to deterioration of macroeconomic stability. Such an example is Albania in 1996, when quick growth of pyramid system, as a consequence of weak financial laws, led to financial instability and loss of confidence of savers and investors. The recovery was relatively fast, by applying tighter fiscal system regulations to restore public confidence and rejecting to compensate depositors' frozen accounts. Bulgaria and Romania took sluggish actions in restructuring and privatizing their large enterprises and banks, and also in adopting macroeconomic stabilization programme due to state intervention. This delay was costly for Bulgaria as the country went through extreme macroeconomic and financial crisis in the early 1997. The delayed privatization process of state-owned enterprises and continuous financial support from the government, resulted in the huge rise of public debt. Moreover, weak banking practices and poor supervision led to enormous increase in NPLs level. Actions to rescue banks from bankruptcy brought large budget deficits and sharp increase in inflation which led to currency crisis. A successful macroeconomic stability was achieved by

introducing currency board in the second half of 1997, and imposing tight monetary and fiscal policies that contributed to a rapid return of monetary stability and recovery. In the case of Romania, rapid price and exchange rate liberalization pushed the country into a deep recession in early 1997. Weak policy discipline and extended bailouts operations towards large state-owned enterprises led to an increase in the share of NPLs and inflationary pressures. The slow economic recovery in Romania started only in 2000.

After the recovery from the turbulence of the initial years of transition, most of the TEs experienced rapid integration into the global economy and large financial inflows. Since 2002, strong economic growth was marked in both regions and especially in CEE countries, where the average growth rate was 6 percent. Expansion of credit and cross-border capital flows contributed to investment and consumption increase. However, the extended credit provision caused imbalanced growth, while flaws were revealed when the global financial crisis hit TEs. Many countries experienced output losses and damage to the confidence in the future convergence process with advanced industrialized economies. The crisis triggered a drop in the volume of exports and an increase in unemployment level. During this period, current account deficit and public debt increased in both regions while the overall economic activity declined. Countries that obtained enlarged foreign-financed credit, experienced sharper output contractions during the crisis (Llaudes, Salman, & Chivakul, 2010). After the crisis, the slow global recovery has been also reflected in sluggish growth in transition countries. Recently, all countries have shown signs of improvement in economic performance however, the SEE region has lagged behind in the convergence process with CEE countries.

The development of a steady market-based system has proved to be a long and tough process. Despite difficulties, the overall transition process has marked progress. All economies have shown improvement in unemployment reduction and poverty alleviation. The income per capita has increased however, there are large differences between countries. Table 1. presents the main macroeconomic indicators for individual countries and compares the average figures between SEE and CEE regions in 2017.

Table 1 Selected macroeconomic indicators, 2017

Country	Per capita GDP	GDP growth (%)	Central government debt (% of GDP)	Budget balance (% of GDP)	Unemployment (% of labor force)	Inflation (annual CPI % change)	Current Account balance (% of GDP)
Albania	4537.9	3.8	70.8	-1.7	14	1.3	-7.0
BiH	5180.6	3.1	42.3	0.0	20.5	-1.3	-4.8
Bulgaria	8031.6	3.5	24.6	1.6	6.6	-0.8	4.6
Croatia	13294.5	2.8	81.9	-1.5	13.9	-1.1	4.3
Czech Republic	20368.1	4.3	34.6	0.2	2.8	0.6	0.9
Estonia	19704.7	4.9	8.7	0.3	8.39	0.1	3.2
Hungary	14224.9	4.0	72.9	-1.8	4.42	0.4	2.7
Kosovo	3894.0	4.5	23.5	-0.9	30.2	0.3	-6.3
Latvia	15594.3	4.5	35.6	-8.1	8.99	0.1	-0.8
Lithuania	16680.7	3.8	37.5	1.7	6.96	0.9	0.9
Macedonia, FYR	5442.6	0.0	39.7	-3.2	23.35	-0.2	-1.1
Montenegro	7669.6	4.3	71.6	-4.2	17.7	-0.3	-18.5
Poland	13811.7	4.6	54.2	-2.3	4.8	-0.6	0.3
Romania	10813.7	6.9	38.9	-2.9	5.3	-1.5	-3.4
Serbia	5900.0	1.9	70.9	0.0	16	1.1	-5.7
Slovak Republic	17605.0	3.4	50.9	-1.8	8.08	-0.5	-2.1
Slovenia	23597.3	5.0	75.0	-3.5	6.79	-0.1	6.4
SEE average	5437.4	2.9	53.1	-1.7	20.3	0.2	-7.2
CEE average	15793.3	4.3	46.8	-1.6	7.0	-0.2	1.5

Source: World Bank Data

Figures show that the main macroeconomic indicators have overall better scores in CEE region. With regard to living standards, there are major differences among countries. SEE economies have a low standard of living and with an average of US\$5437 income per capita, the region is far behind most of the advanced economies in CEE region. Per capita GDP is six times lower in Kosovo compared to Slovenia. These two cases represent the most significant discrepancy of the series. However, the living standard is comparable among most of the SEE countries while there are more profound differences between CEE countries. Recent figures show a moderate growth for SEE countries, with an annual average

of 2.9 percent and a firmer growth in CEE countries. The growth is supported by firmer euro area recovery and lower oil prices that increased private consumption (Crivelli, et al., 2015). Growth in SEE countries is strengthening and is of a particular importance for this region in order to narrow the gap with the advanced reformers of CEE region.

As mentioned earlier, after the global financial crisis, the public debt increased in nearly all countries. Public debt levels are an issue for several countries of both regions such as Albania, Croatia, Hungary, Montenegro, Serbia and Slovenia. These countries are struggling to lower public debt back on a sustainable path and respect the criteria defined in the Maastricht treaty. In general, fiscal deficits have been reduced considerably and some countries even have budget surplus. Most of the CEE countries were more successful in managing the budget balance through policies chosen. The maintenance of fiscal stability is of a particular importance as in many countries there is no or little room for independent monetary policy. High level of budget deficit is particularly a challenge for Montenegro. To tackle this issue, Montenegrin government adopted a new Fiscal Strategy in 2017 and managed to lower the budget deficit to 4.15%. SEE economies have high level of unemployment at around 20.8 percent of the labor force which is quite higher compared to the average for other CEE countries, 7.0 percent on average. Although unemployment continued to decline in most countries, the persistent high rates present a constraint to growth prospects for SEE. Progress in structural reforms and improvements in business environment remain crucial to support private sector development and increase of employment. Inflation is under control and has declined in most countries. The sharp drop in oil prices has contributed to further disinflation in almost all countries in the region while some small economies that pegged their currencies to euro even fell into deflation (Iossifov and Podpiera, 2014). The deflationary pressures were more persistent in Bosnia and Herzegovina, Bulgaria, Croatia, Romania and Slovak Republic. Following the global financial crisis, countries managed to reduce external imbalances and narrow the current account deficits, which in some cases overtook a large share of GDP. However, most of SEE countries still confront serious external vulnerabilities since they depend heavily in imports and have low export competitiveness.

Some countries suffered more from the crisis and its effects are also reflected in the figures presented in the table of the main macroeconomic indicators. For example, Croatia felt deeply the global financial crisis and the consequences of the delay in structural reforms. After a continued six-year recession from 2009-2014, the economy returned to growth in 2015. Commitment to fiscal discipline resulted in improvement of the budget balance while strong exports supported the external performance, recording a current account surplus at 4.3 percent of GDP. The upward post-crisis unemployment trend started to decline since 2015 but the

country continues to face high level of structural unemployment. Despite improvements, public debt at above 80 percent of GDP is still high while output and employment remain below their pre-crisis level. Bulgaria was also hit by the financial crisis and remains the poorest EU country in terms of standards of living. After the crisis, the country faced an increase in unemployment, which started to decline since 2013 but is still above the pre-crisis level. Recent figures show a firm economic growth at 3.5 percent in 2017. Higher volume of exports contributed also to current account surplus, which stood at 4.6% in 2017. Tighter fiscal policies resulted in reaching 1.6 percent budget surplus while public debt is relatively low. The economy experienced internal and external deflationary pressures since mid-2013 however, the spillover of low inflationary pressures from the EU to Bulgaria has been the most significant factor (Goretti& Zhan, 2015).

Despite progress, the implementation of further structural reforms remains a challenging task for policy makers in TE countries. The progress in structural reforms, which are reviewed in the next section, will determine the success of SEE countries in narrowing the gap with the advanced reformers of CEE region, now already members of the EU, but also the success of CEE countries in convergence process with the advanced market economies.

2. Structural Reforms

The transition from planned to market economies has been very complex, notably in the early stage. TEs have struggled with political and economic challenges and many countries are still following aspiring reform goals. Since 1994, the EBRD has been tracking indicators that represent the qualitative assessment of the progress of structural reforms in several sectors of the economy compared with the standards of industrialized market economies. For several years, these indicators included the progress mainly in privatization, governance and enterprise restructuring, price and trade liberalization, and financial institution reforms. The indicators have been widened and refined over time, due to alteration in the challenges of the transition process.

The progress in structural reforms varies among countries and was often conditioned by country specific circumstances and policy-makers decisions. Successful implementation of reforms is substantial and has a positive effect in the long-run economic growth (Babecky and Havranek, 2014). Progress in transition is not only linked to growth in following years but also growth improves the conditions for the implementation of further reforms (Falcetti et al., 2006). Initial conditions, such as industrialization, prior economic growth rates, trade shares and income per capita, happened to be important for economic performance and reform success; however, policy decision appeared to be the most important determinant

of growth and speed of market-oriented reforms (De Malo et al., 2001). CEE countries that were more focused on reforms experienced greater economic growth and narrowed the gap with standards of advanced industrial economies. Progress has been made also among SEE countries but there is a lot to accomplish in order to catch up with CEE region.

During the first decade of the transition, progress in structural reforms advanced quickly. Among the tasks that had to be met since the beginning of transition, price liberalization, trade and foreign exchange liberalization have been easier to implement and were soon fulfilled by all TEs. Institutional reforms in areas of privatization, governance restructuring, and competition policy have been difficult and took more time to be implemented. The privatization of state-owned enterprises (SOEs) was one of the first steps towards the development of the market economy. SOEs were not ready to survive in new market mechanisms therefore, so in order to increase efficiency it was necessary to separate them from state apparatus and eliminate the soft budget constraints practices. In general, large-scale enterprises were harder to privatize especially as those represented an important source of revenue for governments. The progress of countries in enabling the private sector to develop has been a key element of the market economy functioning. Countries have used different methods of privatization such as management-employee buyouts (Albania, Croatia, Estonia, Poland and Slovenia), massive giveaways (Bosnia and Herzegovina, Czech Republic and Lithuania), and sales to foreign or direct investors. Privatization has been completed in almost all CEE countries and major progress has been made also in SEE region.

All TEs marked progress in strengthening market economy structures. However, various EBRD transition reports indicate that reform pace slowed overtime and in some countries and there is much to be achieved in order to complete the transition process. Several reasons, such as decrease in reform motivation after joining the EU by CEE countries and the 2008 economic crisis are highlighted to have contributed to the slowdown in the reforms process. Lately, reforms in SEE countries have been more active, driven by the aspirations to become a member of the EU.

Since 2017, the EBRD's focus has been on tracking quality transition indicators that characterize a sustainable market economy. At the beginning of transition, countries faced similar concerns related to establishing proper institutional framework to support economic stability and growth. Recently, the bank has revised the perception of transition as the process evolved and countries become more diverse in terms of their drivers of development and progress in establishing their institutions and markets. The reversal was also influenced by the effects of the latest economic crisis in the decline of employment and slow aftermath recovery,

where the importance of public support for market reforms was highlighted to be crucial for well-functioning private sector. The bank has started to include six main qualities that characterize a market economy: competitiveness in business environment; well governance in public and private sectors; inclusiveness to ensure equal access to economic opportunities; resilience to resist shocks, cross-border economic integration; and green consideration. Progress in transition now is measured on a scale from 1 to 10 for each category, by 10 presenting the best possible score.

Table 2 Progress in structural reforms, 2017

	Competitive	Well-governed	Green	Inclusive	Resilient	Integrated
Albania	4.41	4.31	4.85	5.11	4.86	5.76
BiH	4.74	3.66	4.85	4.83	5.35	5.47
Bulgaria	5.96	4.69	5.82	5.33	6.54	6.86
Croatia	5.75	5.14	6.03	6.03	6.61	6.85
Czech Republic	na	na	na	na	na	na
Estonia	7.58	7.58	6.44	7.3	8.19	7.77
Hungary	6.42	5.31	6.37	6.27	6.65	7.89
Kosovo	3.37	3.73	3.8	4.7	5.09	4.89
Latvia	6.53	6.09	6.37	6.82	7.66	7.73
Lithuania	6.06	6.1	6.06	7.05	7.23	7.78
Macedonia, FYR	5.39	5.2	4.91	4.72	5.31	6.04
Montenegro	4.89	5.12	5.15	5.62	5.93	5.59
Poland	6.38	6.15	6.56	6.29	7.64	6.79
Romania	6.28	4.97	5.86	5.08	6.98	6.88
Serbia	4.94	4.39	5.77	5.16	5.55	6.39
Slovak Republic	6.82	4.98	7.05	5.73	7.64	7.85
Slovenia	6.03	5.74	6.67	7.02	7.44	7.61
SEE average	4.62	4.4	4.89	5.02	5.35	5.69
CEE average	6.38	5.68	6.32	6.29	7.26	7.4

Source: EBRD Transition Report 2017-18

Note: Score is a scale from 1 to 10, where 10 presents the synthetic frontier for each quality.

The scores and rankings of countries vary across the six qualities. Results show that best-performing countries are among CEE region, with Estonia, Latvia and Slovenia being among the top scorers. SEE countries are far away from the frontier in most of the areas. These countries performed weakly particularly in the areas of competitiveness, good governance, green economy and inclusion. Albania, Bosnia and Herzegovina, FYR Macedonia and Kosovo are among the bottom scorers in most of the areas.

Establishing a sound business environment has been a substantial element of the reform process. With different scores across countries, the participation of the private sector in GDP rose over time. Progress in governance and enterprise reform, and competition policy was more difficult to be scored even in CEE countries. In some cases, governments have followed reforms to make it easier to do business. For example, Albania made significant progress in improving the business environment and has also undertaken several reforms for reducing the size of the informal economy. Country's government has benefited from the World Bank's Competitiveness Development Policy Lending (DPL) for making it easier to do business, facilitating trade and establishing a market economy business climate. Bosnia and Herzegovina also benefited from the Business Environment Development Policy Loan (BE DPL) in 2014. The program supported business start-up, re-organizing investment procedures, and facilitating trade. Consequently, the rank of Bosnia and Herzegovina in Doing Business improved from 131 to 82 in 2014. Croatia presents a case where its government reduced administrative fees for establishing a company with the aim of improving business environment. However, Croatia is ranked 51 among 199 economies in the World Bank's annual Doing Business rankings and performed weakly relative to other countries in CEE region in the area of competitiveness. Kosovo's business environment has continuously improved by implementing several regulatory reforms. The country is ranked among the top 10 economies worldwide in terms of doing business reforms in 2017. Despite the progress, competitiveness figures show that there is plenty room for developing market structures, supporting the business environment and attracting potential investors.

With regards to good governance, both regions face challenges of the quality of public and private governance. For example, Bulgaria lags behind the standards of good governance as the country has faced high level of corruption and deep political crisis. In Kosovo, judicial reforms tackling corruption and independence of judiciary, present one of the main challenges. The country is expected to strengthen good governance and rule of law driven by the Stabilization and Association Agreement (SAA) with the EU.

CEE countries have attained more progress in their transformation into green economies as they had to implement the EU legislation and standards by the time

of accession. SEE countries are far behind the standards in the area of green economy with regards to considering the air pollution, generation of waste and other environmental areas. These countries have to fully meet the target legislation by the end of the transition period. The use of renewable energy remains limited across the region. Some progress has been scored with the assistance of Green Economy Financing Facility (GEFF) programme supported by EBRD in order to finance more energy efficient public and private investments that will consider the environment and improve the living standards. Some progress has been made lately in SEE region. For example, Montenegro has made improvements in this area by completing the first wind power project in 2017. In terms of inclusion, the scores vary across countries of both regions. The most evident inclusion gaps remain in SEE. Despite efforts to promote inclusive growth, the progress is quite slow. These countries challenge large social and skill gaps, youth inactivity and gender inequality. Unemployment of the young labor force remains one of the biggest concerns. To tackle this issue, some countries have undertaken reforms with the objective of advancing the school-to-work transition. Albania has started to provide a dual professional education form but the implementation is relatively weak. In 2016, Kosovo approved the Education Strategic Plan aiming to adjust the vocational education and training strategies with labor market requirements. Meanwhile, other SEE countries are still considering the adoption of new national educational schemes.

In terms of resilience, many countries are still confronting the effects of various crises that hit their financial sector and are continuously making efforts to clean the bad loan portfolios. Figures show that CEE countries are more resilient to external shock relative to SEE. In most cases, the problem of NPLs has been the main concern for financial stability. Some significant progress has been marked in lowering the level of NPL in Albania, FYR Macedonia and Serbia. Despite improvements in quality of assets, in some countries NPLs exceed 10% of total gross loans. While there is progress in strengthening the banking sector, the development of financial markets especially in the SEE region remains weak. Some actions to develop the stock exchange markets using only technology have been made through SEE LINK project with the aim of connecting markets of Bulgaria, Croatia and Macedonia and promoting financial markets.

All TEs are open economies that continuously have worked to reduce cross-border barriers. Although SEE region is less integrated relative to CEE, important road infrastructure projects in Albania, FYR Macedonia, Kosovo and Montenegro have reduced obstacles to trade and investments. Progress in integration has been made between Albania and Kosovo as the two countries have agreed to share a joint custom point in port of Durrës for goods that are heading for Kosovo. This agreement facilitates procedures and enables more flexibility in trade between the

two countries. Widening integration is important for TEs to benefit from trade facilitation and export growth.

Regardless of the progress scored, further implementation of structural reforms remains a paramount condition for TEs to create a favourable business environment, strengthen the private sector and support steady economic growth.

3. The beginning of transition in the banking sector of TEs

The development of the financial sector is an important subject for transition countries as a sound market-oriented financial system is a vital to the shift from a centrally planned to a market economy. Pre-transition financial system was small and in general underdeveloped. The wide reform of the banking systems that had started since the early 1990s included radical changes in regulation and supervision frameworks to enable the transformation process from a mono-bank into two-tier banking system. In the centrally-planned system, the mono-bank has not served as an independent financial institution but more as a record-keeping authority for all payments, private, and state-owned enterprise transactions. During this stage, banks were not fulfilling their commercial operations and thus had limited or passive role in the economy. Some countries had specialty banks that performed specific functions directed by central planning such as managing foreign currency transactions, financing the agricultural, and construction sectors. Therefore, banking activities were divided along functional lines and served the target for planned capital allocation.

Unlike their counterparts operating in market economies, banks operating in the centrally planned system faced no competition among them and no pressure from the stakeholders to perform efficiently. Their primary function was to channel funds and provide credit to state-owned enterprises (SOEs). Capital allocation was directed by state mechanisms without taking into account the risk management and evaluation of credit information. The banking system lacked an effective framework of supervision and regulation therefore a steady monetary policy could not be ensured. The reforms have been viewed as necessary to a successful transition to market-oriented financial system and as an instrument to increase bank efficiency. The outcome of these reforms has been considered to be fundamental to the macroeconomic stability and supporting long-term economic growth. As a result, banks had to reorganize their activities, particularly their role in allocation of the financial resources.

In the early stage of transition, countries faced a difficult process of separating the functions between central and commercial banks and create a two-tier system. The first tier consisted of a central bank that was responsible for monetary policy and

performed supervising and monitoring activities in the banking sector. The second tier consists of state-owned commercial banks (SOCBs), newly created private domestic banks, and any foreign banks. The banking sector was poorly regulated and the newly set up private banks lacked capital and necessary skills to operate efficiently. The adoption of modern financial legislation turned out to be challenging as most countries had little experience in the proper regulation of a decentralized banking system.

In general, development of the banking system was difficult due to turbulence in the macroeconomic environment and unsound banking practices inherited from the past. Following the price and trade liberalization large enterprises, which were mostly under state ownership, found themselves under pressure imposed by market forces. These enterprises were operating at a loss and were unable to repay bank borrowings. Thus, the level of bad loans increased and quickly became a serious burden to banks. The situation got worse as printing money by the central bank to SOEs was frequent and led to inflationary pressures during the 1990s. Hence, enterprises had little incentive to reconstruct as they were likely to receive additional credit and continue their operation. The hope of establishing market-oriented financial institutions and overcoming the non-performing loan problem seemed gloomy, considering the soft budget constraints and lack of properly enforced bankruptcy laws.

Country experiences during this period were uneven and depended on the policies undertaken and past experiences in the banking industry. For example, conditions were more specific in former Yugoslavian republics as the two-tier banking system was introduced in the 1950, long before the start of transition, and included elements of a market economy. Commercial banks were considerably independent from the central bank to perform their operations however the institutional foundation was not matured enough to support the development of the market-oriented banking system. Following the initial years of transition, banks were found soon in an unfavourable economic and political environment and under pressure to perform lending activities without assessing the credit risk. Non-performing loans quickly became a serious problem for many banks while bailout actions by the central bank were common. Before the breakdown of Yugoslavia, bad loans were nearly 30% and inflation already was out of control. At the time of separation of Croatia and Slovenia, the National Bank of Yugoslavia froze the foreign exchange deposits causing currency mismatch and worsening banks' balance sheets. These actions damaged seriously the confidence in the banking system. Taking all these into consideration, it was clear that the banking system of Yugoslavia was in collapse at the beginning of transition and radical changes were necessary for banking system reconstruction. At the beginning of transition, some countries like Poland, imposed lax entry requirements to increase the number of private banks

and promote competition in the banking sector. However, most of the newly set up banks were dealing with lack of capital. As insolvent banks started to present a threat to financial stability, the authorities forced the merge of small weak banks with large SOCBs, further worsening their balance sheets. Some other countries followed a more restrictive policy towards new banks entry, which prevented the increase in the number of small and undercapitalized banks. For example, Hungary's government had rapidly implemented bank privatization policy and successfully managed to recapitalize banks in order to attract important foreign investors. This policy made possible the sale of four large state-owned banks to foreign investors by the end of 1997. On the other hand, Bulgaria had political instabilities and delays in the implementation of reforms which were reflected in several financial crises. Government's influence in the Bulgarian National Bank and persistent financing activities towards SOE's led to hyperinflation, deterioration of the quality of banks assets and banking sector instability. Economic recovery began only after introducing currency board in 1997. In Albania, the banking system was organized in accordance with the classical socialist model. Initial reforms, as in other transition countries, included the establishment of a two-tier system. This task was fulfilled in 1992 with the division of the central bank from the second level consisting of three state-owned banks (Agricultural Commercial Bank, Saving Bank, National Commercial Bank). The progress made was hindered by the collapse of pyramidal schemes in 1997 that held a large part of population's savings. The effects of the collapse spread into the banking sector and in the whole economy. This led to increases in NPLs and inflation, contraction of the economic activity and social unrest.

