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MAASTRICHT CRITERIA FOUNDATION OR OBSTACLE TO THE FURTHER EU ECONOMIC INTEGRATION

Tome Nenovski, PhD[1]
Emilija Stevanovska, PhD[2]

ABSTRACT

The paper focuses on the implications of the global crisis on the basic macroeconomic policies in an effort for maintenance of the Maastricht criteria and the stability of the Euro zone.

After 20 years since the introduction of the Maastricht criteria, the question arises whether they operate towards to convergence and further development of economic integration of the EU or not. The five Maastricht criteria are rules that each Member State should fulfill to be able to join the European Monetary Union. The first three are related to the maintaining of stable and low inflation rate, exchange rate and long-term interest rate, and the latter two are related to the fiscal stability or control of the budget deficit and the public debt.

Maastricht criteria were designed according to the neo-liberal, monetarist wisdom in the 1990's when the EU had only 15 Member States and when the economic growth forecasts were favorable. During the analysis of the criteria, it is necessary to keep in mind that macroeconomic and financial environment was very different from today's situation. Today, the European countries have been faced with the global economic crisis that started five years ago, and which may be qualified as financial, unemployment and fiscal crisis. Almost all Member States fail to meet the projected criteria, some to a lesser extent, and some such as: Greece, Portugal, Ireland, Spain, Cyprus and Italy deviate to a large extent with no prospect in the near future to deal

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with them. It became obvious that theory and economic policy require post-Keynesian measures to overcome the crisis and recovery of the fundamental macroeconomic developments. All of these factors have an influence on impact of fulfilling of Maastricht criteria and also on their consistency.

Keywords: **global crisis, Euro zone, Maastricht criteria, monetary policy, fiscal stability, economic integration**

JEL Classification: ***F1, F15***

Introduction

Causes of the crisis: incomplete economic structure of EMU, in particular the absence of a fiscal union, emergence of high trade deficit and public debt in individual countries and deterioration of productivity and competitiveness of their economies are the main reasons for fueling the crisis.

Commencing its integration since the Treaties of Rome, the EU was designed to strengthen the common market and economies of Member states. Economic integration as a process moved towards to the establishment of a monetary union and introduction of a common currency. Economic growth was favorable and EU countries have felt the benefits of economic prosperity. Economic integration took a greater swing. Maastricht Treaty of 1993 was signed exactly for that purpose. The convergence criteria were established for further strengthening and deepening of the economic integration. To maintain the fragile monetary union it was necessary to be introduced not only monetary but also fiscal constraints monitored by the European Commission. The part of the fiscal constraints was supported by the Stability and Growth Pact of 1997. The European Central Bank was established for the unification of the monetary policy (officially in 1998 by the Treaty of Amsterdam and replaced the European Monetary Institute) whose principal role is maintenance and stability of the general price level i.e. low inflation.

1990's were years of settlement of the internal economic policies of the Member States and their preparation for adoption of the euro as a common currency. Some Member States fully met the Maastricht criteria and some only partially, and with the official introduction of the euro 01.01.1999 the Euro zone began its functioning. In the following years the Euro zone continued the process of convergence and meeting goals. It appeared that a stable foundation of the EU's monetary union was set up and other countries that were not in the Euro zone attracted by the prestigious stage rushed to join, not paying attention to their real preparedness to accept requirements imposed by this membership.

Economic crisis that began in 2008 in the USA which spread to Europe, affected all developed economies. But what we find symptomatic is the fact that the Euro zone economies were affected harder than others, especially the countries of the South or the peripheral parts: Greece, Portugal, Spain, Ireland, Italy and Cyprus. The question is what happened in these countries that caused the total collapse in economic courses? Was it a failure of the real economy or the simply wrong conducting of the economic policy? Whether the convergence criteria were wrongly designed? What is their role during recession? Will EMU withstand the impact from the current financial crisis? What are the possible scenarios for the following period? Only one conclusion is certain - as it is difficult to predict future economic events, as well as the forecasts for the future of the Euro zone are uncertain.

Euro-zone faces four major related challenges: a) high public debt in some Member States; b) weaknesses of the European banking system; c) economic recession and high unemployment in some Member States; d) permanent trade imbalances in the Euro area.