Despite the reforms, the financial sector showed weak development and was not able to provide market-based financial services to the private sector. The inefficiency of banks, poor regulatory system, and lack of expertise in market-based banking led to various financial crises during the 1990s. As a result, in the first decade of transition, financial sector has slightly improved but still remained underdeveloped and played a negligible role in supporting the improvement of economic performance.

4. Privatization and foreign bank entry

Privatization of banks is an essential part of the transition process. Until the late 1990s, SOBs dominated banking sectors of TEs and most of the initial privatization efforts failed to restructure the sector. The turbulent events of the initial transition years, made evident the importance of establishing an independent central bank in order to reduce inflationary pressures and gain confidence of the public in financial institutions (Hermes and Robert, 2000). Enforcement of a strict regulatory and supervisory policy on bank and enterprises and increasing competition were

paramount conditions to reach macroeconomic stability and strengthen the banking system. One of the main concerns of TEs entering the second decade of transition was the promotion of effective financial institutions.

After the first decade, bank privatization and an increase in the number of foreign bank played a leading role in developing market-oriented banking systems. The financial reforms that were undertaken, were considered as crucial to increase confidence in banking sector, intensify competition and improve access to financial services. In this context, banks in TEs have made enormous progress and gradually started to catch up with their counterparts in advanced market economies. Countries have implemented banking reforms and scored uneven progress in transforming their banking sector. Advanced reformers of CEE region were more successful than SEE countries in reforming their banking sector. The EBRD index of banking sector reform presents the progress scored by each country overtime.

Table 3. Index of banking sector reform, 2002-2016

	Index of banking sector reform														
	20 02	20 03	20 04	20 05	20 06	20 07	20 08	20 09	20 10	20 11	20 12	20 13	20 14	20 15	20 16
Albania	2+	2+	3-	3-	3-	3-	3	3	3	3-	3-	3-	3-	3-	3-
BiH	2+	2+	3-	3-	3-	3-	3	3	3	3-	3-	3-	3-	3-	3-
Bulgaria	3+	3+	4-	4-	4-	4-	4-	4-	4-	3	3	3	3	3	3
Croatia	4-	4-	4	4	4	4	4	4	4	3+	3+	3+	3+	3+	3+
Czech Republic	4-	4-	4-	4	4	4	Na								
Estonia	4-	4-	4	4	4	4	4	4	4	4-	4-	4-	4-	4-	4-
Hungary	4	4	4	4	4	4	4	4	4-	3+	3+	3+	3	3	3
Kosovo	na	na	na	na	na	na	Na	na	na	na	na	2+	2+	2+	2+
Latvia	4-	4-	4-	4-	4-	4	4	4-	4-	3+	3+	3+	3+	3+	3+
Lithuania	3	3	3	3+	4-	4-	4-	4-	4-	3+	3+	3+	3+	3+	3+
Macedonia, FYR	3	3	3-	3-	3-	3-	3	3	3	3-	3-	3-	3-	3-	3-
Montenegro	na	na	na	na	3-	3-	3-	3	3	3-	3-	3-	3-	3-	3-
Poland	3+	3+	3+	3+	4-	4-	4-	4-	4-	3+	4-	4-	4-	4-	4-
Romania	3-	3-	3	3	3	3+	3+	3+	3+	3	3	3	3	3	3
Serbia	na	2+	2+	2+	3-	3-	3	3	3	3-	3-	3-	3-	3-	3-
Slovak Republic	3+	3+	4-	4-	4-	4-	4-	4-	4-	4-	4-	4-	4-	4-	4-
Slovenia	3+	3+	3+	3+	3+	3+	3+	3+	3+	3	3	3	3	3	3

Source: Various EBRD Transition Reports ; Note: Index is a scale from 1 to 4+. 1 stands for little progress beyond establishment of a two-tier system. 4+ stands for full convergence of banking laws and regulations with BIS standards; provision of full set of competitive services

Index of banking reform increased gradually in most of the countries; however, there were also reversals that reflected banking sector vulnerabilities. All CEE countries, except of Romania and Slovenia, had scored a rating of 4 by 2006 that reflects full convergence of banking standards with advanced industrial economies. However, several countries such as Hungary, Latvia and Slovenia that were hit by the financial crisis of 2008, scored a lower rating than in the years prior to 2010. Progress has also been made by late reformers of SEE region and these countries started to catch up with the other advance reformers. Kosovo is the only country that scored a rating of 2 in 2016, indicating that there is still a tough and long road to establishing market-supporting financial institutions. In general, all countries marked considerable progress in reforming their banking system, improving regulatory framework and raising confidence in the banking sector.

The progressive strengthening of domestic financial systems is particularly important as it tends to support higher economic growth over the medium term (Levine, 2000). As indicated by the index of banking reform, TEs made significant progress in restructuring the banking sector, privatizing SOBs to strategic foreign investors and applying sounder lending practices. Banking systems began to be dominated by financially powerful foreign banks that had better risk management techniques and banking practices. Each country used various privatization methods such as voucher privatization, management and employee buyouts and privatization by sale. TEs followed different paths to successfully restructuring and privatizing their banking sector depending on country specific factors such as economic and institutional conditions, and government perspective. For example, Albanian's banking system was dominated by SOBs until the late 1990s. Some foreign banks were licensed but financial intermediation remained limited. After the crisis of 1997, remarkable changes were made and by the end of 2003 privatization of banks was completed. In Bosnia, after introduction of the currency board in 1997, a firm development in the banking sector began. Public restored confidence in banks and the stable financial system attracted investments from foreign banks. Bulgaria initiated bolder reforms after the crisis of 1996-97, including improvements in supervision of banks and privatization of banks mainly to foreign financial institutions. Croatia experienced two main periods of transformation of the banking sector. First, in the beginning of the transition, through privatization of SOEs that were also the owners of commercial banks and thus the SOBs were only passively privatized (Kraft, et al. 2006). The second, after the banking crisis of 1998, was particularly important for the development of the banking sector as the resolution of insolvent banks were undertaken and government sold the remaining SOBs to strategic foreign investors. The development of the banking sector in Kosovo was

more specific. Before the war in 1999, financial system provided only limited intermediation services. All Serbian bank that were operating in Kosovo, left by the time UNMIK administration became official so, Kosovo had to newly establish its financial system. Unlike progression in other TEs, foreign banks entered the market of Kosovo first and were later followed by domestic banks. The number of banks has increased gradually and the banking system gained clients' trust in financial services provided. Slovenia had a sluggish privatization process of the banking industry and the state still heads with participation in the banking sector. In Slovenia, two largest state-owned banks Nova Ljubljanska Bank and Abanka are still to be privatized.

Table 4. The structure of banking sector in TEs, 2002-2017

	Number of banks (of which foreign-owned)			Asset share of foreign-owned banks (%)			Asset share of state-owned banks (%)		
	2002	2009	2017	2002	2009	2017	2002	2009	2017
Albania	13 (12)	16 (14)	16 (13)	45.9	92.4	83.4	54.1	0	0
BiH	40 (21)	30 (21)	23 (16)	76.7	94.5	84.9	6.2	0.8	2.4
Bulgaria	34 (26)	30 (22)	22 (13)	75.2	84	75.9	14.1	2.4	2.5
Croatia	46 (23)	32 (15)	26 (16)	90.2	91	90	4	4.1	6
Czech Republic	37 (26)	39 (32)	39 (34)	85.8	70.7	92.5	4.6	2.3	1.3
Estonia	7 (4)	17 (14)	16 (12)	97.5	98.3	93.9	0	0	0
Hungary	38 (28)	38 (23)	32 (22)	85	81.3	85.6	10.7	3.9	0
Kosovo	7 (2)	8(6)	10 (8)	73	91.5	88.1	0	0	0
Latvia	23 (9)	27 (18)	21 (15)	42.8	69.3	78.5	4	17.1	0
Lithuania	14 (7)	17 (5)	12 (10)	96.1	91.5	91.6	0	0	0
Macedonia, FYR	20 (7)	18 (14)	15 (11)	44	93.3	69.9	2	1.4	3.3
Montenegro	10 (3)	11(9)	15 (13)	16.9	87.1	88	23.8	0	0
Poland	59 (45)	67 (57)	63 (51)	70.7	72.3	47	26.6	22.1	36
Romania	31 (24)	31(25)	36 (24)	52.9	84.3	91.3	43.6	7.9	8.2
Serbia	50 (12)	34 (20)	30 (21)	27	75.3	75.8	35.6	16	16.4
Slovak Republic	20 (15)	26 (13)	26 (22)	84.4	91.6	88	1.9	0.9	0.7
Slovenia	22 (6)	25 (11)	18 (3)	16.9	29.5	29	13.3	16.7	44.2

Source: IMF, country central banks and own calculations

Figures show that the participation of foreign banks has increased drastically over time. High presence of foreign bank ownership is an attribute of many TEs banking sectors. The participation of state in banking sector has diminished and this change is particularly important for the development of the banking sector in TEs, considering that state owned banks tend to be less efficient than private banks (Bonin et al., 2005). The entry of foreign banks was assumed to bring large benefits to host countries' financial systems through the application of techniques that

increase efficiency, better management methods, increased competition, and financial intermediation. Regarding the effects of foreign-owned banks presence, there are different expectations and the evidence is not conclusive. There is evidence that foreign banks are were more interested in their profit efficiency rather than spreading the best banking practices in TEs (Bonin and Wachtel, 2002). However, various studies show that foreign bank participation increases competition, has a positive effect on efficiency and financial stability in TEs (Fries and Taci, 2005; De Haas, 2014; Claessens, 2017). Lastly, the idea of obtaining benefits from foreign banks presence was shaken when the crisis started, especially for banks relying on funding from their parents in the countries hit by the crisis. Nevertheless, foreign banks dominate the banking sector in all countries, except of Poland and Slovenia, where the asset share of foreign banks is 36% and 44.2%, respectively. Recently, the banking sector of Poland has changed relatively. After the initial years of transition, the banking sector was soon dominated by foreign banks which played an important role in the development of the banking industry. However, recently the Polish government has questioned the ability of foreign banks to maintain the stability, as was the case in the 2008 Financial Crisis. This argument was used by the government to increase its share in banking sector assets by buying shares of some large banks through PZU, which is the largest state-owned insurance company in Poland.

As mention, the participation of foreign banks was assumed to improve the much-needed efficiency to the banking sector. Table 5. shows some of the bank performance indicators in TEs.

Table 5. Banking sector performance indicators in TEs, 2017

	ROA	ROE	NIM	CAR
Albania	1.5	15.7	95.6	16.6
BiH	1.5	10.2	58.3	15.7
Bulgaria	1.2	9.3	69.4	22.1
Croatia	1.1	7.4	60.1	23.2
Czech Republic	1.1	17.2	59.2	18.1
Estonia	1.4	11.8	46	29.2
Hungary	1.9	19.7	46	16.4
Kosovo	2.6	20.6	71.2	18.1
Latvia	1.2	10.9	53.3	20.6
Lithuania	1.1	12.5	54.6	19.1
Macedonia, FYR	1.4	13.5	60.6	15.7
Montenegro	0.6	4.9	59.7	16.2
Poland	0.8	8.2	61.5	18.1
Romania	1.3	12	58.5	19
Serbia	2.2	12.5	66.4	22.3

Slovak Republic	1.1	10.1	74.4	18.8
Slovenia	1.2	9.8	55.3	18.2
SEE average	1.6	12.9	68.6	17.4
CEE average	1.2	11.7	58	20.3

Source: IMF

Bank in TEs have made major improvements in their performance. Figures show that in general banking sectors are profitable, liquid, and well capitalized. Banks' return on assets and return on equity are comparable between two regions, but remain higher in SEE. Banks have widened their activity and a considerable part of income flows from fees and commissions, while the share of interest income has decreased. This change is more evident in CEE, since SEE tend to have higher interest margins associated with institutional environment and regulatory framework (Fang et al., 2014). Capital adequacy ratio is at a satisfying level in both regions, indicating that banking sectors are safe. However, vulnerabilities exist due to fragile bank supervision, legal protection and risk management systems, that need to be strengthened to support financial development. As mentioned, a better institutional environment is very important to encourage bank lending to the private sector and promote sustainable development in the banking sector.

5. Financial Deepening

Besides the importance of foreign bank entry on the development and strengthening of the banking sector, it became evident that financial intermediation deepening in TEs was necessary. As explained previously, banks in the beginning of transition played a negligible role in supporting the growth of the private sector. However, with the privatization of SOBs and increased participation of foreign banks in the market, all TEs experienced the long-awaited financial deepening. Financial intermediation services continued to spread and credit provision to the private sector increased. The development of the banking sector has been of a particular importance in TEs, in order to improve the business environment by enabling access to finance.

Indeed, both CEE and SEE region have seen a rapid financial development. Table 6. summarizes the evidence, indicating the pace of deepening measured by most widely used indicators.

Table 6. Financial deepening indicators in TEs, 2002-2017

	Private credit by deposit money banks to GDP (%)			Liquid liabilities to GDP (%)		
	2002	2009	2017	2002	2009	2017
Albania	6.4	36.9	35.5	63.7	73.3	81.5
BiH	30.3	52.8	53.7	40.1	54.1	70.1
Bulgaria	18.8	69.3	55.4	39.1	65.3	86.9
Croatia	43	66.7	65.5	52.6	69.2	71.8
Czech Republic	23.8	45.4	50.3	62.7	71	83.8
Estonia	44.7	101.3	70.3	na	57.3	76
Hungary	34.4	60.3	36.1	43.3	60	60
Kosovo	3	34.4	39.3	16.6	34	43.5
Latvia	31.7	104.6	48.8	29.5	46.8	63.3
Lithuania	16.7	43.5	41.8	26.3	48.8	58.7
Macedonia, FYR	16.7	43.5	50.9	27.8	49.4	59.2
Montenegro	8.1	76.5	50.6	11.8	51.5	59.8
Poland	12.9	47	53.6	42.6	52.3	66.8
Romania	10.1	38.5	29.9	24.2	36.5	40.8
Serbia	16.2	42.6	43.4	15.1	38.9	51
Slovak Republic	38.8	44.9	53.5	62.3	58.4	66.3
Slovenia	38	83.3	50.2	52.7	59.8	66.9
SEE average	13.5	47.8	45.6	29.2	50.2	60.9
CEE average	28.4	64.1	50.5	43.5	56.9	67.4

Source: World Bank Data

Financial depth is commonly used to measure the extent of financial intermediation and services in the economy. There were great diversities among TEs in 2002 as well as in subsequent developments throughout the entire period. CEE countries continue to have deeper financial intermediation, while significant progress has been marked also in SEE. Figures show that Estonia had the greatest financial deepening in 2002 whereas in Kosovo financial intermediation was very poor as the banking sector was at the beginning of its development. Stabilization of macroeconomic environment and better banking practices led to further financial sector deepening and by 2009 the average shares of credit to GDP were over 40% in SEE and 60% in CEE. The period from 2002 to 2007 is also known as credit boom since all TEs experienced rapid credit growth and moreover, some countries such as Estonia, Latvia and Slovenia reached extremely high rates of lending. This trend was stumbled by the global financial crisis and the financial depth declined in both regions. The EBRD's Transition Report of 2006 points out that financial deepening was dominated by rapid growth of lending towards households, notably in the form of mortgage lending. This structure of lending, worsened opportunities of enterprises for access to finance that supposedly hinder economic activity. Liquid liabilities as a share of GDP, also known as broad money, has shown an

increasing trend since 2002 in both regions. In SEE, the level of monetization has reached a level that is comparable with the average figure for the CEE region, indicating that there is a potential to increase financial intermediation. After the crisis, credit to private sector decreased in general in both regions, with a higher intensity in CEE countries. There is evidence that foreign-owned banks and banks that rely on internationally funding, tend to reduce their lending more than banks that rely on domestic funds (Ontega, et al., 2015). Despite the increase in financial intermediation, financial access is not at a desirable level in many countries. The EBRD and World Bank’s Business Environment and Enterprise Performance Survey (BEEPS) contains various questions which aim at assessing the nature of obstacles faced by firm in TEs in important business topics such as competition, access to finance, infrastructure, etc. The results of BEEPS V and IV surveys reveal that access to finance remains one of the main obstacles to firms operating in TEs, especially to the newly set up firms.

Table 7. Biggest obstacle to doing business, percentage vote by country

Topic	SEE		CEE	
	2009	2014	2009	2014
Access to Finance	13%	14%	12%	11%
Access to land	2%	2%	2%	2%
Business Licensing and permits	2%	2%	2%	1%
Corruption	9%	6%	4%	3%
Courts	3%	3%	2%	2%
Crime	5%	2%	2%	2%
Customs and trade regulations	4%	4%	1%	1%
Electricity	10%	6%	2%	2%
Inadequately educated workforce	4%	2%	12%	6%
Labor regulations	1%	1%	5%	5%
Political Instability	13%	15%	10%	9%
Competition from informal sector	16%	15%	9%	10%
Tax Administration	2%	5%	5%	5%
Tax rates	7%	10%	19%	25%
Transport	1%	1%	1%	2%
Don't know	5%	4%	6%	7%
Refused	0%	5%	0%	0%
Does not apply	4%	3%	5%	8%

Source: BEEPS IV and BEEPS V

Along with access to credit, unfair competition from the informal economy and electricity issues lead the list of business environment obstacles in BEEPS 2013-14. The same three obstacles were also identified by firms in BEEPS IV, which was conducted in 2008-09. These results do not imply that there were no improvements in financial intermediation but they highlight that there is still plenty room for spreading financial services in TEs.

6. Financial uncertainty and non-performing loans

The breakout of the global financial crisis in 2008 raised major uncertainties about banking stability. Foreign banks became more restricted due to the asset management issues of their parent banks (Tressel, 2010) and credit provision remained sluggish throughout the crisis.

The crisis indicated that foreign ownership could intensify the effect of a home country shock on host TEs (De Haas, 2014). The main concern was that foreign banks could tighten lending and withdraw their funds, causing not only shortening of credit but also possible macroeconomic turmoil. As a response to this issue, some important international banks created the Vienna Initiative in early 2009 to ensure that foreign banks did not begin a large-scale withdrawal from the emerging Europe and thus to maintain financial stability. This initiative supported the stabilization of lending by the 17 foreign banks that signed commitment letters (De Haas, et al., 2015). In general, banking crisis were avoided and macroeconomic adjustments have taken little effort to be placed. Countries such as Bulgaria, Hungary, Latvia and Slovenia, that experienced highest financial inflows prior to the crisis, had to undertake the deleveraging process to avoid deeper turmoil. Deep structural reforms were again stressed as vital to diminish the negative effects of deleveraging on output loss, and to increase countries' ability to support financial deepening (Crivelli, et al., 2015).

Table 8. Non-performing loans in TEs, 2002-2017

	Non-performing loans																
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Albania	5.6	4.6	4.2	2.3	3.1	3.4	6.6	10.5	14	18.8	22.5	23.5	22.8	18.2	18.3	13.2	
BiH	11	8.4	6.1	5.4	4.1	3	3.1	5.9	11.4	11.8	13.5	15.1	14.2	13.7	11.8	10	
Bulgaria	2.6	3.2	2	2.2	2.2	2.1	2.4	6.4	11.9	15	16.6	16.9	16.7	14.6	13.2	10.4	
Croatia	10.2	8.9	7.5	6.2	5.2	4.8	4.8	7.7	11.1	12.3	13.8	15.4	16.7	16.3	13.6	11.2	
Czech Republic	8.1	4.9	4	3.9	3.6	2.4	2.8	4.6	5.4	5.2	5.2	5.2	5.6	5.5	4.6	3.7	
Estonia	0.8	0.4	0.3	0.2	0.2	0.5	1.9	5.2	5.4	4	2.6	1.5	1.4	1	0.9	0.7	
Hungary	2.9	2.6	1.8	2.3	2.6	2.3	3.3	8.2	10	13.7	16	16.8	15.6	11.7	7.4	4.2	
Kosovo	na	na	na	na	4.1	4.1	3.3	4.3	5.8	5.7	7.4	8.5	8.3	6.2	4.9	3.1	
Latvia	2	1.4	1.1	0.7	0.5	0.4	2.4	14.3	15.9	14.1	8.7	6.4	4.6	4.6	3.7	3.5	

Lithuania	5.3	2.4	2.2	0.6	1	1	6.1	24	23.3	18.8	14.8	11.6	8.2	4.9	3.7	3.2
Macedonia, FYR	23.1	22.4	17	15	11.2	7.5	6.7	8.9	9	9.5	10.1	10.9	10.8	10.3	6.3	6.1
Montenegro	16.5	4.7	5.7	5.2	2.8	3.2	6	13.5	20.9	15.5	17.6	18.4	16.8	13.4	10.2	7.4
Poland	21.1	21.2	14.9	11	7.4	5.2	4.7	4.3	4.9	4.7	5.2	5	4.8	4.3	4	3.9
Romania	2.3	8.5	8.1	1.4	1.8	2.6	2.7	7.9	11.9	14.3	18.2	21.9	13.9	13.5	9.6	8
Serbia	21.6	24.1	22.2	19.8	22.2	8.4	11.3	15.7	16.9	20	18.6	21.4	21.5	21.6	17	9.8
Slovak Republic	7.9	3.7	2.6	5	3.2	2.5	2.5	5.3	5.8	5.6	5.2	5.1	5.3	4.9	4.4	3.7
Slovenia	3.9	3.7	3	2.5	5.5	3.9	4.2	5.8	8.2	11.8	15.2	13.3	11.7	10	5.1	3.2
SEE Average	15.6	12.8	11	9.5	7.9	4.9	6.2	9.8	13	13.6	15	16.3	15.7	13.9	11.4	8.3
CEE Average	6.1	5.5	4.3	3.3	3	2.5	3.4	8.5	10.3	10.9	11	10.8	9.5	8.3	6.4	5.1

Source: World Bank

Both regions saw an increase in non-performing loans in the aftermath of crisis, the share of which has started to decline but is still above the pre-crisis level. The level of NPLs varies across countries, while on average it remains higher in SEE. Almost all TEs faced bad loan problems during their transition. In the early 2000s, high levels of bad loans were mostly inherited from the central planning area. The recovery was hard but most of the countries managed to continuously reduce this problem that hampered financial development. Figures show that in 2007, the ratio of NPLs was on average the lowest in both regions, however this picture changed soon due to the crisis. Recently, NPLs ratio have fallen sharply in Albania, FYR Macedonia, Romania and Serbia, whereas some countries still confront a two-digit bad loan ratio. Albania has undertaken an action plan in 2015 to reduce the NPLs level by introducing several legal amendments and improvements in the regulatory system. These efforts were successful to lower the level of NPLs to 13.2% in 2017, the lowest level since 2010. NPLs have presented a burden to Montenegrin banks for many years. In the mid-2000s, Montenegro saw a large growth of bank credit, mostly to the real estate sector. The participation of foreign banks in lending was high and the financial crisis contributed to a quick rise in NPLs. Following the changes in the regulatory and supervisory framework, country managed to lower the NPLs to a single-digit level in 2017. Romania experienced a credit boom in the first years after joining the EU and a sharp increase in the level of NPLs since 2009, which peaked at 21.8% in 2013. With the actions taken by the supervisory authority, NPLs declined significantly since 2014. NPLs are one of the main challenges of Serbian banking sector. Since the beginning of the transition, Serbia faced a large portfolio of inherited bad loans. The ratio of NPLs began to decline shortly before the crisis, to be increased again very soon. Only recently Serbia managed to resolve the problem of NPLs, with the assistance of IMF, World Bank and EBRD. IMF's Regional Economic Issues report of 2014 points out that countries should tackle the issue of high NPL by improving banking sector

supervision, insolvency framework and legal reforms. Lowering the ratio of NPLs is particularly important to encourage banks to increase credit provision - which as mentioned previously, remains one of the main obstacles for enterprises in TEs. The evidence also suggests that persistent high NPLs ratios tend to hamper the growth rates, as these high ratios influence the performance of firms and also present a burden for banks (Damijan, 2016).

Conclusion

Since the early 1990s, all TEs went through a tough and long process of transforming their economies from centrally-planned to market-oriented economies. In the initial years, the progress was small but by the end of 1990s, considerable success had been attained to ensure macroeconomic stability mostly through strict fiscal and monetary policies. Since the beginning of 2000s, the economic activity boosted, especially in the CEE region. This trend was hampered by the Global Financial Crisis of the year 2008, which led to a slowdown in economic activity and a sluggish recovery. Significant success has been marked in the liberalization of the economies and the privatization process, however the standards and the performance of industrialized economies have not been reached yet. Progress scored varies among countries in terms of the qualitative aspects that are features of modern market economies. The progress of CEE countries in structural reforms has been constantly greater compared to SEE region. Despite improvements, the main challenges for both regions, and particularly for SEE countries, remain the improvement of corporate and public governance, strengthening the rule of law and reducing corruption. TEs have also lagged behind in taking into account environmental pollution and gender and age inclusiveness.

The transformation of the banking in TEs was quite a difficult process and in general small improvements were marked during the first decade of transition. During this period, banks continued to use inherited mechanisms from the centrally-planned system, therefore their role in improving economic performance was limited. In some cases, the banking sector even went through episodes of crisis that threatened the overall stability. Sluggish reform process, poor risk management techniques and soft budget constraints were some of the main sources for weak bank performance in the first years of transition. Further reforms, establishing an independent monetary authority and strengthening the legal framework were necessary to ensure a well-functioning banking sector.

An important stage for the development of banking in TEs began with privatization process of banks to strategic foreign investors, which brought long-awaited benefits in the banking industry. The role of state-owned banks declined while foreign bank

participation grew rapidly. The banking sector marked important progress while the performance indicators show that banks are profitable and well-capitalized. With the entry of foreign banks, financial deepening started to increase however financial intermediation, especially in SEE countries, is not at a desirable level. Businesses in TEs, continuously reported that access to finance remains one of the main obstacles to their activity. This implies that lack of finance may hamper private sector development and economic growth in TEs. Since the beginning of the 2000s, TEs and particularly CEE region experienced a rapid credit growth, which revitalized economic activity. Lending was oriented to a great extent towards households and mostly in form of a mortgage lending. The Global Financial Crisis of 2008 and weak global economic activity weakened the stability in the banking sector of TEs, especially in the countries that had huge foreign capital inflows prior to the crisis. NPLs increased in most of the countries, and for many years they have presented one of the main barriers to bank performance and credit growth. CEE region has managed to lower the level of NPL, while considerable progress has been made also among SEE countries. The crisis indicated that strengthening supervisory and regulatory institutions is vital to maintain the stability in the banking sector. Moreover, all countries, especially those of SEE region, need to improve access to finance for business and thus support the development of the private sector.

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OVERVIEW OF TRENDS IN THE EMPLOYMENT STRUCTURE IN KOSOVO

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Abstract: Technological advances and their skills-biased effects on labor demand are believed to be the primary forces behind the reshaping of occupational structures in United States and Europe in the recent decades. Changes in the composition structure of the employment gave rise to alternative patterns of labor markets. In this context, job polarization, upgrading or downgrading of occupations have gained the interest of many researchers. This trend is witnessed in many countries of Europe and USA while the available data for Kosovo present a more complex story. While we witness a split of trend in 2015 we can still discuss about the potential sings of downgrading in the case of Kosovo. This means that the number of people with high skills added to the labor force each year is in disproportion with level of skill in the newly created jobs. However, the trends are not clear cut, therefore this paper attempts to present a more nuanced picture of the skill mismatch in the labor markets in Kosovo.

Key words: Employment structure, job polarization, upgrading, downgrading, occupations, skill mismatch education, overeducation, crowding out.

JEL classification: J1, J1, J2, J4, J6

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Introduction

Considering the importance of jobs in economic and social terms a detailed analysis of the dynamics of Kosovo's labor markets is of great importance. Although the challenges faced by Kosovo's workers are already identified in different reports prepared by World Bank or Kosovo Agency of Statistics, a more thorough research with the purpose of informing policy making in Kosovo is necessary. Several aspects of Kosovo's labor markets grab the attention of researchers in this field. Apart from traditional challenges such as low levels of growth relative to the needs of Kosovo labor markets, inadequate educational attainments, high joblessness, weak links between schooling and employment labor markets today are also faced with the challenge of adapting to a changing world driven by technological advancements.

Kosovo exhibits the most challenging labor market performance in the region despite the fact that its GDP growth levels have been constantly above Western Balkan average in last decade. It still lags behind most of its neighbours in labor force participation, employment, skills and capital. Its labor markets are characterized by heterogeneity in labor market conditions while employment showed signs of instability across years. Overall, employment is still very low, Kosovo is the only country whose employment rate is persistently around 30 percent. Only around 29 percent of individuals in the working age were employed during 2017, at the same time, labor force participation rate is extremely low, only approximately 43 percent were economically active during that year. Females and the youth exhibit even worse labor market participation rates compared to males and prime-age workers. Further, in 2017 among individuals who were economically active 30.5 percent were unemployed, which is a significant increase compared to around 27.5 percent in the previous year. Youth unemployment is very high around 50 percent, moreover, the share of young individuals who are not in employment, education or training (NEETs) is more than 27 percent.

Meanwhile, in the last twenty years Kosovo experienced a period of explosive expansion of tertiary education mainly due to increased education opportunities and partly driven by the aspirations to work in the public sector where wages have increased significantly compared to the private sector. At the same time one of the main challenges facing Kosovo is the poor quality of education and the mismatch between education and labor markets demands. A recent World Bank report shows that poor quality education and skill mismatch are among the main factors that prevent the inactive population from obtaining and retaining good jobs (World Bank, 2017).

Above all, as a result of a very complex political and socio-economic transitional period Kosovo's labor markets do not always exhibit the same labor market trends as other European countries, where changes in the structure of employment mostly indicate the existence of job polarization, which is manifested by declines in middle-skill occupations and growth in low and high skill occupations, mainly associated with technological advancements. Based on Kosovo Labor Force Survey reports (2012-2017), one can identify significant job polarization in terms of employment between different levels of education and genders. For example, if we sort workers in three separate groups based on the level education only (high, medium and low) in accordance with UNESCO's international Standard Classification of Education (ISCED) classification we can see how employment share is "polarizing" into relatively high-education, and low-education jobs. Interestingly enough, this trend cannot be observed with the available information when occupations are sorted by skill level suggesting that Kosovo labor markets offer a very interesting case study which can be contrasted with evidence to findings in other countries. Accordingly, our study aims to examine changes in the skill and education specific employment structure in Kosovo and document possible diverging trends and patterns in Kosovo labor markets, contrast these findings to those evidenced in other countries in Europe, and analyse their implications for the labor markets.

More specifically, this paper aims to descriptively analyze the implication of the recent changes in employment structure by looking at the level of education (skills) of individuals who are employed, and then comparing it with the number of occupations for each skill (education) level. Following the core assumption of this paper: highly educated individuals work on high-skilled jobs, medium educated individuals work on medium-skilled jobs and individuals with low level of education work on low-skill jobs we can put forward the following hypothesis regarding the availability of skill mismatch and the direction in which this mismatch leads our labor markets: Kosovo labor markets are faced with a significant mismatch between the occupational skill level demanded by the market and the supply of skills by the labor.

The data show that the share of highly educated workers has increased more than 6 percentage points, while the share of low educated individuals has remained roughly the same and the share of medium educated individuals has decreased considerably. This shows that education brings an advantage in employment opportunities. Nevertheless, the important observation in this case is the kind of jobs that these highly educated individuals are getting. While the share of employed highly educated workers is increasing every year the share of high-skill occupations is not increasing with the same pace, suggesting that highly educated individuals must be getting jobs on occupations that do not match their level of education.

Because of the scarcity of high-skill jobs, high-skill workers might be forced to take medium-skill jobs and as a result they *crowd out* the medium-skilled workers who also would downgrade to lower skill occupations and create over-education in the low-skill jobs. This is a very important observation since on one side it provides signs that the educational system is detached from labor market needs; meanwhile on the other side this mismatch between the level of education and job-requirements has, as research shows, significant impact on the socio-economic and psychological state of the individuals.

1. Literature review

Changes in the composition structure of the employment have given rise to alternative patterns of labor markets globally. Job polarization upgrading or downgrading of occupations have gained the interest of many researchers recently. A vast amount of literature today deals with the shrinking share of the middle class in the US and Europe. The share of employment in occupations at the middle of the skill distribution has declined in Europe and US, while at the same time the share of high and low skill occupations has increased (Autor, Katz, Kearney, Berman, & Chandra, 2006; Goos & Manning, 2007; Goos, Manning, Salomons, 2009). Technological advances and their skills-biased effects on labor demand are believed to be the primary forces behind the reshaping of occupational structures in the recent decades (Autor, Katz, & Krueger, 1998; Acemoglu & Autor, 2011; Fernandez-Macias & Hurley, 2014; Hurley, J; Storrie, D, Jungblut, 2011). This phenomenon is known as job polarization which is characterized by a relative increase in the demand for high and low skilled workers and a decline in the demand for middle skilled workers (Spitz-Oener, 2006; Goos et al., 2009; Acemoglu and Autor, 2011; Fernández-Macías, 2012; Castellano, Musella, Punzo, 2018; Autor, Levy, Murnane, 2003; Goos and Manning, 2007). Among the first authors to study the issue, Autor, Levy, and Murnane (2003), have shown that the main driver of job polarization was fast the computerization of many routine jobs which were intensively carried out by middle-skilled individuals (“routine-biased technological change”). Empirical studies have examined several aspects of job polarization and have shown that United States and most of EU countries have experienced a polarization of employment, in particular, the aggregate share of jobs in middle skill have declined since the end of the 1980s while the share of jobs in high-skill occupations as well as low-skill has increased (Acemoglu and Autor, 2011; Autor and Dorn, 2013; Dustmann, Ludsteck, Schönberg, 2009; Mishel, Shierholz, Schmitt, 2013).

On the other hand, upgrading of occupations, favors high-qualified activities, which means that there is a relative increase in the share of employment in the high skilled jobs compared to low-and middle-skill jobs (Autor, 2010). More rarely, low-skill

jobs grow faster than the rest, or while middle and high skill jobs decrease the low-skill jobs grow, leading to downgrading of occupations (Hurley, J; Storrie, D, Jungblut, 2011). During the crisis period (2008–2010), some EU countries exhibited signs of downgrading, a growth in lower-paid jobs, accompanied by declining employment in top-paid jobs, this pattern continued into 2011–2013 in some countries (Fernandez-Macias & Hurley, 2014).

All of these three forms have different impacts on the skill mismatch. According to Sparreboom&Tarvid (2016), if we hypothesize a labor market in which there is no divergence between skill and education and all jobs are held by workers that are trained adequately for that job, polarization of jobs could increase the skills mismatch. Specifically, assuming that the supply response is not immediate and there is no interaction with unemployment, job polarization could produce both under and overeducation. There could be an increase of undereducation for workers who are performing the expanding share of high - skill jobs, while overeducation would rise for workers performing low-skill jobs, because those jobs would be taken by workers previously employed in medium-skill jobs. Hence, if we follow the same line of reason we can argue that the effects of upgrading would produce similar results but only undereducation would appear as a result of expanding share of high-skill jobs. Downgrading, on the other hand, has different effects. As a result, a decreasing share of high-skill jobs could produce overeducation because the scarcity of high-skill jobs may force more educated workers to take middle-skill jobs and as a result crowd out the middle-skilled workers who also would downgrade to lower skill occupations and create another overeducation in the low-skill jobs.

Meanwhile, an excessive volume of empirical literature studies the determinants and economic consequences of mismatch between formal education and the labor market requirements. For example, McGuinness, (2006) emphasizes the negative effects of mismatch for the economy as a whole (e.g. a waste in tax revenues due to the financing of excessive levels of education), for firms (e.g. a loss in efficiency if over-educated workers are less productive than their adequately educated colleagues) but also for individuals (e.g. over-educated workers may earn less than their former classmates doing jobs that match their education).

2. Data and variable definitions

In order to assess labor market trends in Kosovo we use data from the Kosovo Labor Force Survey (LFS) for the period 2012-2017. The LFS is conducted by the Kosovo Agency of Statistics (KAS) and contains the richest and most reliable data on the labor market in Kosovo. Since 2012, LFS methodology and standards applied by KAS are harmonized with Eurostat recommendations. In the most recent yearly

data (2017), 3668 households were surveyed, selected according to the random method from the Population Census 2011. Households selected for the survey had three re-surveys within the reference period providing us with a panel structure of four observations per household.

In this paper we use aggregate data only on the occupational skill level and level of education. The richness of the data provides sufficient information to tackle our research question allowing us to identify emerging patterns in terms of the direction in which employment trends are headed. They help us show whether there are signs of job polarization into relatively high-skill, and low-skill, in the same line with international trends, or if there is movement in the direction of downgrading. We use International Standard Classification of Occupations (ISCO-08) (ILO, 2012) in order to define skill level required for an occupation; ISCO-08 defines four occupational skill levels, with one being the lowest and four being the highest. What makes this system particularly useful in our case is that each definition provides examples of typical occupations and the usual type of education required for competent performance. This makes the mapping of skill levels into major groups of occupations and types of educations possible and enables us to utilize LFS data on occupation and education to fulfill the research aim. Table 1 shows the relationship between four skill levels and ten major occupational groups as defined by ISCO-08.

Table 1. Mapping ISCO-08 major groups to skill level

ISCO-08 Major groups	ISCO-08 Skill level
1. Managers	3 and 4
2. Professionals	4
3. Technicians and Associate Professionals	3
4. Clerical Support Workers	2
5. Service and Sales Workers	2
6. Skilled Agricultural, Forestry and Fishery Workers	2
7. Craft and Related Trade Workers	2
8. Plant and Machine Operators, and Assemblers	2

9. Elementary Occupations 1

0. Armed Forces Occupations 1, 2 and 4

Source: International Labour Office

Moreover, we use UNESCO's international Standard Classification of Education (ISCED-97) in order to match ISCO-08 skill levels with ISCED-97 levels of education required to perform competently. This is valid only in cases where formal education requirements can be used as part of measurement of skill level of an occupation. Therefore, we should note that International Standard Classification of Occupations (ISCO-08) suggests that in some cases experience and informal training may substitute for formal education. So, Table 2 shows the relationship between four skill levels by ISCO-08 and ISCED-97 levels of education.

Table 2. Mapping ISCO-08 skill levels to ISCED-97 education groups

ISCO-08 Skill level	ISCED-97 education groups
4	6. Second stage of tertiary education (leading to advanced research qualification)
	5b. First stage of tertiary education, 1 st degree (medium duration)
3	5a. First stage of tertiary education (short or medium duration)
2	4. Post-secondary, non-tertiary education
	3. Upper secondary level of education
	2. Lower secondary level of education
1	1. Primary level of education

Source: International Labour Office

In Table 2 we can see that 5a, 5b and 6 all represent some form of tertiary education, which match with both skill levels 3 and 4, moreover, levels of education 4, 3 and 2 match with skill levels 3, and 1-Primary level of education matches with 1-elementary occupations.

Considering that LFS aggregate database provides data only for tertiary education only as a single group, we are forced to use only three levels of education in our analysis (high, medium and low). First group (high-education) includes all workers that have any form of tertiary education, second group (medium-education) includes individuals who have finished secondary school both gymnasium and vocational and third group (low-education) includes all individuals without school and individuals with primary school (I-IX classes). Further, in order to make education and occupation level variables comparable, we use the same logic for skill level of occupations as we used for level of education. We will use only three occupational skill levels: High-skill occupations that includes Managers, Professionals, Technicians and Associate Professionals; Medium-skill that includes Clerical Support Workers, Service and Sales Workers, Skilled Agricultural, Forestry and Fishery Workers, Craft and Related Trade Workers, Plant and Machine Operators, and Assemblers; Low skill includes Elementary Occupations.

Since, each major occupational group can be mapped to a certain skill level at the same each skill level can be mapped to a certain level of education (as shown in Table 1 and 2) we can use this common feature to match occupations with level of education required to perform competently. Therefore, in this paper we assume that high-skilled jobs should be performed by highly educated workers, medium-skilled jobs should be held by medium educated workers and low-skill jobs should be performed by workers with low level of education.

This assumption allows us to discuss about downgrading, skill-mismatch, possible existence of overeducation and crowding out of lesser educated individuals. Specifically, in order to show signs of skill-mismatch we look at the number of people employed according to level of education and the number of jobs according to required skill level and compare the number, share and growth in both variables. We seek to find diverging trends between the two variables, because in an ideal world those two variables should be the same, especially if the assumption made above holds. Diverging trends between those two variables can be interpreted as skill-mismatch. We argue below that in our case the skill-mismatch is accompanied by overeducation by showing that the number of highly educated individuals is growing much faster than the number of jobs required high level skills. By comparing employment growth by education level and job growth by skill level we show that overeducation may be creating a crowding out effect for medium and low educated individuals.

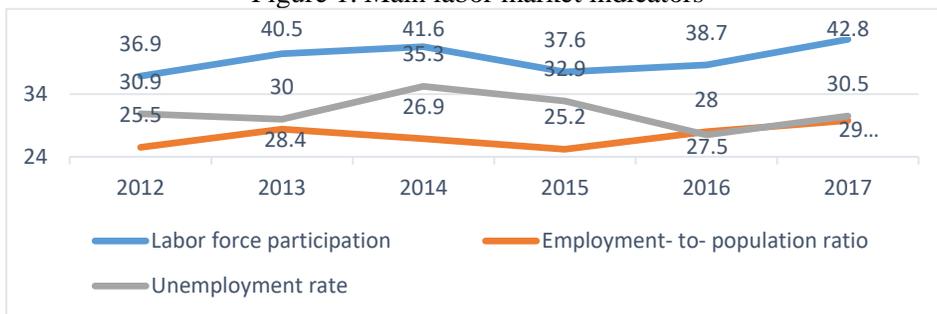
It is important to note that in some cases experience and informal training may substitute for formal education. In such cases the assumptions made in this paper might lead to an overestimation of the skill-mismatch, more precisely of the

overeducation and the crowding-out effect. Nevertheless, because of the nature of the available data a more thorough analysis which would allow to assess the effect of the substitution of education by experience and informal training is outside the scope of this paper.

3. Results and discussion

Despite the fact that Kosovo has experienced growth above Western Balkans average in the last decade, labor market performance remains weak and fragile. Unemployment remains high hovering around 30% combined with low labor force participation and employment rate. The situation is even worse for youth whose unemployment remains high at 53%, meanwhile the share of NEET is 27%. As the following table shows the main indicators are characterized by volatility which is not always easy to relate to the conditions in which the economy is operating each year. For example, (see Figure 1) labor force participation, that is constantly fairly low, drops to 37.6% in 2015 from 41.6% in 2014 and then climbs back in 2017 to 42.8%. Similarly, employment to population ratio has shown a similar tendency. On the other hand, the drop-in unemployment can be partly explained by labor force participation. A tentative explanation for the year 2015 can be the sudden wave of illegal immigration which occurred by the end of 2014 and the first month of 2015. It is also interesting to note year 2017, during which LFP together with employment to population ratio and unemployment rate increases. Basically, the increase in labor force participation led to increases in other indicators acting as a sign of a more optimistic view of the socio-economic conditions of the country. While the objective of this paper is not to identify the causes of the volatility in labor market trends, it is important to note their existence.