Analysts and investors are concerned about how indebted countries will repay the debts and whether they will repay, how the vulnerability of the European banking system could cause wider financial turbulence, will the Euro zone enter in the prolonged economic recession and whether one or more countries will leave the Euro zone. Some analysts criticize the measures taken so far as insufficient. Issues about the economic, financial and political stability of the Euro zone still exist. Many analysts consider the crisis in the Euro-Zone as the greatest threat to global economies.[3]

The crisis revealed the problems in the structure of the Euro zone. It has a common monetary policy and currency, but no fiscal union and no centralized fiscal authority and/or system for transfers between the Member States. It is likely with the tight fiscal union the central budgetary authority would have controlled the spending of the various member states of the Euro zone and would use fiscal transfers to mitigate the asymmetric shocks within the euro area.[4]

The paper referred to the opinions of the authors conceptualized as follows: the first part deals with the Maastricht criteria and the establishment of the Euro zone to the beginning of global financial crisis; the second part is focused on meeting the Maastricht criteria and problematic nature during the crisis; in the third part are referred the possible scenarios for the future of the Euro zone; and in the fourth part are placed the concluding observations.

1. The Maastricht criteria and the establishment of the Euro zone

The EU legislation clearly identifies the process of adoption of the euro. It occurs in three phases and the first phase is full membership in the EU, the second is membership in the European exchange mechanism ERM II and the third is fulfillment of the Maastricht criteria. The Maastricht convergence criteria were formulated in the early 1990's. Their goal was the creation of a monetary union and a new currency. The full definition of the five criteria is summarized below: [5]

[3] *Nelson, M.R., Belkin, P., Derek, E. & Weiss, M.A. (2012). The Eurozone Crisis: Overview and Issues for Congress. Congessional Research Service. September 26, 2012 pp.1*
[4] *Nelson, M.R., Belkin, P., Derek, E. & Weiss, M.A. (2012). The Eurozone Crisis: Overview and Issues for Congress. Congessional Research Service. September 26, 2012 pp.4*
[5] *Progress towards convergence. (1995). Report prepared in accordance with article 7 of the EMI statute. European Monetary Institute (EMI). November 1995. pp. 2*

HICP inflation (12-months average of yearly rates): Shall be no more than 1.5% higher, than the unweighted arithmetic average of the similar HICP inflation rates in the 3 EU member states with the lowest HICP inflation. EU member states with a HICP rate significantly below the comparable rates in other Member States, do not qualify as a benchmark country for the reference value and will be ignored, only if price developments have been strongly affected by exceptional factors (i.e. severe wage cuts and/or a strong recession).

Government budget deficit: The ratio of the annual general government deficit to gross domestic product (GDP) at market prices must not exceed 3% at the end of the preceding fiscal year. Deficits being slightly above the limit (previously outlined by the evaluation practice to mean deficits in the range from 3.0 - 3.5%), will as a standard rule not be accepted, unless it can be established that either: 1) The deficit ratio has declined substantially and continuously before reaching the level close to the 3% - limit" or 2) The small deficit ratio excess above the 3% - limit has been caused by exceptional circumstances and has a temporary nature (i.e. expenditure one-offs triggered by a significant economic downturn, or expenditure one-offs triggered by the implementation of economic reforms with a positive mid/long-term effect).

Government debt-to-GDP ratio: The ratio of gross government debt (measured at its nominal value outstanding at the end of the year and consolidated between and within the sectors of general government) to GDP at market prices, must not exceed 60% at the end of the preceding fiscal year. Or if the debt-to-GDP ratio exceeds the 60% limit, the ratio shall at least be found to have sufficiently diminished and must be approaching the reference value at a satisfactory pace.

Exchange rate: Applicant countries should have joined the exchange-rate mechanism (ERM / ERM II) under the European Monetary System (EMS) for two consecutive years, and should not have devalued its currency during the last two years, meaning that the country shall have succeeded to keep its monetary exchange-rate within a +/- 15% range from an unchanged central rate.

Long-term interest rates (average yields for 10-year government bonds in the past year) shall be no more than 2.0% higher, than the unweighted arithmetic average of the similar 10-year government bond yields in the 3 EU member states with the lowest HICP inflation (having qualified as benchmark countries for the calculation of the HICP reference value). If any of the 3 EU member states in concern are suffering from interest rates significantly higher than the GDP-weighted Euro zone average interest rate, and at the same time have no complete funding access to financial markets (which will be the case for as long as a country receives disbursements from a sovereign state bailout program), then such a country will not qualify as a benchmark country for the reference value; which then only will be calculated upon data from fewer than 3 EU member states.