Figure 1. Main labor market indicators



Source: Labor Force Survey (Kosovo Agency of Statistics)

The following Table shows the number of employees according to level of education. It is interesting to see that from 2012 to 2017 we can identify a form of

polarization in the sense that the increase in employment of those with medium level of education has been increasing at a slower pace compared to those with low level of education and high level of educations. Meanwhile, the biggest increase is witnessed by those with high level of education. Similar to other indicators we have a break in trend in 2015 as well, during which the number of employees in all categories drops sharply. Evidently, the biggest drop is witnessed by those with low levels of education, an expected reaction of labor markets in extreme situations. The polarization of employment according to level of education was stronger before 2015 as it is evident in the table, meanwhile 2016 and 2017 show some signs of stabilization. On the other hand, employment of those with high level of education witnessed the biggest increase along the years which can be considered as a sign that higher levels of education lead to better probabilities of finding a job.

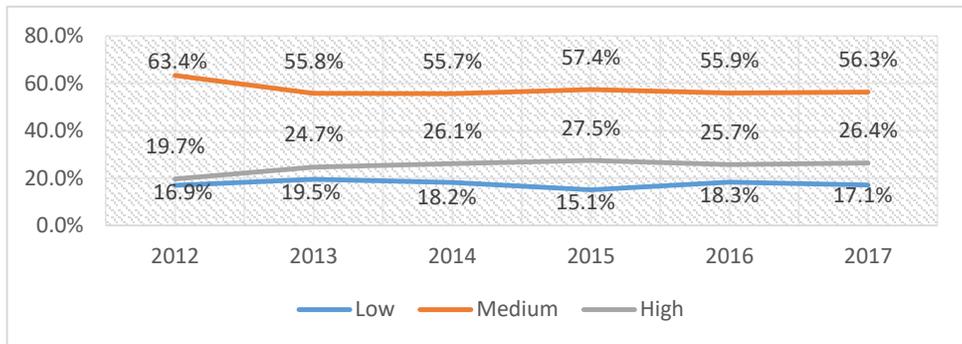
Table 3. Number of employees according to level of education

	2012	2013	2014	2015	2016	2017
<i>Low</i>	51,300	65,988	58,877	44,832	60,800	61,600
<i>Medium</i>	192,100	188,827	180,190	170,421	185,600	201,200
<i>High</i>	59,600	83,585	84,433	81,647	85,400	94,300
Total	303,000	338,400	323,500	296,900	331,800	357,100

Source: Labor Force Survey (Kosovo Agency of Statistics)

Figure 2 shows the share of different levels of education in the total employment structure. Again, here we can see how the share of employment for those with medium level of education has dropped from 63.4% to 56.3; meanwhile the share of those with low levels of education and high level of education has increased.

Figure 2. Employment structure according to level of education



Source: Labor Force Survey (Kosovo Agency of Statistics)

Table 4 depicts the number of employed individuals in low, medium, and high skilled occupations during 2012-2017 (with exception of 2013, data for this year were not available). It is evident that during the reported period Kosovo's employment structure has exhibited interesting patterns. In general, there is an upward trend for each of the three differently skill categories, with the exception of 2015 during which we can see that the number of workers decreased significantly (this decrease occurred mostly at the middle and high skill occupations). The most important observation of Table 4 is that it clearly shows the stagnation of the high skill occupations compared to other two skill groups. Specifically, while the number of workers in low-skill occupations has increased robustly from around 56.000 in 2012 to over 85.000 in 2017, the number workers in high skill occupations increased at a significantly lower pace, from around 97.000 in 2012 to 101.400 in 2017. Meanwhile, the number of workers on medium skill occupations has been growing at a much slower pace compared to the number of workers on low skill occupation but faster than those on high skill occupations.

While we should be cautious when drawing conclusions especially because of a very short reporting period, data show that Kosovo has experienced a deterioration in the employment structure. These changes in employment structure have important implications for labor market outcomes of individuals. Following the assumption that each occupation should be filled by individuals equipped with the corresponding skill level, the slow increase in high skill jobs may have negative impact on highly educated individuals because they will continuously have less opportunities to work on a job that matches their level of education, therefore, they would either search for jobs at lower skill levels or be forced to unemployment.

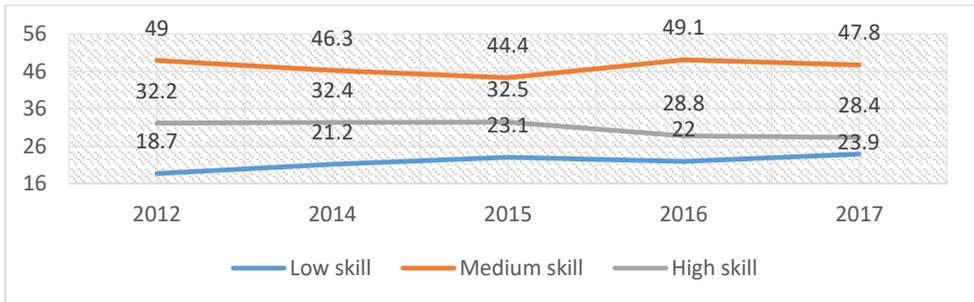
Table 4. Number of employees according to skill level

	2012	2014	2015	2016	2017
<i>Low skill</i>	56,661	68,582	68,584	73,047	85,100
<i>Medium skill</i>	148,470	149,780	131,824	162,964	170,594
<i>High skill</i>	97,566	104,814	96,492	95,789	101,407
Total	303,000	323,500	296,900	331,800	357,100

Source: Labor Force Survey (Kosovo Agency of Statistics)

To continue with, Figure 3 shows employment shares between 2012 and 2017 (with the exception of 2013) for each of the three skill level occupations. The proportion of workers in high skill occupations decreased by 3.8 percentage points, from over 32 percent in 2012 to around 28 percent in 2017. It is important to mention that during the period 2012 to 2015 the share of low and high skill occupations was increasing, while the share of medium skill occupations was decreasing. This indicates the presence of job polarization in the occupational structure similar to findings in US and Europe (Autor et al., 2003; Goos & Manning, 2007; Acemoglu & Autor, 2011). Meanwhile the period 2015 – 2017 presents a different story; again, this change can be attributed to the huge migration wave of 2014 and first three months of 2015. During this second period the relative share of workers on medium and low skill occupations is increasing, while share of workers on high-skill occupations has decreased significantly. Once again as we mentioned earlier even though the time period that we are reporting is very short we can argue that there may be a presence of downgrading, or at least deterioration in the employment structure similar to downgrading. The same pattern of job structure was experienced in some EU countries during the 2008-2010 crisis (Fernandez-Macias & Hurley, 2014).

Figure 3. Employment structure according to skill level



Source: Labor Force Survey (Kosovo Agency of Statistics)

The observed patterns in the job structure, especially in the last two years shed light on a very important problem of Kosovo’s labor market: the difference between labor demand and labor supply. If we refer to data on employment according to level of education which is presented on Table 3 and Figure 2 separately without checking with data on skill levels presented on Table 2, one may form the perception that the employment structure in Kosovo is characterized by upgrading (see Autor, 2010). The data show that the share of highly educated workers has increased more than 6 percentage points, the share of low educated individuals has remained roughly the same, while the share of medium educated individuals has decreased considerably, which show that indeed, education brings an advantage in employment opportunities. But, that does not tell the whole story, the important observation that should be made here is the kind of jobs that these highly educated individuals are getting. While the share of highly educated workers is increasing every year the share of high skill occupations is decreasing significantly which suggests that highly educated individuals must be getting jobs on occupations that do not match their level of education.

Referring to the tables above, it is important to note that the gap in 2012 between high skill jobs and the number of employees with high level of education was around 37.000. This can be considered as one of the reasons why the interest in higher education increased in Kosovo and more people were completing more years of study. However, in the following years, the number of high skill jobs increased at a significantly lower pace compared to the number highly educated workers. Even though the gap continues to exist, we believe that this trend is one of the main contributors to the skill mismatch in Kosovo.

These findings indicate that new jobs are being created mostly in low and medium skills occupations, which means that the demand for low and medium skill

occupations is increasing while demand for high skilled employees is increasing at a slower pace. On the other hand, surprisingly, the supply for labor is responding by increasing significantly in the offer of highly educated workers instead of offering more medium and low skilled individuals, which is an indication that the system of education does not respond to labor market needs, and it's relatively detached from economy. In addition to that, the large size of the public sector may partially explain the observed supply behavior. We believe that individuals' educational decisions are affected by the public sector which requires highly skilled workers and has higher average wages compared to the private sector.

Following Sparreboom&Tarvid (2016) line of reasoning, in Kosovo's case the decreasing share of high skill jobs accompanied with increasing share of low skill jobs it is rational to expect a significant impact on overeducation, because of the scarcity of high skill jobs, high skill workers are forced to take medium skill jobs and as a result they crowd out the medium skilled workers who also would downgrade to lower skill occupations and create another case of overeducation in the low skill jobs. This claim is in line with the World Bank report (2017) which identifies skill mismatch as an important factor that impacts labor market outcomes.

In order to illustrate the idea of overeducation in Table 5 we present a very simple analysis. We analyse the increase in the number of workers during 2017, specifically, on the left side of the table we present the increase in the number of workers by level of education, while on the right side we show the increase in the number of workers by occupational skill level. Following the assumption that each person should match with a job which meets his skill level then it is evident that workers are getting jobs that do not match their level of education. Therefore, presence of overeducation is obvious which in this case appears in several levels. Firstly, highly educated individuals take medium skill occupations; secondly, medium educated individuals take low skill jobs and lastly and less common highly educated individuals working on low skill jobs.

Table 5. Difference between the level of education of employees and skill level of occupations

Level of education:	2016	2017	Difference (2017-2016)	Skills	2016	2017	Difference (2017-2016)
<i>Low</i>	60,800	61,600	800	<i>Low skills</i>	73,047	85,100	12,053
<i>Medium</i>	185,600	201,200	15,600	<i>Medium skills</i>	162,964	170,594	7,630

<i>High</i>	85,400	94,300	8,900	<i>High skills</i>	95,789.00	101,406	5,617
Total	331,800	357,100	25,300	Total	331,800	357,100	25,300

For instance, during 2017, only 800 low educated individuals got new jobs, while according to occupational skill level 12.053 low-skill jobs were created, which is 11.253 more than low educated workers. This is an indication that all these jobs have been taken by individuals that have higher level of education, most probably by individuals that have medium level of education. This claim is supported by the data on workers with medium level of education. While 15.600 workers with medium level of education got new jobs, only 7.630 medium skilled jobs were created, the difference that is around 8.000 workers must have been filled by individuals whose skills does not mach with the skills required for the job. Further, 8.900 highly educated workers got new jobs, while only 5.617 high skill jobs were created, which is around 3.300 less. All these individuals must have taken jobs below their skill level, even though without the availability of microdata it is hard to say what sort of jobs these individuals have taken, but it is rational to assume that they crowd out the medium skilled workers who on their side downgrade to lower skill occupations, hence driving low educated individuals to unemployment or out of labor force.

Conclusion

In this paper we investigate the changes in the skill and education specific employment and show the existence of diverging trends and patterns in Kosovo labor markets in light of important changes in the occupational structure of the European countries and USA. Our results show that during the last seven years' employment trends are much different compared to those of European labor markets, who are characterized mostly by job polarization and upgrading of occupations. In Kosovo, more mixed patterns of the occupational structure are witnessed. If not downgrading, Kosovo has clearly experienced a deterioration in the employment structure which means that there is a stagnation of the growth in high skill occupations compared to other two skill groups.

In order to assess labor market trends in Kosovo we use data from the Kosovo Labor Force Survey (LFS) for the period 2012-2017. We use International Standard Classification of Occupations (ISCO-08) (ILO, 2012) in order to define skill level required for an occupation; meanwhile UNESCO's international Standard Classification of Education (ISCED-97) is used in order to match ISCO-08 skill levels with ISCED-97 levels of education required to perform a job competently. This method allowed us to identify a gap between labor demand and labor supply.

In simple words, while our economy is mostly creating jobs in low and medium skill occupations, there has been a substantial increase in the number of high educated workers, which cannot be appropriately absorbed by our economy. Our result show that during the reported time Kosovo labor markets exhibit a significant increase in employment of individuals with high levels of education. This is an indication that education is a key factor in improving labor market outcomes, but, even though that might be partially true, it is important to note that the number of high skill jobs is increasing at a much lower pace, which, we believe, is one of the main contributors to the skill mismatch in Kosovo. This mismatch is manifested in the form of overeducation because as our analysis shows, it is evident that a significant number of highly educated individuals must be getting jobs on occupations that do not match their level of education. This skill-mismatch results in a crowding out effect in two levels, first high skill workers crowd out the medium-skilled workers who also would downgrade to lower-skill occupations, hence, driving low-skilled workers out of employment.

The conclusions drawn from our analysis should be read with the caution, due to limitations imposed by aggregate data that we used and the time frame. These results show tentatively the existence of skill-mismatch, overeducation and crowding out effect in Kosovo labor markets and should form the basis to a deeper analysis of the implications of these factors on labor market outcomes.

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DIGITALIZATION OF THE TOURISM INDUSTRY: WHAT ARE THE IMPACTS OF THE NEW WAVE OF TECHNOLOGIES

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Abstract: Digital technology is affecting the transformation of most industries and is creating new challenges that need to be taken into consideration. Tourism industry is mostly affected by digital innovation and has been an early adopter of digital technologies. The links between ICT and tourism development have started to establish for more than 30 years, thus bringing progressive changes in the tourism sector with introduction of new technologies. The appearance of new digital business models has an important impact on tourism in general and can be considered as the main driver for the competitiveness in the tourism industry. The use of ICT has transformed the way businesses operate and the consumers' life style, and the use of ICT also has provided many benefits both for companies and for consumers. Transformation of ICT has gone through several waves; thus, each wave has its impact on the tourism industry. The first transformation started with computer penetration, followed by mobile phone penetration and internet penetration. This wave of technology has deep impacts on the tourism industry, but now we have a new wave with more important and deeper impacts. The new wave of technology includes: Virtual Reality, Artificial Intelligence, Robots, Internet of Things, Drones, Blockchain, Big Data, Augmented Reality and 3D printing. Each of these technologies are already impacting tourism industry. While the first wave of technologies has decreased the costs of travel, the costs of aviation, hotels, travel agencies, tour operators in one side and have brought many facilitations for tourists enabling them searching and booking online without being physically present in the travel agencies in the other side, the new wave of technologies is not used only to reduce costs. Based on the arguments described above, this paper will discuss digitalization of tourism industry in general the impacts of the first wave of technologies and the impacts of new waves of technologies in tourism industry.

Key words: digitalization, tourism, new waves, massification, individualization, sustainability

JEL classification: L83, L86, R41, O33

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Introduction

The notion of digital economy is spreading all the time because of its multifaceted and dynamic nature and due to the transformational power of digital technologies. According to OECD (2012), the digital economy have allowed and accomplished the trade of goods and services using online commerce. The Economist Intelligence Unit and IBM have defined digital economy as one that “can provide a high quality of ICT infrastructure and harness the power of ICTs to benefit consumers, businesses and governments”(World Bank, 2016). In the literature digital technology has many different names, such as IT- Information Technology, ICT- Information and Communication Technology, DT-Digital technology, and DICT- Digital Information and Communication Technology, and its application in tourism are known as DT – digital tourism, e-Tourism - electronic tourism and e-tourist – electronic tourist (Gelter, 2017).

The development of digital businesses in the network of the current information society offers numerous opportunities to increase the level of existing employment places; it stimulates economic development and innovation-based investment for the convenience of companies. Currently, Information and Communication technologies can be considered one of the main determinants that contributes to socio-economic development. The spread of these technologies has affected contemporary economies and societies, transforming almost all spheres of life. (Szopiński & Staniewski, 2016). Likewise, ICT can be considered as a General-Purpose Technology (GPT); since computers and related devices are used in most sectors of the economy. ICTs have also shown a significant level of technological dynamism, fueling not only the substantial upgrading of computer capacity, but also a consecutive wave of new technologies. Moreover, ICTs have seriously alleviated new ways of organizing firms, including decision-making decentralization, team production, and so on. In this way, ICTs have clearly demonstrated complementarities of innovation with other forms of technological advancement (Guerrieri & Padoan, 2007).

Digital technology is affecting the transformation of most industries, especially tourism and is creating new challenges that need to be taken into consideration. The relationship between ICT and tourism has been very close, due to the dissemination of information in the tourism sector (Pedrana, 2014). ICT has started to establish links and influence tourism development with the introduction of the first wave of technologies such as: the Computer Reservation Systems (CRS) in the 1970s, Global Distribution Systems (GDS) in the late 1980s and the Internet in the late 1990s(Dimitrios Buhalis & Law, 2008). Tourism is an industry that provides consumers with a chain of sufficient and valuable information. Suppliers, brokers and consumers have their role using their specific information systems when they

search for information about their booking, transportation, accommodation, and destination (Henriksson, 2005). Tourism is an intensive information sector because tourists do not only need to provide information about services, attractions, roads and tourist guides in general, but also with updates and news (Pedrana, 2014).

The aviation, travel and tourism industry are mostly affected by digital innovation, but industry and technology trends suggest that further changes should continue. The tourism sector has been an early adopter of digital technologies and platforms, but the high demand for travel, driven by a growing middle class in emerging markets and the increasing importance of digital experiences, means that further digitization will be vital if expectations of tomorrow's customers have to be met (World Economic Forum, 2017). However, the tourism industry is changing (Werthner & Ricci, 2004), and this can be done if we consider e-commerce, which is very suitable for the tourism industry, to enable consumers to buy online without being physically present in the travel agencies. On the other hand, the new wave of technology such as Virtual Reality, Artificial Intelligence, Robots, Internet of Things, Drones, Blockchain, Big Data, Augmented Reality and 3D printing are impacting and transforming tourism industry. Moreover, tourism is one of the sectors with the most advanced "digital maturity" (Mc Kinsey France, 2014).

Transformation is encapsulated in a macroeconomic trend: from the traditional economy to the new economy, from production to services. Digitalization is one of the developments that enables companies to provide services rather than products. As an industry, aviation, travel and tourism with the influence of digital trends is more oriented towards service in the so-called "new economy" (World Economic Forum, 2017). As a result of the impact of new technology, more experienced consumers, global economic restructuring and environmental constraints on growth, the tourism industry is changing dramatically (Poon, 1993). Moreover, while more travelers expect their products and services to meet their requirements, it is important for tourism businesses to have tools that can preserve and monitor information to meet the individual needs of their customers (UNWTO, 2011). As a result of increased usage of ICT, the demand for flexibility is higher and the quality of information has an important impact on leisure time and tourism.

The paper is organized as follows: The second describes the impact of the first wave of technologies on the tourism, how these technologies have reduced costs, how they have created more integrated value chain and the explanation of ICT on the tourism industry. The third section describes the new wave of technologies, the challenge of massification, individual experience and sustainability and how these technologies are resolving these complex challenges. The fourth section describes the benefits from the use of ICT in tourism industry. The last section provides the conclusions of the paper.

1. The impact of the first wave of technologies on the tourism industry

The use of ICT has transformed the way businesses operate and the consumers' life style, and has also provided many benefits both for companies and for consumers. The information revolution has gone through several phases, where it began with the first wave of personal computer penetration, followed by the next two waves: the second wave of mobile penetration and the third wave of Internet penetration. In the global tourism industry are known three waves, which are (Pease & Rowe, 2005; Shanker, 2008): developing Computer Reservation Systems (CRSs) as the first global information application, developing Global Distribution Systems (GDS), and developing the Internet as a new platform for managing business destinations and tourism companies. The evolution of hardware accelerated and diversified with the introduction of the first mainframe computers in the 1960s and personal computers with Apple 1 in 1976 and the IBM PC in 1981 (Gelter, 2017). In 2008, the number of personal computers in the world has exceeded one billion (therefore almost every citizen of the world, including children and the elderly, used the computer) and increased further at a rate of about 150 million per year (Grzegorek & Wierzbicki, 2017). The second wave of digital transformations was mobile telephony, where the first mobile phones appeared in 1983 and now have evolved into powerful today's smartphones. Smartphones have brought forward the joining of some special technical equipment into one, such as voice recorder, digital camera and digital video cameras, video player, MP3 player, gaming equipment, eBook and Internet and post office functions as well as laptop office functions PC (Gelter, 2017).

Buhalis (2003) shows examples on different fields of the development of ICT in the tourism industry such as; airlines, hospitality, tour operators, travel agencies, computer reservation and management systems. Airline tickets, hotel rooms, rental cars, tickets for museums, festivals, sport events and package tours are the mostly booking online. Airline carriers implemented the emerging computer technology to manage reservations, schedules, fares, prices, tickets and boarding passes, itineraries, invoices, and others more accurately and efficiently. Since the increased importance of information coupled with technological developments, organizations have gradually increased their investment in information technology in order to increase the efficiency of their business, improve productivity and support management decisions. So, ICT has the potential of surpassing many of the problems by creating lower costs when consumers purchase online, creating more integrated value chain and bringing many benefits for tourists and companies.

Over time, technology has been transforming and improving in the tourism industry, due to the influence of Computer Reservation System, Global Distribution System and internet connection worldwide. Consumers are looking for new and convenient ways to buy services at the lowest possible cost. Today, tourism operates in a complicated digital environment, where tourism organizations are required to understand and utilize ICT strategically in order to serve their customers, improve efficiency, maximize profits, enhance services, and maintain long term profitability (Dimitrios Buhalis, 1998). Changes related to tourism offer and tourist demand caused by the Internet have also led to a number of benefits for both, enterprises and destinations as well as for consumers i.e. tourists. The Internet is an extremely useful tool and an opportunity for the tourism industry to bridge the gap between supply and demand, through closer communication and interaction (Buhalis, 2003). The Internet and ICT have brought many benefits for tourism development. One of the benefits of the ICT and the Internet on tourism is increase of efficiency and capacity. The most important advantage of information and communication is the availability of information as well as reliable information, through which knowledge is created, shared and accessed widely, to the large number of people, and thus the cost of production is reduced due to the growth of efficiency (Mihajlović, 2012). Tourism companies have gained some advantages from using technologies such as cost reduction, revenue growth, marketing research and database development, and customer retention (Morrison, Taylor, Morrison, & Morrison, 1999). The airline industry was one of the first that have started to use these technologies. The airline reservation system allows the company to manage their inventory more efficiently and managers to increase their levels of experience. They also include sophisticated systems to adjust their prices to demand fluctuations in order to maximize their profitability (Dimitrios Buhalis, 2004). On the other hand, information in the internet enables customers to find answers to their questions, to reduce phone charges based on free calls, as well as helping for saving of distribution costs. Distribution, sale and ticketing is one of the major cost items in the airline industry (Kazoba & Massawe, 2016). Southwest Airlines, a US airline company, has been among the first companies to use the 'low cost' strategy, based on the idea that travel customers are more sensitive in prices than in excessive additional services. Point-to-point and online booking have been the most cost-effective solution. Both elements are perfectly complementary, point-to-point allows the application of simple, efficient and fast websites where consumers immediately find the required service and very low prices compared to the standard one for adopting this new service. Today, almost of the low-cost tickets are sold online, so the booking online has rapidly impacted all sectors of the tourism industry.

ICT have deep implications for tourism and e-tourism as well it reflects the digitalization of value chains and all processes in the tourism, travel, hospitality

and catering industries. Tactically, e-tourism allows companies to manage their operations and make online purchases. (Dimitrios Buhalis & O'Connor, 2005). Strategically, e-tourism has made revolution in business processes, the value chain also strategic relationships with stakeholders. E-tourism defines the competitiveness of companies by taking benefits of intranets for reshuffle internal processes, extranets for expanding transactions with confidential partners and the internet for connecting with all stakeholders (Buhalis 2003). ICT developments create both challenges and opportunities for tourism companies and the most important emerging tendencies can be examined within the structure of change. Necessity of tourism companies to use ICTs in order to develop strategies that are oriented to customer, driven by profitability and partnership permitted is growing more and more. This will help them to focus on customers, organizational needs as well as distribution strategies (Dimitrios Buhalis & O'Connor, 2005).

Nowadays, information and technology must be conceived of widely to include the information that businesses establish and use as well as a wide span of increasingly convergent and connected technologies that elaborate the information with the show of personal computer, optical networks, the explosion of the Internet and the World Wide Web. Easy connections and eliminating information-related delays in any supply chain network are possible by the cost and availability of information resources which means that companies are going toward a concept that is known as Electronic Commerce, where transactions are done via different electronic media, including electronic data interchange (EDI), electronic funds transfer (EFT), bar codes, fax, automated voice mail, CD-ROM catalogues, and a variety of others (Moharana, Murty, Senapati, & Khuntia, 2011).

Today, as a result of using advanced technologies supply chains are made more dynamic. Information technology (IT) is pervading the supply chain at every point, converting the way exchange-related activities are performed, more than ever before (Palmer & Griffith, 1998). Effective coordination of supply chain activities, by means of great information technology processes, has lately been identified as essential to organizational performance (Lewis & Talalayevsky, 1997). Inter-organizational information systems can be simple electronic data exchange (EDI) systems for interchange data like purchase orders, advice of delivery information, and bills, or may include more complex transactions like integrated cash management systems, shared technical databases, internet, intranet, and extranet (Min & Galle, 1999). Enterprise resource planning (ERP) encompass functions such as human resource planning, decision support applications, distribution and manufacturing, supply chain management, sales and marketing, etc. (Yusuf & Little, 1998). ERP systems represent an optimal technological infrastructure that can effectively support supply chain management systems when properly integrated with a process-oriented business design (Chen, 2001).

Considering that the web is flexible, interactive and comparatively efficient medium across which different business partners and consumers will be able to communicate, the potential that it offers for enhancement of efficiency in the channel functions is tremendous (Palmer & Griffith, 1998).

2. Tourism industry and ICT

Over the last few years, there has been a rapid development of tourism in the world, where people visit different places throughout the year whether to spend the holidays, to visit historical and cultural sites or people who travel for business. Tourism represents one of the most important social, economic, and cultural phenomena, where despite the changes in the economy and the various shocks either by wars or any unexpected events has continued to develop and expand across parts of the globe. Tourism as a very important sector for a country's economy has been challenged with increasing demand from customers as well as increasing competition and developing potential to explore beautiful places. Despite crisis and occasional shocks, tourism has grown steadily by demonstrating the strength of this sector. In 1990, 438 million international arrivals were recorded, while in 2000 the number of tourist arrivals were increased to 681 million, which indicates an increase on number of tourist arrivals (UNWTO, 2017). The number of international tourist arrivals have increased from 25 million globally in 1950 to 278 million in 1980, 674 million in 2000, and 1,235 million in 2016 (UNWTO, 2017).

It is difficult to measure the industrialization of tourism because an industry is usually measured by the production of goods and the offered services by businesses. Many businesses offer services to tourists, they serve also non-tourists, so offering goods and services cannot reflect the output attributed to tourism. A hotel can serve tourists, but there are also occasions when it will serve non-tourists. So, it is difficult to give the percentage of services offered to tourists and non-tourists. Therefore, it is not known to what extent the goods and services offered are consumed by tourists. (Backer & Barry, 2013). Tourists have different tastes and their budgets differ from each other, as well as their preference for spending vacations and choosing the place where they want to stay.

The development of infrastructure technology has impacted the travel of people, where now travel is realized easier and faster by influencing the development of tourism. The influence and role of ICT in the tourism industry cannot be ignored and should be considered a key factor in the current society in which information dominates. ICT with its dynamics has offered new opportunities, new tools and has enabled new distribution channels, thus creating a new business environment. The use of ICT has facilitated business operations by making transactions easier and

faster, by creating relationships with trading partners, enabling faster and easier distribution of products and services, and providing information to consumers around the world. On the other hand, the development of ICT has also affected consumers by offering them the opportunity to easily access information to plan their travels. So, the key element in the tourism industry is information (Shanker, 2008). ICT development has also affected demand and supply. As a result of increased usage of ICT, the demand for flexibility is higher and the quality of information has an important impact on leisure time and tourism. Through new technologies and social networks e.g. social media platforms such as Facebook, Twitter, blogs, clients have the opportunity to share their information and thoughts about the destination, the quality of service in hotels and restaurants and the environmental and social conditions. The number of hotels have strengthened their brand image and communicating directly with their customers by posting links to a press release or by promoting a new package through social networks (Bethapudi, 2013).

Moreover, the development of information and communication technology has influenced the pace of tourism growth, facilitating the work of tourists to watch places that want to visit in the internet, make online bookings and to choose different offers for travel. So, the main goal of tourism development is to satisfy tourists, because if the tourist is satisfied will tell others for this place and maybe will visit it again.

3. New wave, new purposes

After the development of the first waves of technologies, three other waves are based on initial inventions made long ago, but the current social penetration has been delayed and we expect the current penetration of the fourth wave of robots, the fifth wave of engineering knowledge (usually but not exactly called artificial intelligence, Internet of things, etc.), and finally a wave of biomedical engineering (Grzegorek & Wierzbicki, 2017). Nowadays, we should also to add the World Wide Web and its revolution from Web1 to Web4 and wireless communication development. The first use of the Internet in the 1990s, exactly Web 1.0 was related to search of information mainly in databases, on websites and in discussion forums and in simple e-mail communication (Gelter, 2017). Web 2.0 appeared as an interactive and social network that facilitates collaboration between people, with websites that emphasize user content and usability. This period was known for various sites like Wikipedia, social networking sites and virtual communities with user-created content such as Facebook, blogs and microblogs such as Twitter, podcasts, video sharing such as YouTube (Gelter, 2017). Recently, the Internet has been transformed into web 3.0, which refers to a third generation of Internet-based services that collectively make up what can be called the "intelligent network" -

which is more connected, open and intelligent with semantic web technologies, scattered databases, mining, driving, machine justification, autonomous agent, recommendations agents, and artificial intelligence technologies - which emphasize the meaning of machine-facilitated information so that provide a more productive and intuitive user experience (Gelter, 2017). The evolution of the digital innovations (web 2.0., web 3.0., internet, the internet of things) that is essential to the new industrial revolution, has led to “Industry 4.0” in tourism (Ivanović, Milojica, & Roblek, 2017). The new wave of technology such as; Virtual Reality, Artificial Intelligence, Robots, Internet of Things, Drones, Blockchain, Big Data, Augmented Reality and 3D printing, have already impacted tourism and some of them will be described below.

After the Industrial Revolution, tourism activities started to attract more tourists and countries that had realized the process of industrialization, had started to travel more frequently around the world. Developing countries are faced with low level of income and their industries are not developed, so the income from tourism activities has a greater part in the budget. When the incomes from tourism are taken into consideration, mass tourism is one of the most important to be mentioned. Mass tourism is a kind of tourism where a number of people make journeys together, can accommodate together and realize their journey as a holiday group(Akis, 2011). The extreme concentration of tourists in a country is one of the characteristics of mass tourism, which can lead to the filling of a country with tourists and the loss of tourism attractiveness. Mass tourism is determined by the volume of tourists compared to the respective territory and the density of the local population(Theng, Qiong, & Tatar, 2015). Mass tourism has brought changes in many areas such as: in environmental pollution, rural areas, dwellings in urban areas, migration effects etc. These variations have led to the search for new solution and new ways such as alternative tourism(Akis, 2011).

Nowadays, when we are faced with the challenge of tourism massification, it is worth mentioning that technology has affected this field in several ways. Technology impacts are relatively apparent in airplanes, credit cards and travel checks, computers, and finally reservation systems used in communication between organizers and intermediaries. Tourism is a more 'flow of information' industry than 'product flow' and this feature makes it more dependent on technologies(Sezgin & Yola, 2012).

The introduction of the new waves of technologies, has started to transform tourism from massification to personalization. For a long time, companies threw away data because they had too much to process or had limited storage capacities. But now collecting and transforming data from different sources into voluminous data sets has created the latest megatrend and hype, Big Data. All industries have been

affected by the emergence of large data, but the tourism industry has seen the most dramatic transformation in this regard. Also, AI - Artificial Intelligence, will be an integrated part of any software application. In addition to the increased usability and capacity of traditional applications such as Office and other everyday applications, Web evolution from Web 1.0 to introduce Web 3.0 and the forthcoming 4.0 web site show a remarkable technological development (Gelter, 2017). Blockchain is another technology that is impacting tourism industry Cryptocurrency algorithms were the first known application of blockchain technology (Pilkington, 2016), which have affected tourism industry. Despite the demand-driven growth, Bitcoin's adoption has slowed down and needs a new impetus. Some travel companies, such as Btctrip¹⁴ and Destinia¹⁵, list their prices at BTC, making the payment process more and more easy. In the case of Destinia, with some exceptions (late arrival fees, airlines accepting only credit card payments), most online products can now be purchased using bitcoins.

An evolution worth mentioning will have a profound impact on travel and tourism is robotization, which is known as the fourth wave of digital transformation. Recently, robotization in the form of self-driven cars has become a hype, and self-driving tractors and self-driving trucks are already a reality, soon affecting the agriculture and transport sector. In addition to the "classic robots" that appear, we begin to see robots take up jobs as receptionists, translators, hotel staff, economists and salesmen(Gelter, 2017). Henn Na Hotel in Japan is using robots as staff to serve the guests. Three reception multi-lingual robots are employed as a receptionist, which are responsible to greet, check-in and assist guests.Also, there are other robots that perform different functions at the hotel. Moreover, robotization in tourism is not just about replacing people with robots; it is intended to individualize mass tourism and standardize exclusivity of services (Alexis, 2017). So, the development of new wave of technologies is facing with the challenge of transformation of mass tourism to personalization.

Experiences can affect people better than products and services (Pine & Gilmore, 1999), so sales of experiences are the best possible solution. Creating experiences is memorable, so people give great value to their experience creation, even though their creation can be expensive. Creating and offering unforgettable experiences for tourists is a great way for tourist companies to create a competitive edge in the future.

¹⁴<https://btctrip.com/>

¹⁵<https://destinia.com/m/bitcoins>

Different authors have tried to define individual experience, taking into account the following elements: experiences as something different from everyday experiences (Quan & Wang, 2004); something that is created outside the common visitor environment or away from home (Jurowski, 2009); past events during the journey can be a long-term memory (Jefferies & Lepp, 2012; Larsen, 2007); events or activities that people engage in personally (Jurowski, 2009; Pine & Gilmore, 1999); events that may occur before, during and after tourist activities (Tung & Ritchie, 2011) creating experiences that are unique to each individual (Jurowski, 2009; Kim, 2010; Pine & Gilmore, 1999); experience involving consumers in a variety of ways, including emotionally, physically, intellectually and spiritually (Jefferies & Lepp, 2012; Volo, 2010). On the other hand, recently the focus of the researchers has shifted to remarkable experiences (Farber & Hall, 2007; Jefferies & Lepp, 2012) or unforgettable experiences (Curtin, 2010; Kim, 2010; Tung & Ritchie, 2011). The experiences of visitors to tourism situations vary greatly and, in the case of tourism, unforgettable or extraordinary experiences are very important because they are "exceptionally vivid and long lasting" (Kim, 2010, p. 781) and can be remembered easier. Curtin (Curtin, 2010) have emphasized that in the most cases future expectations and behavior of consumers are based on memories of previous experiences.

Relationships between customers and companies are changing in favour of consumers, who are increasingly gaining power and control (Florida 2002, Prahalad and Ramaswamy 2004). Taking into consideration the impact of new technologies, the creation of individual experience is easier for tourists as well as for tourism companies. In this regard, travel blogs should be considered as an important form of social media which are "free, public, web-based entries in reverse chronological order presented in a diary format style" (Volo, 2012). Travel reviews that can be found on blogs act as a community where consumers connect and become involved with one another. There are four types of travel blogs (Volo, 2012), and those are: Consumer-to-consumer (C2C) as a widely spread form of blogs used for sharing tourism experiences and to communicate with family and friends thus creating electronic word-of-mouth; Business-to-business (B2B) blogs where stakeholders can communicate industry trends, technological developments, research findings or marketing tips; Business-to-consumer (B2C) or corporate blogs in order to communicate companies' offerings and to foster relationships with customers, and their content is created in-house or by professional bloggers; Government-to-consumer (G2C) which are created by destination marketing organizations (DMOs) to communicate with their target market.

VR is one of the new technology waves that is expected to have a very significant impact on the tourism industry (Tussyadiah, Wang, & Jia, 2017). Tourist companies are trying more and more to use the right tools to create experience to consumers. Therefore, VR has been proposed as a substitute for travel and

consuming travel experiences (Tussyadiah et al., 2017). In recent years, a Japanese company named First Airlines has used Virtual Reality in order to design dream holidays for their passengers. The company believes it can offer the opportunity to experience unforgettable holidays for passengers with limited finance or health issues, staying in Tokyo. This company offers a two-hour flight to an Airbus seat, filled with decorations and imitations for the best possible realization of this experience. Moreover, the air stewards serve meals, drinks and snacks to passengers, and flight service provides music for every destination (Street, 2018). On the other hand, the abundance of Internet of Things (IoT) technology that has entered into our lives over the last years and now beginning to generate a wealth of useful customer information for travel companies. The IoT and related developments can now gather information about your daily life, what you watch on TV on the websites you visit, what you like on Facebook etc. Any purchases we make with our cards, any search we write on Google, any moves we make when our mobile phone is in our pocket, any "like" is stored (Gelter, 2017). So, the traditional business models are changing and are transforming on e-business models, thus helping tourists in creating their individual experiences in the best possible way.

4. The challenge of sustainability

Sustainable development of tourism has to fulfil the needs of present tourists and host countries, to protect and enhance opportunities for the future. Information technology can be considered as an important factor in sustainable supply chains. The members of a supply chain are linked by information, material and capital flows (Chopra & Meindl, 2013; Seuring & Müller, 2008). According to Chopra and Meindl (2013) information enables supply chain drivers to work together with the aim of creating an integrated and coordinated sustainable supply chain. Information opens supply chain responsiveness to demand (Mangan et al., 2008) and effective supply chain management can be critically enabled by IT (Simchi-Levi, Kaminsky, & Simchi-Levi, 2009). Chopra and Meindl (2013) identified information as the major determinant of performance in the supply chain and emphasized that it ensures the foundation on which supply chain processes accomplish transactions and managers make decisions. According to them, to claim good information is one of the major challenges to improve supply chain sustainability. Nevertheless, IT investments to enhance supply chain performance may not deliver the improvements they are aimed for (Fawcett, Wallin, Allred, Fawcett, & Magnan, 2011). Role of IT in supply chain performance improvement lies in better information sharing to coordinate competitive initiatives and improve collaboration. Information that is accurate, accessible and suitable for all levels in the supply chain have to be shared. According to Seuring and Müller (2008) it is increasing need for cooperation among partner companies in sustainable supply

chain management, and this is only possible with information technologies which playing a vital role in this regard. In fact, information and communication technology infrastructure plays a critical role for sustainable development in any area for cooperation, collaboration, connectivity, processing and storage of knowledge (Mohamed M., Murray A., Mohamed M., Mohamed, Murray, & Mohamed, 2010). Introducing new waves of technologies, such as drones has affected hospitality and tourism industry. For example, Las Vegas drones are now used to distribute drinks to party groups at hotel pools, while tourists are using drones to deliver unusual views of the attractions and share these views, often with direct broadcast, with their friends (Hay, 2016).

The Virtual Reality (VR) is one of the technological developments in the field of tourism and it suggested as a substitute for travel and tourism products (Cheong, 1995), making it useful for managing protected areas such as natural and cultural heritage sites (for example, limiting the number of tourists or limiting visits). So, it can be said that VR is a positive contributor to sustainability (Dewailly, 1999).

5. Benefits from the use of ICT in the tourism industry

Today, the internet is not just a portal that can be used for communication with tour companies and destinations, but it is also a platform for businesses and consumers as a source of information for a trip, helping tourists with decision-making, planning and paying it electronically. ICT enforcement and increased use of the internet in the tourism industry should facilitate communication with clients and business partners, but also ensure future success in the tourism market (Čavlek, 2013). Rapid development of ICT has a significant impact on modern development of tourism (Dimitrios Buhalis & Law, 2008; Pease & Rowe, 2005) changing the way people, companies and organizations are now working and introducing innovative forms of business operations. Because of ICT usage, there have been global changes in the way of doing business on tourism and there are created not only many new opportunities but also business challenges (Aramendia-Muneta & Ollo-López, 2013; Dimitrios Buhalis, 1998). According to a study, 81% of travelers in the United States used the Internet to plan and search for travel information in 2012, and even 82% of the tourists used the Internet looking for a package arrangement (Kayani, 2014). The same year, in Europe, about 53% of Europeans used the Internet as the main assistance in organizing their holiday, which is two and a half times more than traditional agencies and tour operators as a way to organize holiday with “modest” 23% of share (Ficarelli, Sendra, Ferrando, & Lloret, 2013). So, Europeans are increasingly resorting to the benefits of ICT in the planning and booking their trips. Thus, ICT development has enabled tourists to evaluate the destination before they physically travel to it. Social networks that enable people to experience a destination through impressions of other customers,

both of which they know and completely unknown, are extremely prominent (Neuhofer, Buhalis, & Ladkin, 2014).

There are a number of benefits and determinants that influence tourists to use technologies (Kayani, 2014; Pease & Rowe, 2005) such as: availability of information; time saving directly associated with the possibility of online search and online payments; a possibility of quick price comparison with online intermediary and direct service providers; a possibility of comparison results in favorable prices, a number of discounts and upgrades to basic services. According to Buhalis (Dimitrios Buhalis, 2011) there are many benefits to consumers such as: they can shop any time from any place because of ubiquity; great selection to choose from a diversity of channels; can arrange many products and services; can make a comparison and shopping for lowest prices; digitized products can be downloaded instantly the payment is realized; can find easily what consumers need, with details, demonstration, etc.; to sale any time and from any place; can socialize online in communities from home; can find unique products/items. On the other hand, the benefits resulting from ICT application in the travel and tourism sector are different such as: enabling value co-creation (defined by Prahalad and Ramaswamy (2004) as the 'joint creation of value by the company and customer'), ICT makes tourism companies to use consumer knowledge to create their offers, to be aware for consumer needs, competitiveness and potential benefits of ICT usage by tourism companies and shouldn't forget that tourists are a crucial part of tourist value chain. ICT use in the tourism sector has opened new ways for relations between distribution channel members and new management solutions that enhance these relationships (Berné, García-González, García-Uceda, & Múgica, 2015), has increased the efficiency of the exchange of information between companies operating in the same distribution channel, providing easy access to data and information in order to identify customer needs and reach potential customers with full, personalized and up-to-date information and to create new ways to satisfy the needs of consumers, for an "informatization" of the entire tourism value chain (Januszewska, Jaremen, & Nawrocka, 2015). Usage of ICT by human resources of the company helps in improving image of the tourism companies and will lead to business operating cost reduction and higher income. Usage of ICT will improve usage of technological resources in order to connect to internet, to be more flexible and to understand better consumer needs.

Conclusion

The use of ICT has impacted many industries, one of them is the tourism industry. Since the introduction of the first wave of technologies such as computers, mobiles and the internet and the emergence of new wave of technologies, tourism has had different transformations and benefits.

With the introduction of the first wave of tourism technology there were many important benefits, such as: availability of information, reliable information, cost reduction, more integrated value chain, increased efficiency and capacity, and so on. One of the first to be influenced by digitization was the airline industry, which was also one of the first to use the "low cost" strategy in the tourism industry. Value chains have become more dynamic and integrated as a result of the use of information technology because information technology is affecting the supply chain at any point by converting the way exchange activities are carried out. With the use of ICT businesses are making transactions easier and faster, they are establishing relationships with trading partners, enabling faster and easier delivery of products and services, and providing information to consumers around the world. On the other hand, ICT development has also affected consumers by providing them with easy access to information to plan their travels and to buy tourism services with a lower cost.