The first three criteria are designed to maintain monetary stability and exchange rate stability. The last two criteria should ensure the stability of the euro through protection from inflationary pressures caused by excessive budget deficits. Monetary and financial character of the Maastricht criteria is reflected by the fact they are not related to the real indicators such as production, investment or employment. From that point we can say that the Maastricht criteria have strong neoliberal basis especially because of the focus on low inflation.

Today 17 EU countries are using the euro as their currency: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Spain and Slovenia. The other 10 EU member states have not yet adopted the euro or have chosen not to adopt.

During the analysis of the Maastricht criteria must not be forgotten that the macroeconomic and financial environment 20 years ago was very different from the situation today. The countries had their own way of regulation of the capital flows and the financial markets were less developed and sophisticated. Today, all EU countries have full liberalization of the capital accounts and capital mobility is significantly higher. All these factors have an impact on fulfillment of the Maastricht criteria and also on their consistency. Although, at the beginning, the Maastricht convergence criteria were designed for the less developed countries to catch up the more developed ones, must be taken into consideration that the Maastricht criteria are only rules for monetary and fiscal stability. The convergence is a long-term process of institutional and structural adjustment of less developed economies.

In the 1990s the convergence was able to be conducted in a worldwide climate of low inflation, low aggregate demand and the Euro zone countries were above its potential output. Countries with higher inflation, especially those from southern Europe, implemented a restrictive monetary policy and reduced the rate of inflation. The question is whether such a policy was achieved in exchange for lower productivity and higher unemployment[6]

At the start of the process, there was a concern in the European structures that some countries will abuse the system and might refer to fiscally irresponsible manner. Stability and Growth Pact was introduced in 1997 to prevent this problem. For this purpose, the EU countries have worked several years to stabilize inflation, cut public spending, reduce public debt and avoid the currency devaluation in order to achieve the convergence criteria. By 1999, the deficit and public debt were reduced in most countries, and eleven countries have qualified for the implementation of the Euro.

As the time for introduction the euro approached, it became clear that Belgium and Italy will not meet the rule for the size of the debt. They however were allowed to join on the basis that the debt was having a downward tendency. Greece was allowed to join the euro two years after the original formation i.e. in 2001. Although this actions support the Maastricht criteria and the Stability and Growth Pact, in early 2000,

[6] *Paleta, T. (2012). Maastricht Criteria of…Divergence? Review of Economic Perspectives. Vol. 12 issue 2. 2012 DOI: 10.2478/v10135-012-0005-7 12. pp. 95*

Germany was the first country that violate the rules, and right after that France followed. In November 2003 the European Commission presented evidence to the European Council that both countries were out of the established criteria of the fiscal aspect. Political pressure from Germany and France and other countries led to the suspension of the contract in 2004 and no penalties were passed. Pact in 2005 was changed in the direction of extension of the deadlines for taking action to allow a longer period to adjust and loosen up the set clauses. (see Table 2. App.)

By the end of 2004, only half of the Euro zone countries had fiscal positions that could be considered as positions close to balance or in surplus. These countries were Belgium, Finland, the Netherlands and Spain. France, Germany, Greece, Italy and Portugal remained far from their targets. As a result, these countries ended up posting a deficit in excess of 3%, which cause the introduction of the Excessive Deficit Procedure. Implementation of the convergence criteria was hindered by the fact that several countries, including Greece, Italy and Portugal wrongly displayed their deficits reports to the European Commission. When amounts were later revised by Eurostat, it was revealed that the problem is more serious, and might some countries be disqualified to join the euro area, due to the high level of the deficits.[7]

Overall, the Maastricht criteria had a positive impact on countries such as Italy, which tried to reduce its debt and deficit levels before joining the euro. However, with a different set of initiatives under the Stability and Growth Pact, there was no significant improvement in the deficit and debt ratios in most countries. Although there has been a growth of deficits and public debts after the reform of the Pact in 2005, the finances of the Member States have not changed greatly. France and Germany have not improved their debts to bring them in line with the Maastricht criteria, while Ireland has actively reduced them to healthy levels. If we compare budget stabilization efforts before and after the implementation of the euro can be concluded that the Euro zone

[7] *Allen, F. & Ngai, V. (2012). In What Form Will the Eurozone Emerge from the Crisis? University of Pennsylvania Press. August 20, 2012 pp. 11*

countries have not shown good results which in turn shows that the Maastricht criteria and the Stability and Growth Pact had limited effect.