While the first wave of technologies has decreased the costs of travel have brought many benefits for tourists, new technologies have more complex value purposes than to reduce costs and are used to resolve more complex problems such as: the challenge of massification, the challenge of individualization and the challenge of sustainability by tourism industry. Transformation of tourism from massification to personalization will be possible with the new technologies, where in this regard it is worth mentioning the introduction big data, blockchain technology and robots, which have profound impact on tourism industry. Considering how important is to create individual experience, tourism companies are trying to use new technologies to create unforgettable experiences for tourist in the best way possible. The Travel Blog is an adequate technology to enable conversations between travelers and sharing their experiences, while Virtual Reality is an important contributor on the creation of individual experiences, as well as to tourism sustainability. New technologies are developing very fast and that will have a very important and profound impact on tourism. These technologies will overwhelm the existing value chains in tourism and will lead to the emergence of new players in the tourism industry and will significantly affect customer experiences.

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DOUBLE DEFICITS AND THE EFFECTS OF EXTERNAL CRISIS ON DOMESTIC FINANCIAL CONDITIONS: A COMPARISON OF FRANCE AND SPAIN

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Abstract: The linkage between budget deficit and current account deficit may be referred to the relation between domestic and foreign financial activities. We verified the existence of double deficits in France and Spain in order to study the transfer of foreign crisis towards internal financial conditions in these countries via a linkage between their two deficits. We first simultaneously studied the double deficits and the financial integration using the Feldstein-Horioka thesis. Secondly we analyzed the relation between the two deficits and the effects of unemployment rate, exchange rate and public debt in order to verify the linkage of the two deficits due to deindustrialization. We found that in France, there was no linkage between the two deficits. In Spain, there were only partial twin deficits from budget deficit towards current account deficit. As a result, we can consider, neither for France nor for Spain, the effects of external financial perturbations on the internal financial conditions via a linkage between the two deficits.

Keywords: Double deficits, Crisis, Financial integration, Feldstein-Horioka puzzle

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Introduction

The relation between the internal and external financial situations of a country can explain several phenomena including financial problems, financial integration or financing resources. In addition, when an economic crisis especially a foreign crisis occurs, it will be important to study its negative influences on domestic financial situation. One way to study this problematic in a country is to consider the relations between internal and external financial activities. The double deficits hypothesis can help to verify such a relation. In the economic literature, the linkage between budget deficit and current account deficit is mostly studied in order to find the effect of an internal deficit on the external deficit. However, if we consider this relation from another angle, as external deficit versus internal deficit, we may also be able to study the negative effects of a foreign perturbation on the domestic economic situation.

The objective of this study is to verify whether the negative effects of the recent international crisis were transferred to the domestic financial conditions of our example countries, France and Spain, through a linkage between their internal and external balances. We also try to verify the financial integration level of these countries, in order to seek a linkage between this level, double deficits and also the crisis. We measure the financial integration level using the Feldstein-Horioka hypothesis. Using this approach, we are able, on the one hand, to study the relation between domestic investment and public and foreign savings (which in fact represent internal and external balances), and on the other hand, to test the validity of the Feldstein-Horioka hypothesis. In another part of our research, we add other variables to our double deficits model, with the aim of studying their effects on both deficits, as well as the relation between the two deficits.

France and Spain are chosen for this study because of the weight of their economies in Europe, and their different problems faced with the crisis. France has a larger economy than Spain, and was less influenced by the crisis. France's problems are significant because of the size of its economy and its impact on the rest of Europe and the Euro, while Spain's problems are significant because, regarding the size of this economy, their solutions are, in some aspects, different from those other European countries heavily touched by the crisis. Such similarities and differences make the comparison between France and Spain interesting and important.

To implement our analyses, we use quarterly data for a period of 14 years from 2000 to 2013. The reason for choosing this period is to have a balanced period before and after the crisis and not too far from it. If we consider 2007 as the beginning of the crisis, we have 7 years before and 7 years after, and this helps us to more efficiently consider the conditions before and after the crisis. In fact, we do

not take into account the recent years after 2013 in order to have a period closer to the crisis with which we can better consider policies, changes and improvements over the years just after the crisis. As our period is somewhat short, we use quarterly data to have more observations. Also, we feel that quarterly variations have a large role in this study and in its results.

1. Literature review

As our study combines two economic issues, financial integration level and double deficits, we review the literature for both. On financial integration, we consider the Feldstein-Horioka hypothesis and its puzzle in the case of our samples and models. For the double deficits problem, although most previous researches have tried to study twin deficits in order to verify the effect of an internal deficit on an external deficit, we aim to study the linkage between the two deficits bilaterally, while studying the effect of the external deficit on the internal deficit is our main objective. Finally, we review some literature of the combination of the two issues.

Feldstein-Horioka thesis for measuring financial integration level

After initial approaches like those based on international capital flows or asset price equalization, Feldstein and Horioka (1980) proposed a new approach to measure financial integration. This approach is founded on the correlation between domestic savings and domestic investment. In a world with perfect capital mobility, there should be no relation between domestic savings and domestic investment. Savings in each country answer to global demand of investment while investment in that country is financed by capital from the rest of the world. Consequently, a low correlation between domestic savings and domestic investment could signify higher international financial integration. Feldstein and Horioka used the following regression to test their hypothesis:

$$\bar{I}_i = \alpha + \beta \bar{S}_i + e_i \quad (1)$$

\bar{I}_i and \bar{S}_i are respectively the averages of investment rate and savings rate of country i during a given period; β is the coefficient of domestic savings retention (savings retained within national borders by domestic investment). If β is close to zero, domestic investment is financed by domestic savings at a low level, so, there is high capital mobility and international financial integration. On the contrary, when β is close to 1, domestic investment is essentially financed by domestic savings, and so, there is low international capital mobility.

Feldstein and Horioka tried to validate this theoretical approach on 16 OECD countries for the period 1960-1974 and found a high coefficient β , in contrast with exchange control reduction since the 1960s suggesting a higher integration in capital markets. Such a contradictory result opened up a new debate on the economy called the Feldstein-Horioka puzzle. Some later studies such as those by Bayoumi (1990), Eichengreen (1990) and Flandreau and Rivière (1999) on other

samples and periods reached similar results. Since the work of Feldstein and Horioka, researchers tried to solve this puzzle or explain it. For example, Coakley, Kulasi and Smith (1996) stated that violation of one of the following conditions in some studies may have resulted in a high correlation between savings and investment:

1) Shocks affecting domestic savings in a given country may not modify the real exchange rate in the rest of the world (the case studied should therefore be a small country);

2) The shocks on domestic savings and investment are not in fact correlated. This condition particularly supposes that there is neither productivity shock nor demographic shock;

3) Real exchange rate parity prevails, this condition implies that the mobility and the substitutability of capital and goods are perfect, and the markets are efficient;

4) The intertemporal budget constraint should not be exercised;

5) The countries are homogeneous.

Some of the first works following Feldstein and Horioka, carried out the case of small countries and introduced susceptible variables in order to simultaneously modify domestic savings and investment in the equation presented by Feldstein and Horioka, to control two first conditions; however, the results were similar, with coefficients of savings retention close to one. It seems when the third condition above is not verified, it may better explain the high correlation between savings and investment. Some of the later works considered intertemporal budget constraint and showed that this condition may be the reason for strong linkage between domestic savings and investment when there is high financial integration, because in the long term, the intertemporal budget constraint shows the nullity of current account balance which means the relation of domestic savings with domestic investment. This problem may occur when we use time series and introduce the average of savings and investment as regression variables during a given period. The intertemporal budget constraint means the equilibrium of current account balance on average over a long period, and the current payments balance is equal to the difference between domestic savings and investment. When we exercise the intertemporal budget constraint, savings rate will be equal to investment rate (on average, over a long period) which leads to a coefficient of savings retention close to one. The estimation of regression using time series may also lead to non-stationarity of savings and investment series. This problem could be ameliorated by regression on cross sections or by analyzing the cointegration of savings and investment series. But we need to know that the estimator related to analysis by regression on cross sections is sensible to shocks. Another method to avoid the puzzle is to use panel data. A high coefficient of savings retention could appear because of national specificities, using panel data that takes into account the

interindividual heterogeneity and also current account variability, led, in several studies, to a lower coefficient of savings retention.

Some of the recent works considering these methods, and/or also using new methods and econometric models reached low correlation between domestic savings and domestic investment that signifies high international financial integration and supports the Feldstein-Horioka hypothesis. For example, Syssoyeva-Masson and Sousa Andrade (2015), profiting from the Feldstein-Horioka model and using a quantile regression approach, studied the case of the 24 European Union members over the period 1990-2012 and found a high financial integration level within these countries. They also found that the relation between domestic savings and investment is lower for the countries with higher investment rate.

The Feldstein-Horioka thesis and its puzzle have provoked numerous debates in academic circles and it is still subject of articles trying to verify various aspects of this puzzle (e.g. Younas and Chakraborty 2011; Kumar, Webber and Fargher 2012; Petreska and Mojsoska-Blazevski 2013). Sousa Andrade (2007), considering the methodological thought of Karl Popper, mentions that the Feldstein-Horioka thesis has been since its creation the subject of discussions on its refutation on the one hand, and of efforts to support it using new econometric methods on the other hand. These efforts have also led to the proposition of new methods for measuring capital mobility. For Sousa Andrade, the Feldstein-Horioka thesis is an example for the theoretical and empirical analyses integration.

Double deficits

Many studies that have verified the linkage between internal and external deficits, studied the influence of a budget deficit on commercial or current account deficit, in order to determine whether a deficit in internal balance can lead to a deficit in external balance. Such a relation, the twin deficits hypothesis, is treated theoretically in Neo-Keynesian and neoclassical theories. These theories propose different modalities for financing a budget deficit. According to the literature, there are three linkage possibilities between the deficits: a full linkage between budget deficit and current account deficit, absence of such a linkage, and existence of a partial or intermediate linkage. Consider the following equality:

$$I = S_p + S_g + S_f \quad (2)$$

in which I is domestic investment and S_p , S_g and S_f are private savings, public savings and foreign savings respectively. If in the case of an expansionary budget policy, local investment and private savings do not vary, or vary to the same extent, the budget deficit and the external deficit are linked. The budget deficit has to be entirely financed by foreign savings; domestic savings entirely go towards

investment. However, if the expansionary budget policy affects only private savings, there will be no relation between the two deficits. If, following the same policy, investment decreases while private and foreign savings increase, the budget deficit and current account deficit are partially related. In this case, the budget deficit may be financed by private savings or foreign savings. Neo-Keynesian and neoclassical theories explain more precisely these three possibilities.

Neo-Keynesian theories:

- Absence of linkage between the two deficits:

One Neo-Keynesian model which implicates the existence of relation between the two deficits in short term but not in long term, in the case of a fixed or flexible exchange rate with perfect capital immobility, is the model presented by Branson (1985). According to this model, local currency bonds cannot be substituted by foreign currency bonds in a satisfactory manner. Branson supposed that the financial market is in equilibrium which leads to current account equilibrium in long term, because of the dynamics of interest rate and exchange rate compared to price movement. The long run current account equilibrium implies that a budget deficit cannot affect the current account. In this case, the budget deficit is financed by the domestic savings surplus.

- Strong twin deficits:

According to the Mundell-Fleming model, with flexible exchange rates and perfect capital mobility, a budget deficit increase in the case of a small country leads to a higher interest rate and income level. The interest rate augmentation then leads to capital inflow in the short term, which causes national currency revaluation. This revaluation increases imports and decreases exports, and affects the current account balance. The current account deficit augmentation makes capital flow out; so the income and the interest rate return to their initial levels, and investment stays unchanged. In this case, the current account deficit is entirely dependent on the budget deficit, and it is foreign savings that finance the internal deficit.

- Partial linkage between the two deficits:

This kind of linkage can be verified for both small and large countries with fixed or flexible exchanged rates:

In the Mundell-Fleming model for a small country with fixed exchange rates, a budget deficit augmentation increases the income and the interest rate. Imports and capital inflow therefore increase, and the capital inflow augmentation causes an excess demand for the national currency. This action, which revaluates the national currency, supposing that buying currency is not sterilized by the sale of bonds, increases the supply of this currency, so the interest rate returns to its initial level, but income will be established in a higher level. Consequently, imports increase, which leads to a current account deterioration. However, the current account

change will be partial, because this increase in income also involves a private savings augmentation. In the case of a flexible exchange rate with relatively high but imperfect capital mobility, the capital inflow will be greater and a surplus appears in the balance of payments. In this case, the currency revaluation worsens the current account deficit, which simultaneously affects the goods market and external balances. Later, at the new equilibrium, income, interest rates and savings decrease, but they are established at a higher level than at the initial equilibrium. The exchange rate also increases, but it is established at a lower level than at the initial equilibrium.

In the case of large countries, we need to consider knock-on effects following expansion or contraction of the country's income and imports. With perfect capital mobility and a fixed exchange rate, budget deficit augmentation increases the national income as well as national and global interest rates. The income augmentation increases imports and worsens the current account deficit, but on the other hand, the country's imports increase the income of other countries leading to augmentation of the partner country's imports and our country's exports. This mechanism improves the current account balance of a country, but this improvement is less than the initial deterioration, because the augmentation of global interest rate decreases the income of other countries. So the effect of a budget deficit on the current account deficit is only partial. In the case of flexible exchange rates, the improvement of the country's current account balance in the second step is more than in the previous case, because the interest rate augmentation does not have a negative effect on the partner's income. In these cases, the budget deficit is financed by both private and foreign savings.

Neoclassical theories:

- Ricardian equivalence:

According to this theory which is based on capital mobility, each generation is in relation to the next generation, and public bonds and savings can be transferred among generations. Thus, for economic actors, augmentation of taxes and sale of bonds by the government are similar. Decreasing taxes and increasing debt to compensate tax reduction leads the government to increase future taxes in order to cover the repayment of debt and its interest. Consumers do not consider their current taxable income increase as permanent, and consequently, owing to their budget intertemporal constraint, they do not change their style of consumption, and all increases in taxable income will be saved. These savings will be used to buy new bonds, and these bonds help consumers to pay for the future tax augmentation. Thus, private savings increase is equal to the decrease in public savings (budget deficit increase), domestic savings and interest rate stay unchanged, there will be no need for foreign savings, and the current account balance will not change. Thus, the budget deficit does not affect the current account deficit.

- Blanchard's model:

Blanchard (1985) presented a general model to explain various conditions of linkage between the two deficits. According to this model, the economic agents may have finite or infinite horizons which are introduced by a parameter of possibility of death. Thus, the Ricardian equivalence supposing an infinite horizon and intertemporal optimization behavior for agents is a particular case of this general model. In this model, economic agents can perfectly predict future taxes and have access to a perfect capital market. Also, the current generation's decisions are independent of the future generations' decisions.

The different cases are:

1) Absence of linkage (or "Ricardian equivalence"). In this case, which applies to steady state and short run, the horizon is infinite and there is no linkage between the two deficits.

2) Strong twin deficits. For such a linkage in the steady state, a necessary but not sufficient condition is a finite horizon; if the interest rate is equal to the subjective time preference rate, the two deficits are completely related; but if the interest rate is less than the subjective time preference rate, the linkage is more than proportional.

3) Partial linkage between two deficits. In the steady state, when horizon is finite and the interest rate is greater than the subjective time preference rate, the linkage between the two deficits will be partial. In the short run with a finite horizon, either the interest rate is less or greater than the subjective time preference rate, the linkage will be partial.

Some other studies verified the linkage between the two deficits using causality tests, like those of Fidrmuc (2003) and Kouassi, Mougoué and Kymn, (2004). Another approach is to consider the sustainability of the current account. This sustainability implies the existence of a cointegration relationship between the exports and the imports of goods and services, and also between net interest payments and net transfer payments. Wu, Chen and Lee (2001) tested for the sustainability of the current account in a panel cointegration framework for the G7 countries. Also, Baharumshah, Lau and Fountas (2003) applied the same approach to four ASEAN countries.

There are studies that used cointegration techniques and error correction model to verify the relation between the two deficits. Akbostancı and Tunç (2002) examined the Ricardian equivalence hypothesis for Turkey between 1987-2001 using cointegration methodology and by estimating an error correction model. Their results rejected the existence of Ricardian equivalence and showed the relationship between the two deficits in both long-run and short-run. Ratha (2011) employed

the bounds-testing approach as a cointegration technique and error correction model for studying the case of India over the period 1998-2009, and using monthly and quarterly data, found the twin deficits in long-run and no linkage between the two deficits in short-run.

The results of empirical works studying different samples and periods are different. Some studies reached a linkage between the two deficits, from budget deficit towards trade deficit and/or in the opposite direction, like those of Kulkarni and Erickson (2001) for India and Pakistan, Onafowora and Owoye (2006) for Nigeria, Tarawalie (2014) for Sierra Leone, and Paparas, Richter and Mu (2016) for Greece. Some others obtained no linkage between the two deficits, like the works of Winner (1993) for Australia, and Kulkarni and Erickson (2001) for Mexico. Also, some found that the existence and the magnitude of twin deficits could be different considering some different conditions: Furceri and Zdzienicka (2018) studied twin deficits in 114 developing countries over the period 1990-2015 and found a partial but strong linkage between the two deficits from budget balance towards current account balance. Their results showed that this linkage could be larger during recessions; in countries that are more open to trade; that have less flexible exchange rate regimes; and with lower initial public debt-to-GDP ratios. Afonso, Huart, Jalles and Stanek (2018) studied twin deficits for a sample of 193 countries over the period 1980-2016. They found that the relationship between budget deficit and current account deficit differs according to whether fiscal rules exist or not; in the absence of fiscal rules, the twin deficit hypothesis is confirmed, but when some fiscal rules such as rules with monitoring of compliance, budget balance rules and debt rules in emerging market economies and lowest income countries, and in the post-crisis period exist, the effect of budget balance on current account deficit strongly decreases.

Taking into account the relations of total demand and total supply as well as the equality between them, we can show the relationship between the Feldstein-Horioka thesis and the double deficits hypothesis.

We have the equality between total demand and total supply as:

$$Y = C + I + G + X - M \quad (3)$$

On the left, we have Y as national income or total supply, and on the right, total demand which includes public consumptions (C), investment (I), public consumptions (G), exports (X) and imports (M).

Also, the relation of total supply can be shown as:

$$Y = C + S + T \quad (4)$$

in which S represents domestic savings and T taxes.

Thus, we can have:

$$(G - T) + (I - S) = (M - X) \quad (5)$$

Or:

$$(G - T) + (I - S) + (X - M) = 0 \quad (6)$$

This means that the sum of public budget balance and financial market balance should be equal to trade balance. In this relation, we can simply recognize the effect of relation between investment and savings on the linkage between internal (public) balance and external (trade) balance. If the amounts of domestic investment and savings are equals, trade balance could directly affects public balance, and conversely. If the amounts of domestic investment and savings are not equals, their difference could influence the linkage between internal and external balances.

The simple relation of equilibrium in foreign trade and payments can be explained as following:

$$(X - M) + F = 0 \quad (7)$$

which means that the external balance ($X - M$) is equal to incoming financial flows (F); if a country has trade deficit ($X - M < 0$), its incoming financial flows should be positive ($F > 0$) in order to compensate deficit. On the contrary, a country with trade surplus can have outgoing financial flows.

Regarding the relation (6), if a country has budget deficit ($G - T > 0$), and the amounts of domestic investment and domestic savings are supposed to be equals ($I = S$), thus, the country would also have trade deficit ($X - M < 0$) and should have incoming financial flows; such a country could be debtor. But if the amounts of investment and savings are not equals, for example if domestic savings is more than domestic investment ($I - S < 0$), budget deficit might be compensated by this difference in financial market and hence, it would not affect trade balance; in this case, the country might not be debtor. The difference between the amounts of investment and savings in financial market could also reflect the level of financial integration according to the Feldstein-Horioka hypothesis.

In a non-Ricardian world with perfect capital mobility, a budget deficit augmentation leads to a domestic savings reduction which, for a given amount of investment within a Feldstein-Horioka structure, causes the reduction of foreign investment and the augmentation of current account deficit. Thus, twin deficits occur. In the case of Feldstein-Horioka puzzle, the reduction of domestic savings does not lead to an augmentation of current account deficit, and there will be no twin deficits.

Fidrmuc (2003) simultaneously studied the linkage between the two deficits and the relation between domestic savings and investment, using income identity to

obtain a regression explaining a long run relation between trade balance, budget deficit and investment. He rewrites national income identity as:

$$Y_t = C_t + G_t + I_t + X_t - M_t \quad (8)$$

$$X_t - M_t = Y_t - (C_t + G_t) - I_t = S_t - I_t \quad (9)$$

The identity (9) sets the external balance equal to the difference between domestic savings and investment. Fidrmuc divides savings into private savings (S^p) and public savings (S^g). The first is equal to the taxable income ($Y - T$) minus private consumption (C), and the second, which corresponds to the budget balance, is equal to the difference between taxes (T) and government expenditure (G). Thus:

$$X_t - M_t = (Y_t - T_t - C_t) + (T_t - G_t) - I_t = S_t^p + S_t^g - I_t \quad (10)$$

Fidrmuc proposed the following regression model:

$$x_t - m_t = \gamma_1 + \gamma_2(t_t - g_t) - \gamma_3 invt_t + \varepsilon_t \quad (11)$$

In this relation, which represents the variables as GDP proportions, $(x - m)$ is the current account balance, $(t - g)$ is the budget balance and $invt$ is investment. The coefficient γ_2 represents the validity of the twin deficits hypothesis, and the coefficient γ_3 represents the validity of the Feldstein-Horioka hypothesis. For countries completely integrated within the global economy, and having complete twin deficits, both coefficients should be equal to unity.

Despite its advantages, this approach has some problems. For Marinheiro (2008), in the regression (11), $(t - g)$ is government gross savings or current budget balance and not total budget balance, because the latter also includes public investment and public transfer payment. So, in this regression, public investment variations do not change public savings and, consequently, they do not have any effects on budget deficit, while a reason for twin deficits may be the effects of public investment increase on both deficits, which cannot be captured in this regression. Furthermore, $(x - m)$ is the trade balance and not current account balance, which also includes net transfers. Finally, by using trade balance and current budget balance in the regression, the constant γ_1 will be equal to the average of private savings, and the coefficients γ_2 and γ_3 will be biased towards unity, and we will in fact estimate an identity by eliminating the variable of private savings. To remove these problems, Marinheiro proposes the use of current account balance and total budget balance.

Some more recent empirical works also simultaneously studied the twin deficits and the Feldstein-Horioka hypotheses. Halicioğlu and Eren (2017) investigated the validity of these two hypotheses for Turkey over the period 1987-2004. Using

cointegration tests, they found the presence of a long-run relationship between current account and budget deficits as well as domestic investments during the estimation period that means the presence of the twin deficits hypothesis and the Feldstein-Horioka puzzle for Turkey and the low level of the integration of this country into the world capital market. But, the augmented Granger-causality tests suggested no causality between current account and budget deficits, neither in the short-run nor in the long-run. In another work by Litsios and Pilbeam (2017) on the cases of Greece, Portugal and Spain and taking into account the eurozone crisis, the authors found no long-run stable relationship between savings and investment contrary to the Feldstein-Horioka puzzle, but a strong significant negative relationship between domestic investment and current account deficits. Their results also showed the effect of fiscal balances on current account balances in the underlying economies which implies that fiscal deficits reduction could help them to reduce their current account deficits.

2. Methodology and model

We use two economic models to verify the relation between the two deficits and to study the influence of the crisis: one to study the linkage between the budget deficit and the current account deficit with respect to the effect of investment on these two deficits, a second to study the linkage between the two deficits and three other determinant variables (public debt, unemployment rate and exchange rate).

The first model gives us a combined analysis of the relation between two deficits and financial resources of investment which could reveal the relation between domestic investment and domestic and foreign savings, and therefore, determine the financial integration level of a given country. We suggest this method with simultaneous analysis of deficits linkage, financial integration level and the Feldstein-Horioka hypothesis which helps to improve our understanding of how the integration level can affect a foreign crisis transfer towards domestic financial conditions through a relation between external and internal deficits. In the second model, we set out to analyze the relation between current account deficit and budget deficit considering the phenomenon of deindustrialization, which can affect both deficits and be a reason for their linkage. An imbalance in current account or commercial equilibrium to the benefit of imports could weaken national industries. Such a negative effect could reduce the revenues of government and obliges it to increase its expenditure in order to protect national industries, which would be in detriment of budget balance. On the other hand, it reduces export abilities, and further increases the external deficit. To analyze this procedure, we use unemployment rate, exchange rate and public debt as variables to represent deindustrialization level, commercial advantage and expenditure resource, respectively. The results of these two models and their comparison may also help

determine the reliability of each method in studying the relation between two deficits.

For our first model, inspired by the works of Fidrmuc (2003) and Marinheiro (2008) explained in section 2, we use the following two equations. In the first, budget deficit is regressed on current account deficit and investment, and in the second, current account deficit is regressed on budget deficit and investment:

$$lbd_t = \alpha_1 + \alpha_2 lcd_t + \alpha_3 linv_t + \varepsilon_t \quad (12)$$

$$lcd_t = \gamma_1 + \gamma_2 lbd_t + \gamma_3 linv_t + u_t \quad (13)$$

We can extract equations (12) and (13) from the national income identity (relation 8). In these equations, *lbd* is the logarithm of budget deficit, *lcd* the logarithm of current account deficit and *linv* the logarithm of domestic investment, α 's and γ 's are the coefficients of the regressions, and ε and u are the error terms. Investment data are put as a percent of GDP, and the data related to budget deficit and current account deficit are calculated by dividing the government expenditures into its incomes and dividing current account debit into its credit, respectively. By using this calculation, values greater than unity for *bd* and *cd* imply the existence of budget deficit and current account deficit respectively; values less than unity imply the existence of budget surplus and current account surplus. Thus, variation of the values of these 2 variables in the same direction indicates the existence of double deficits. As Ratha (2011) indicates, using such a method has two advantages:

- 1) There is no need to choose a price index for deflating variables to obtain real values, because the proportions are themselves expressed in real terms;
- 2) Since the variables are not negative, we can process the model using logarithmic form variables.

Considering the relations (12) and (13) as principal equations, we carry out our analysis using an autoregressive distributed lag (ARDL) model with error correction. This model has several advantages:

- 1) When we analyze the effects of external events on internal conditions and also the reverse, such as the impacts of internal variables (investment and budget deficit) on an external deficit, we expect some lags to accompany the effects of variables, especially in the case of our data, which are quarterly. As we do not know in advance the exact number of lags, use of the ARDL model could help us to identify them and include them in the model;
- 2) Our data set covers 14 years; short-run changes could therefore affect the results of the regressions. Using error correction method can mitigate this problem by associating short-run behavior with long-run trends;
- 3) Using ARDL model with error correction, we do not need to test the co-integration between variables in cases where we have time series integrated of orders zero or one together.

Although one proposed solution to remove the Feldstein-Horioka puzzle is to use panel data and related econometric models, we carry out our analyses using time series data, because we aim to verify the case of each country independently. At the end, we will see if we could remove the “puzzle” using this method and these data. The ARDL models with error correction used in the current report are:

$$\Delta lbd_t = \alpha_0 + \sum_{i=1}^m \alpha_{1,i} \Delta lbd_{t-i} + \sum_{i=0}^p \alpha_{2,i} \Delta lcd_{t-i} + \sum_{i=0}^q \alpha_{3,i} \Delta linv_{t-i} + \beta_1 MCE_{t-1} + \varepsilon_{1t} \quad (14)$$

$$\Delta lcd_t = \gamma_0 + \sum_{i=0}^m \gamma_{1,i} \Delta lbd_{t-i} + \sum_{i=1}^p \gamma_{2,i} \Delta lcd_{t-i} + \sum_{i=0}^q \gamma_{3,i} \Delta linv_{t-i} + \delta_1 MCE_{t-1} + \varepsilon_{2t} \quad (15)$$

In these regressions, Δ is a difference operator, α 's and γ 's are the short-run coefficients, β and δ are long-term coefficients related to lagged error correction terms, MCE is the correction error term, and ε 's are the error terms which are postulated to not be serially correlated. Coefficients α_2 's show the effects of different lags of the current account deficit on the budget deficit; coefficients γ_1 's explain the effects of different lags of the budget deficit on the current account deficit, and the coefficients α_3 's and γ_3 's show the effects of different lags of investment on both deficits.

When the coefficients related to current account deficit in regression (14) and the coefficients related to budget deficit in regression (15) tend towards zero, there is no relation between the two deficits. On the other hand, the statistical significance of these coefficients explains the existence of a linkage between the two deficits and its direction. Also, when the coefficients related to investment in the regressions (14) or (15) are significant, the investment is likely to be financed by internal or external resources respectively, considering that financing investment by these resources could affect their balance towards a deficit. Therefore, we need to test the equality of the coefficients in each regression with zero and one. Using such an analysis, we can obtain simultaneous results about the linkage between the two deficits and the financial integration level related to the Feldstein-Horioka hypothesis.

The second model incorporates the effects of five variables including budget deficit, current account deficit, unemployment rate, real exchange rate and public debt on each other. Using this analysis, we study the linkage between the two deficits as well as the effects of other variables on them. Our aim is to verify the existence of a relation between the two deficits and the reason for such a relation, as well as to understand if the other variables can affect each deficit. In such a study, we would be able to verify if a perturbation in a given internal or external balance could have an impact on another one, and via which intermediate. If not, we might

be able to determine which other variables could affect budget or current account balance. The reason for choosing unemployment rate, real exchange rate and public debt as variables to be entered into the model is their role in the process of deindustrialization, which is explained in the section 3. We might also consider some other variables for this purpose; but we think that the aforementioned variables can better describe deindustrialization, so we assume that the effects of other variables are less important and reflected through error terms.

In order to study the effects of our variables on each other, given that the amount and direction of the relations between these variables are not completely known, we use a vector error correction model (VECM). This model includes the advantages of a VAR model and also has other benefits:

1) When the time series are integrated of order zero or one together, a VEC model can remove the problem of the absence of co-integration between variables using the difference between them;

2) For our short 14 year period, short-run changes and evolutions are important. The error correction term helps to analyse such changes, and helps to relate short-run dynamics to long-run behaviour.

The model that we introduce and use for our analysis is:

$$\Delta \ln Y_t = \alpha + \sum_{i=1}^m B_i \Delta \ln Y_{t-i} + \Gamma_1 \ln Y_{t-1} + V_t \quad (16)$$

In this model, Δ is the difference operator, B is a row vector of length 5 representing long-run coefficients related to lagged variables and in first difference, Γ is a (5×5) matrix regrouping short-run multiplication coefficients and the adjustment coefficients towards a long-run equilibrium associated with lagged variables, V is the residuals column vector of length 5, and Y represents a column vector of length 5 including five variables:

$$\hat{Y} = [bd \quad ur \quad rer \quad deb \quad cd]$$

In this vector, *bd* is the budget deficit, *ur* the unemployment rate, *rer* the real exchange rate, *deb* the public debt, and *cd* the current account deficit. Budget deficit and current account deficit data are calculated, like our first model, in a proportional form. *bd* indicates government expenditures divided by its tax revenues, and *cd* indicates the current account debit divided by its credit¹⁷. *deb* is the public debt divided by GDP, and *rer* is the effective real exchange rate deflated by the price consumer indices for 42 trading partner countries¹⁸ (2005=100).

¹⁷ The difference between current account debit (expenditures) and its credit (receipts) represents current account balance.

¹⁸ EU28 and 14 other industrial countries: Australia, Canada, United States, Japan, Norway, New Zealand, Mexico, Switzerland, Turkey, Russia, China, Brazil, South Korea and Hong Kong.

We estimate the regression of our VEC model using the method of Johansen to obtain the estimated effects of variables on each other, especially the effects on two deficits. Finally, we test our analyses using cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) tests.

The charts of our time series are presented in Appendix 1. To begin with, we test the stationarity of these time series to be sure they are integrated of order zero or one using the augmented Dickey-Fuller unit root tests. The results (Table 1) show that all time series are stationary, or integrated of order one except the time series related to the variable corresponding to Spain's public debt, which is integrated of order two.

Table 1 Time series stationarity tests (augmented Dickey-Fuller unit root test)
(Period 2000.Q1 – 2013.Q4)

Variable	Integration order
Budget deficit (France)	I(1) at 99%
Current account deficit (France)	I(1) at 99%
Domestic investment (France)	I(1) in 99%
Unemployment rate (France)	I(0) at 95% / I(1) at 99%
Real exchange rate (France)	I(1) at 99%
Public debt (France)	I(1) at 99%
Budget deficit (Spain)	I(1) at 99%
Current account deficit (Spain)	I(1) at 99%
Domestic investment (Spain)	I(1) at 99%
Unemployment rate (Spain)	I(1) at 99%
Real exchange rate (Spain)	I(1) at 99%
Public debt (Spain)	I(2) at 99%

Source: Authors estimations

For this case, we take into consideration a structural break in this variable's data in the second quarter of 2008, as observed graphically, and that could have occurred because of the economic crisis. We test the stationarity of this time series using the method and critical values presented by Perron (1990) for such cases. The results show that, considering such a break, the time series related to Spain's public debt variable is integrated of order one at a confidence level of 99%.

We can therefore use all the time series in our models. We present the results of our two models for the cases of France and Spain.

France

The estimation of regression (14) for France shows that the coefficients related to current account deficit and investment are not significant. Therefore, we have, on the one hand, the absence of relation between the two deficits, and, on the other hand, a probable linkage between investment and foreign financial resources, because the absence of a relation between investment and budget deficit can be a reason for financing the investment by foreign resources. According to the estimation of regression (15), the investment has a significant impact on current account deficit (coefficient 0.16), consistent with the financing of investment through foreign financial resources. Also, like the results related to the estimation of regression (14), there is no linkage between the two deficits. Consequently, for France we did not find (from the results using our first model) any linkage between budget deficit and current account deficit. Thus, we do not have double deficits in this case. But on the other hand, financing the investment through foreign resources, with no relation between internal and external deficits, could be an evidence for a partial Feldstein-Horioka puzzle. In the absence of a relation between domestic and foreign financial activities (which shows a low level of financial integration), investment is mostly financed by foreign resources. Table 2 summarizes the results of the estimations.

Table 2 Relation between two deficits and financial integration level in France
(ARDL model results)
(Period 2000.Q1 – 2013.Q4)

	1st lag
Effect of current account deficit on budget deficit	0
Effect of budget deficit on current account deficit	0
Effect of domestic investment on budget deficit	0
Effect of domestic investment on current account deficit	0.16

Significance level: 5%

Source: Authors estimations

Using the model (16), we analysed the effect of each deficit on the other, and at the same time, the effects of other variables on the two deficits. We present the most important results related to the effects of variables on deficits. Among the five regressions of the model, we consider those that regress budget deficit and current account deficit on other variables. Our estimations, Table 3, reveal a positive effect of unemployment rate on budget deficit (coefficient 0.52), which means that unemployment augmentation increases budget deficit after one quarter. Other variables do not have any significant impact on this deficit. On the other hand, with respect to current account deficit, we found negative effect for public debt

(coefficient -0.52), showing that public debt augmentation decreases the current account deficit after two quarters, but we do not observe any impact from other variables on the current account deficit. Consequently, there is no linkage between the two deficits. The result is the same as that found by the first model, and means that we cannot consider the effects of external financial perturbations on the internal financial conditions via a linkage between the two deficits. We need to look for other causes. Finally, CUSUM and CUSUMSQ tests on model regressions confirm our estimations (Appendix 2).

Table 3 Relation between two deficits and other variables effects on two deficits in France (VEC model results) (Period 2000.Q1 – 2013.Q4)

	1st lag	2nd lag
Effect of current account deficit on budget deficit	0	0
Effect of budget deficit on current account deficit	0	0
Effect of unemployment rate on budget deficit	0.52	0
Effect of unemployment rate on current account deficit	0	0
Effect of real exchange rate on budget deficit	0	0
Effect of real exchange rate on current account deficit	0	0
Effect of public debt on budget deficit	0	0
Effect of public debt on current account deficit	0	-0.52

Significance level: 5%

Source: Authors estimations

Spain

After estimating the regression (14) for Spain, we observed negative impacts for the current account deficit (coefficient -0.68) and also investment (coefficients -0.45, -1.08, -0.73 and -0.64 related to different lags) on budget deficit. There is in fact a negative relation between the two deficits, and a negative effect of investment on internal deficit could mean that investment is financed by foreign rather than by domestic resources. The augmentation of investment improves budget balance which means that it does not push on budget revenues. This may be expected that it is financed by foreign resources. These results are confirmed by those from the estimation of regression (15). Again there is a negative relation between the two deficits (coefficient -0.10) and a positive effect of investment on current account deficit (coefficients 0.36, 0.26, 0.25 and 0.42 related to different lags). In this case, there is a relation between the two deficits, but not one that implies double deficits, because neither budget deficit nor current account deficit affects the other in the same direction. However, the existence of a negative linkage could show there is a

relation between internal and external financial activities. As a result, regarding financing the investment by foreign resources, we arrive at a result consistent with the Feldstein-Horioka initial hypothesis. The results of the estimations are summarized in Table 4.

Table 4 Relation between two deficits and financial integration level in Spain
(ARDL model results)
(Period 2000.Q1 – 2013.Q4)

	1st lag	2nd lag	3rd lag	4th lag
Effect of current account deficit on	-0.68	-	-	-
Effect of budget deficit on current	-0.10	-	-	-
Effect of domestic investment on	-0.45	-1.08	-0.73	-0.64
Effect of domestic investment on	0.36	0.26	0.25	0.42

Significance level: 5%

Source: Authors estimations

The estimation of our second model, represented in table 5, shows that budget deficit does not depend on current account deficit, but, on the other hand, it positively affects the current account deficit with three quarters of delay (coefficient 0.19) which means that budget balance deterioration deteriorates current account balance. The unemployment rate affects only budget deficit (coefficients 0.43 and 0.33 related to the first and forth lags respectively) and does not have any impact on the current account deficit. Its effects on the budget deficit are positive (unemployment rate augmentation increases budget deficit).

Table 5 Relation between two deficits and other variables effects on two deficits
in Spain (VEC model results)
(Period 2000.Q1 – 2013.Q4)

	1st lag	2nd lag	3rd lag	4th lag
Effect of current account deficit on	0	0	0	0
Effect of budget deficit on current	0	0	0.19	0
Effect of unemployment rate on budget	0.43	0	0	0.33
Effect of unemployment rate on current	0	0	0	0
Effect of real exchange rate on budget	0	0	0	0
Effect of real exchange rate on current	0	0	0	0
Effect of public debt on budget deficit	-0.85	0	0.78	-1.12
Effect of public debt on current account	0	-0.49	0	0.41

Significance level: 5%
Source: Authors estimations

Neither budget deficit nor current account deficit are affected by the real exchange rate. However, the public debt has both positive and negative impacts on both deficits. With different lags, it has both positive and negative effects on budget deficit (coefficients -0.85, 0.78 and -1.12 related to first, third and fourth lags respectively) as well as on current account deficit (coefficients -0.49 and 0.41 related to second and fourth lags respectively). However, its negative effects (an augmentation of the public debt decreases the deficit) are stronger on both deficits than its positive effects (an augmentation of public debt increases the deficit). In summary, according to our second model, there is a linkage between the two deficits from the budget deficit towards the current account deficit. Such a result implies the existence of twin deficits in the case of Spain, but it cannot explain the effects of external financial perturbation on internal financial conditions via a linkage between the two deficits. CUSUM and CUSUMSQ tests on the model regressions confirm the estimations (Appendix 2).

Concerning the linkage between budget and current account deficits, the results using our second model are contrary to those of our first model, which show a negative relation between the two deficits (non-existence of double deficits). Considering the reliability of the estimations of both models, including the condition confirmed R-Squared, we should take both into account. For Spain, there is no evidence for double deficits (from current account deficit towards budget deficit), but evidence for the existence of a partial linkage between two deficits (from budget deficit towards current account deficit).

Conclusion

We studied the linkage between the external and internal deficits of France and Spain and the effects of some other variables on these two deficits, as well as the international financial integration of the two countries. Our aim was to study the financial conditions of these countries in a crisis situation. Taking 2007 as the start of the recent economic crisis, we chose a balanced period of seven years before and seven years after this crisis to study its macroeconomic effects. Our principal goal was to verify the effects of the global financial crisis on the internal financial conditions of the 2 countries, and we investigated two major economic issues using new methods: studying the double deficits phenomenon and financial integration level based on the Feldstein-Horioka thesis. We combined the two issues and tried to develop their literature.

According to the results of our analyses, we observe no linkage between budget deficit and current account deficit in the case of France. Regarding our hypothesis that the effects of global crisis on internal financial conditions are mediated by a linkage between two deficits, we can conclude that the international and European financial crisis did not affect the internal financing conditions in France via a relation between its internal and external deficits. As a result, we should look for other channels through which the global crisis has been transferred into the internal financial activities of France, or pay attention to domestic reasons which could have led to financial problems inside the country. We observed that the unemployment rate augmentation in France can increase its budget deficit, but that the real exchange rate and public debt have no effect on the budget deficit. So, France needs to pay particular attention to its unemployment rate to solve its domestic financial problems. On the other hand, in the absence of other impacts, public debt can reduce the French current account deficit while investment can deepen it. So, France could use the public debt for reducing its external deficit. Looking at French economic policies after the crisis event, we observe that the French government has used almost the same policies (especially regarding unemployment) to face financial perturbations. Our results suggest that public debt should be considered as a mechanism to control the external balance problem, and also to compensate for the negative effects of investment on it. Finally, investment financing mostly by foreign resources and the absence of linkage between the two deficits, lead us to the Feldstein-Horioka puzzle, but we can consider the appearance of this situation due to crisis; in fact, we can study the crisis as a reason for decreasing French financial integration level at least partially and temporarily.

In the case of Spain, we found a negative bilateral relation between the two deficits and a positive linkage between them from the budget deficit towards the current account deficit. As the first relation falls outside our theoretical structure, we consider the positive linkage between two deficits. Explaining the effect of internal financial conditions on external ones, it shows the existence of twin deficits for the case of Spain. On the contrary, in the absence of a positive effect of current account deficit on budget deficit, we cannot conclude that the global crisis is transmitted towards internal financial conditions through a relation between two deficits. In this case, as in the case of France, we need to study other reasons for such a transmission as well as the effects of other variables on the budget deficit. As we observed, the investment has a negative effect on the budget deficit and a positive effect on current account deficit: that means that an increase of the investment could reduce the budget deficit but puts a pressure on the current account balance. On the other hand, an augmentation of unemployment rate could increase the budget deficit; also the public debt could reduce both deficits. Consequently, increasing investment and public debt as well as decreasing unemployment rate might be considered as economic policies to improve internal financial conditions, and the Spanish

government considered such policies in its austerity policies package although with an attention to public debt measure that was already large. For a current account deficit, according to our variables and the results related to them, public debt may help to reduce it and to compensate for the deteriorating impact of investment on this deficit. Also, we need to keep in mind that increasing the budget deficit can increase the current account deficit. Using policies to restrict the budget deficit may also reduce the current account deficit. Furthermore, regarding the relation between the two deficits and also investment financing by foreign resources, we obtained a result consistent with the Feldstein-Horioka initial hypothesis.

To compare France and Spain, we find that, although for Spain there is a relation between the two deficits, but not for France, in both cases, the transmission of foreign crisis towards internal financial activities could not be explained by a linkage between the two deficits. Furthermore, in the case of Spain, the budget deficit is affected by more variables than in the case of France, which may be one of the reasons for the deeper crisis observed in Spain. Effects on the current account deficit are almost the same for both countries. Investment is capable of increasing the current account deficit while public debt may decrease it and compensate for the effect of the investment. This result should be considered in relation to the problems of large public debts in both countries. Finally, in both cases, investment is financed mostly by foreign financial resources. For Spain, we found results consistent with the Feldstein-Horioka initial hypothesis, while in the case of France we were faced with the Feldstein-Horioka puzzle, which could be due to special conditions of crisis. These last results can also show the validity of our method and use of time series data, especially in the case of Spain, to remove the Feldstein-Horioka “puzzle”.

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Appendices

Appendix 1 Charts of the time series used

Source: Authors calculations using the Eurostat Database (2017) (using Eviews)

Fig. 1 Logarithm of budget deficit (France) (Period 2000.Q1 – 2013.Q4)

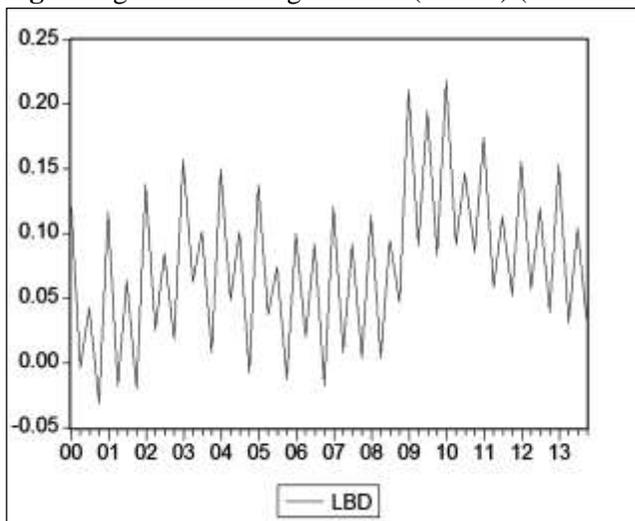


Fig. 2 Logarithm of current account deficit (France) (Period 2000.Q1 – 2013.Q4)

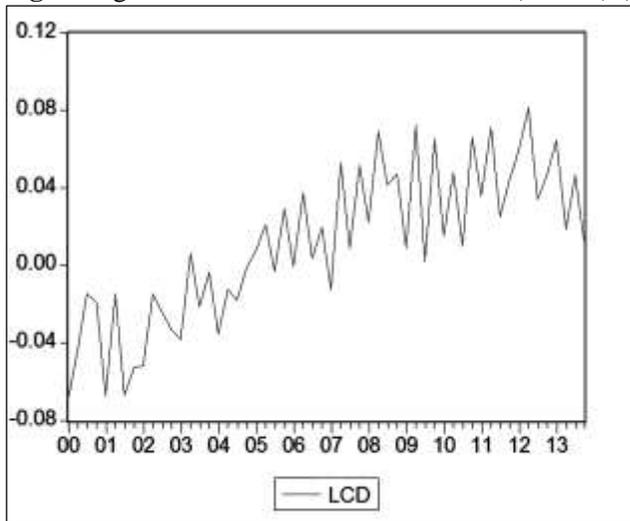


Fig. 3 Logarithm of investment (LINV) (France) (Period 2000.Q1 – 2013.Q4)

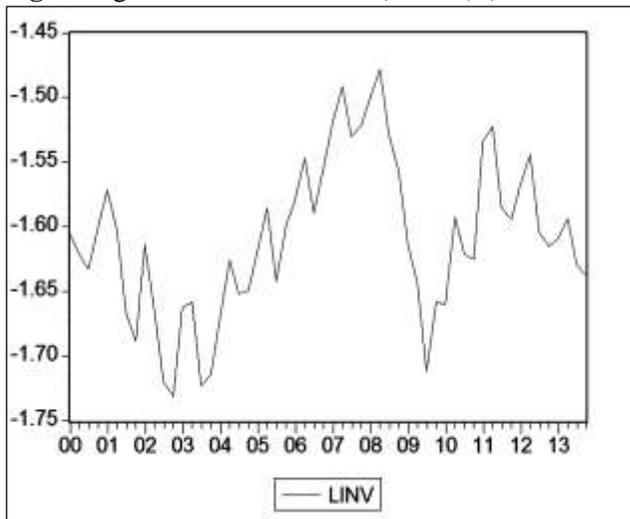


Fig. 4 Logarithm of unemployment rate (France) (Period 2000.Q1 – 2013.Q4)

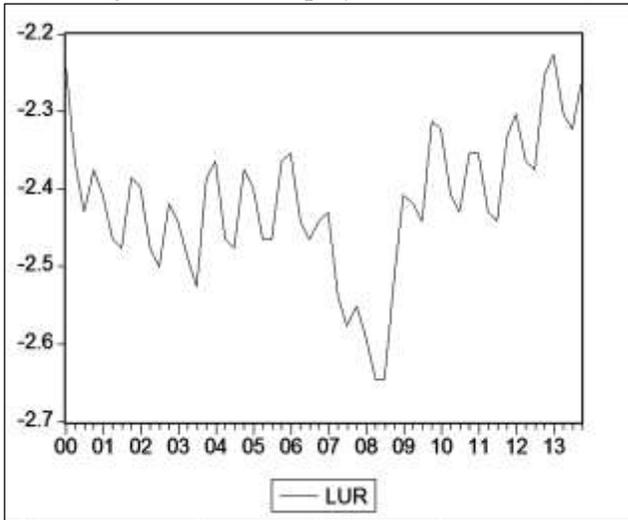


Fig. 5 Logarithm of real exchange rate (France) (Period 2000.Q1 – 2013.Q4)

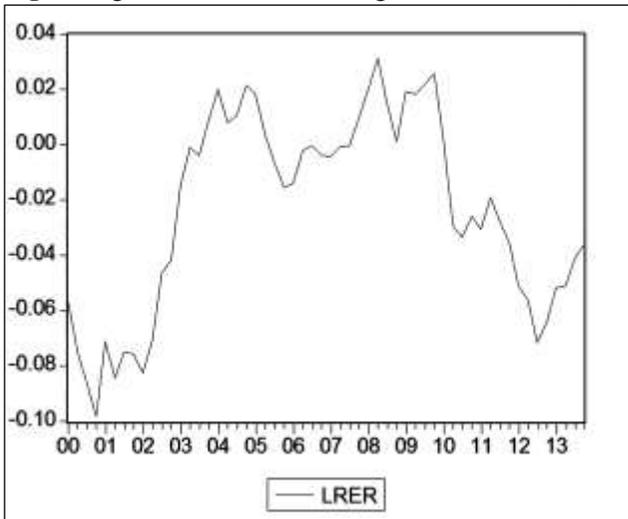


Fig. 6 Logarithm of public debt (France) (Period 2000.Q1 – 2013.Q4)

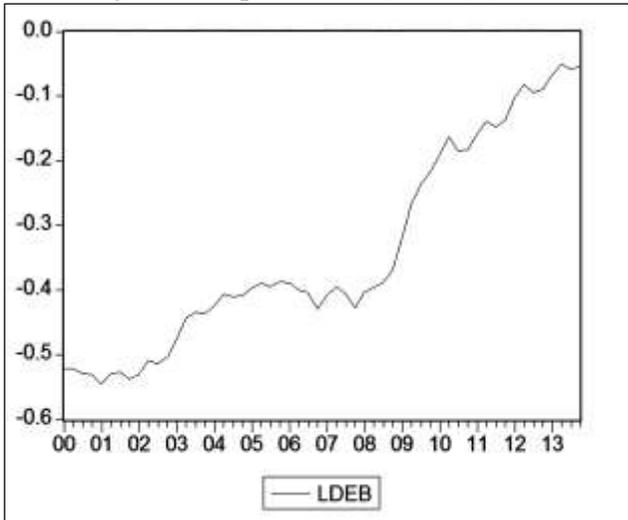


Fig. 7 Logarithm of budget deficit (Spain) (Period 2000.Q1 – 2013.Q4)

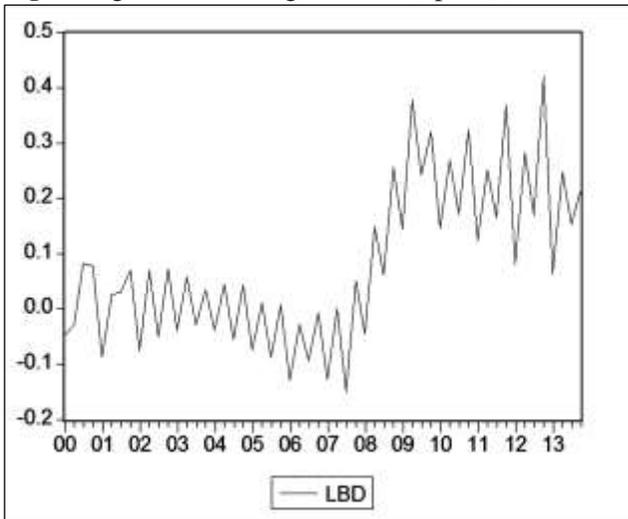


Fig. 8 Logarithm of current account deficit (Spain) (Period 2000.Q1 – 2013.Q4)

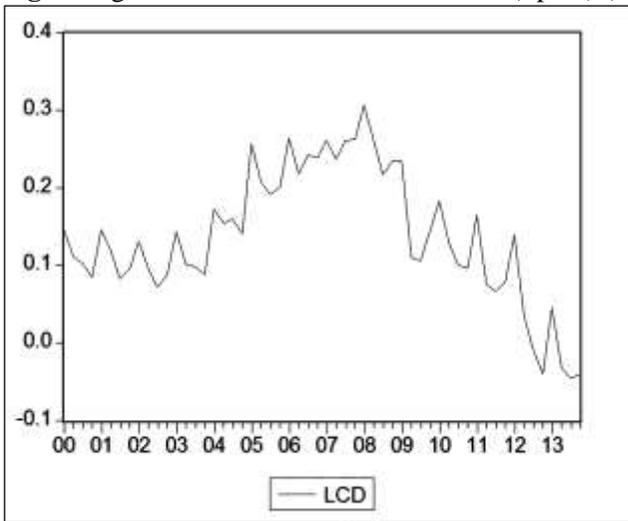


Fig. 9 Logarithm of investment (Spain) (Period 2000.Q1 – 2013.Q4)

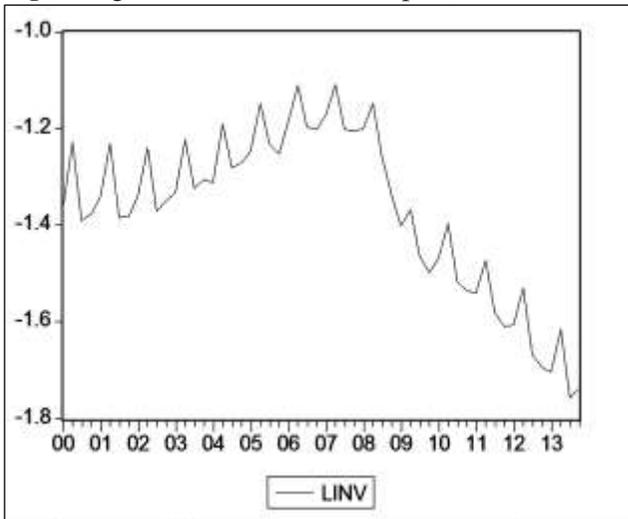


Fig. 10 Logarithm of unemployment rate (Spain) (Period 2000.Q1 – 2013.Q4)

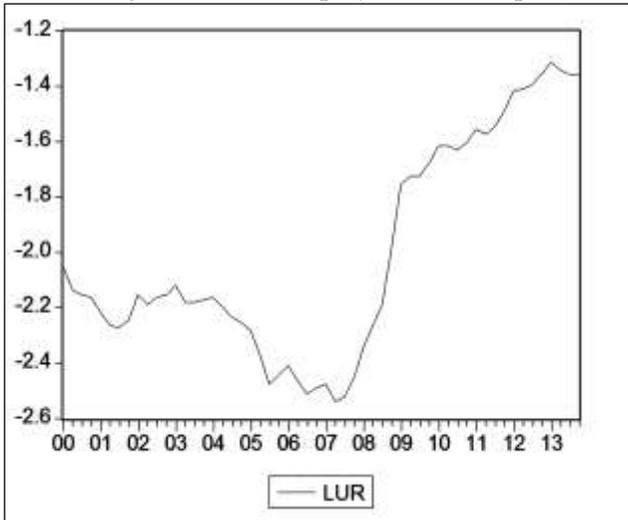


Fig. 11 Logarithm of real exchange rate (Spain) (Period 2000.Q1 – 2013.Q4)

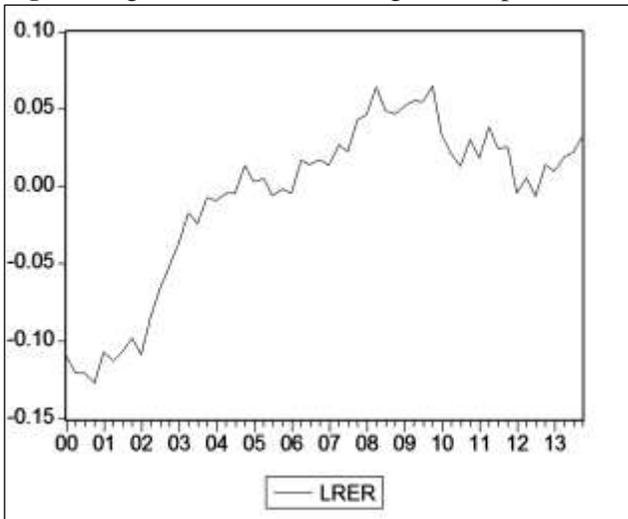
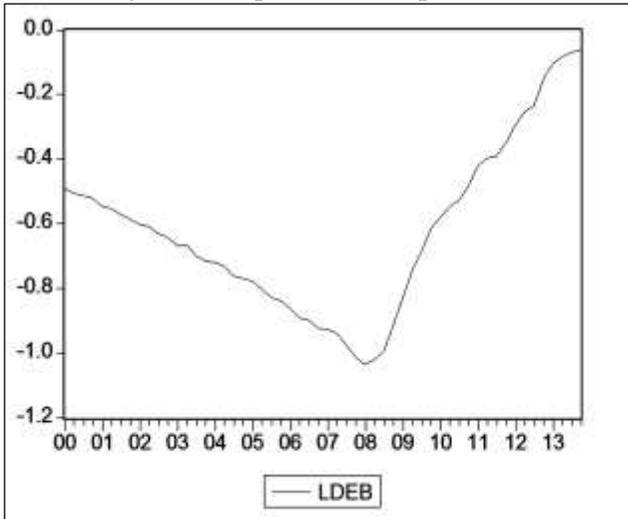


Fig. 12 Logarithm of public debt (Spain) (Period 2000.Q1 – 2013.Q4)



Appendix 2 Application of CUSUM and CUSUMSQ tests to VEC model regressions

Source: Authors examinations (using Microfit)

Fig. 13 CUSUM test on regression *lbd* (France)

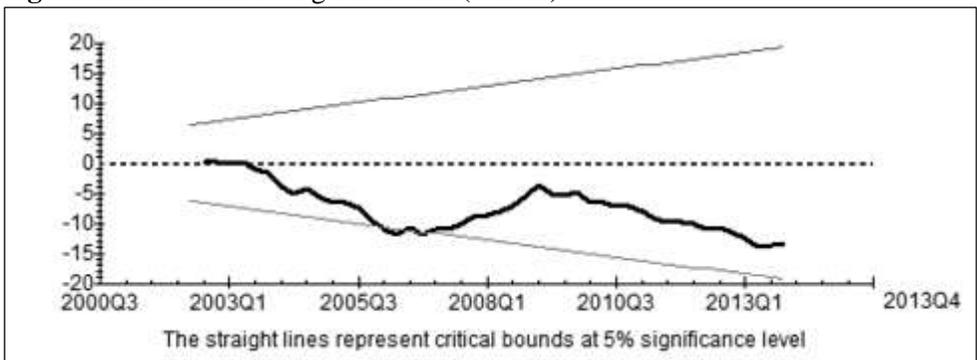


Fig. 14 CUSUMSQ test on regression *lbd* (France)

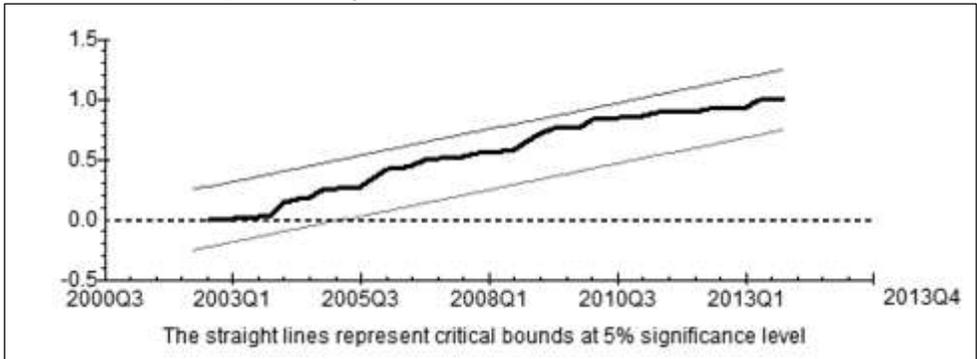


Fig. 15 CUSUM test on regression *lcd* (France)

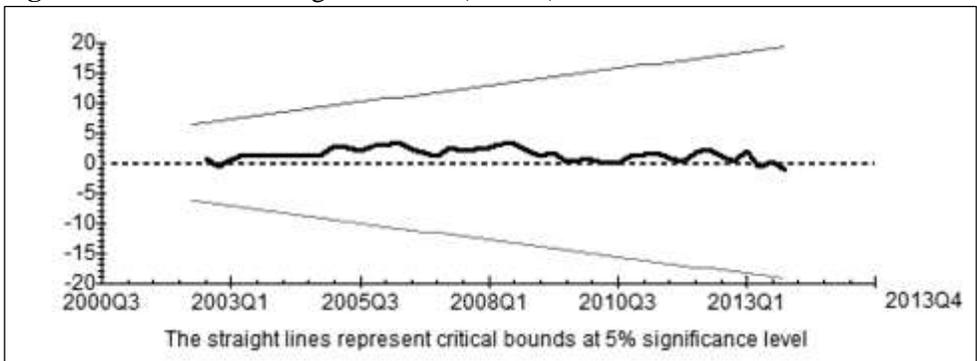


Fig. 16 CUSUMSQ test on regression *lcd* (France)

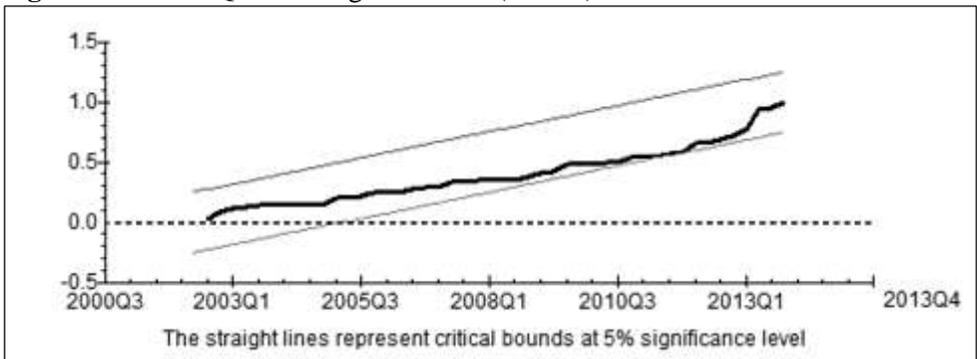


Fig. 17 CUSUM test on regression *lbd* (Spain)

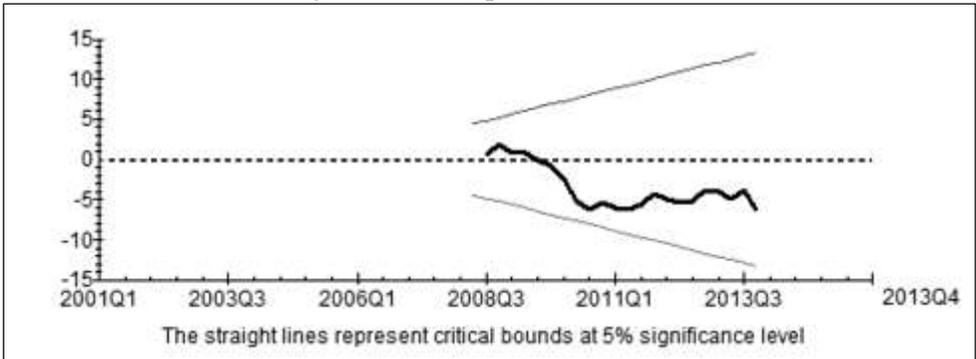


Fig. 18 CUSUMSQ test on regression *lbd* (Spain)

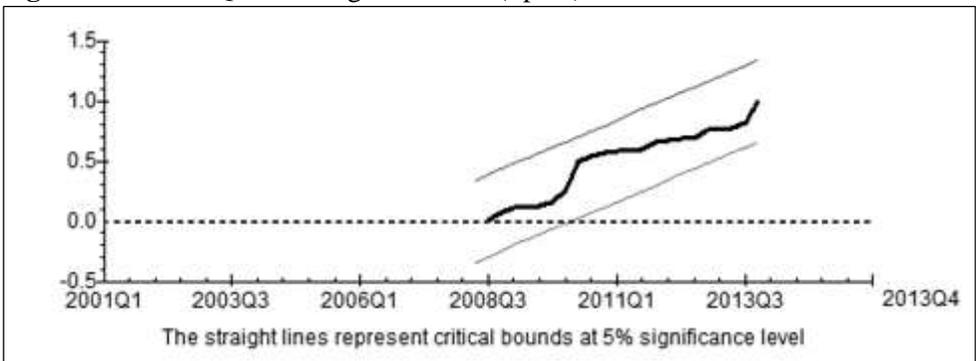


Fig. 19 CUSUM test on regression *lcd* (Spain)

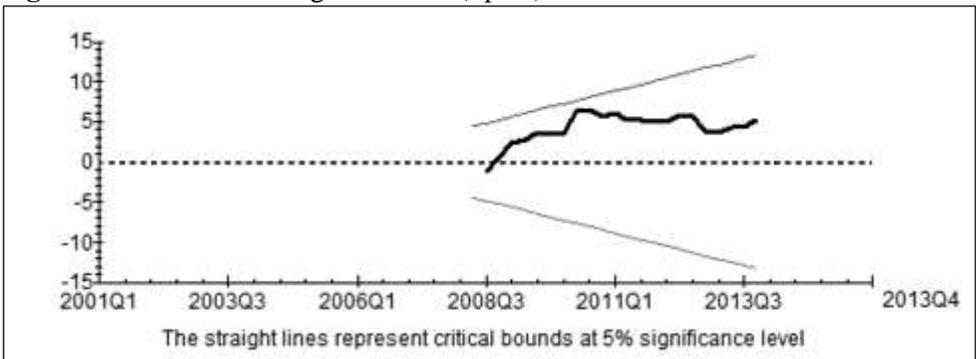


Fig. 20 CUSUMSQ test on regression *lcd* (Spain)