By 2012, all Euro zone countries were involved in the excessive deficit procedure. (see Graph 2. App.) Although the authorities of the European Commission still argue that the Maastricht Treaty is a framework through which Member States would return to sound fiscal policy, just a few countries follow the recommendations of the Commission. In addition, since 23 of the 27 EU member states were subject to an excessive deficit procedure, and many of them were launched in 2009 (see Graph.1 App.) the probability of any sanction to the individual member state was greatly reduced.[8]

The inability to implement automatic penalties, such as Germany demanded before the introduction of the Pact, is a restriction that makes execution of sanctioning hard on countries with excessive deficits or debt.

2. The current financial crisis and the impact on the Euro zone

In the mid 2000's the euro project was recognized as a successful and many countries rushed to join the Euro zone. However, the financial crisis that began in 2008 has changed all this. What started as a debt crisis in Greece in late 2009 has evolved into a wider economic, social, and political crisis in the Euro zone and the European Union. Euro zone faces four major related economic challenges: (1) high levels of public debt and public deficits in some Euro zone countries; (2) weaknesses in the European banking system, (3) economic recession and high unemployment; and (4) persistent trade imbalances within the Euro zone. In addition, the Euro zone is facing a political crisis.[9] Disagreements between key policymakers how to find a suitable response to the crisis, as well as the complex process of decision-making in the EU contributes to

[8] *Allen, F. & Ngai, V. (2012). In What Form Will the Eurozone Emerge from the Crisis? University of Pennsylvania Press. August 20, 2012 pp.12*

[9] *Nelson, M.R., Belkin, P., Derek, E. & Weiss, M.A. (2012). The Eurozone Crisis: Overview and Issues for Congress. Congessional Research Service. September 26, 2012 pp.5*

anxiety among countries. Governments of several European countries have fallen as a direct or indirect result of the crisis. (see Picture 1. App.)

At the end of 2009 and beginning of 2010 it became clear that Greece was in serious trouble. (see Graph.3 App.) In May 2010, Greece became the first Euro zone country to seek help from the International Monetary Fund and the European Union. This was followed by the creation of the European Financial Stability Facility (EFSF), a private company with debt guaranteed by Euro zone governments to provide funding for Euro zone countries that require financial assistance. Several months later, in November 2010, Ireland also requested assistance and was followed by Portugal in April 2011. (see Graph 4. App.) In 2012, Spain, and then Cyprus asked for aid. (see Graph 5 and 6. App.) Although not called for a bailout, Italy is under pressure.[10] EFSF is a temporary measure and due to expire in 2013. The scope of it the crisis revealed serious weaknesses in the design of the Euro zone.

In the years before the crisis, all Euro zone countries at a certain moment broke the deficit rule of 3% of GDP except Luxembourg and Ireland. However, no country was punished. The effect of the crisis was large in all countries. Based on the data from 2011, only four countries in the EU are in full compliance with the Maastricht fiscal criteria: Estonia, Luxembourg, Finland and Sweden. Despite these prevalent disorders of the criteria, no country was punished at any stage. Stability and Growth Pact represents a failure in disciplining countries. With 5 of the 17 countries that are now in programs for rescuing and Italy that may require rescue, there is widespread concern about the future of the euro.[11] The problem is that the EFSF is not large enough to provide funds that Italy will likely need. (see Graph 7. App.) Policy makers' response was initially to try to strengthen the Pact. However, given the failure in the past it seems unlikely that it will succeed in the future. More leaders recently have promised greater political and fiscal integration and banking Union. The problem with these

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[10] *European Financial Stability Facility (EFSF). European Commission. 15 March 2012.*
[11] *Allen, F. & Ngai, V. (2012). In What Form Will the Eurozone Emerge from the Crisis? University of Pennsylvania Press. August 20, 2012 pp.10*

reforms is that they are much more far-reaching and it will take many years to implement.

Euro zone crisis is commonly called crisis of wrong mix of economic policies. Monetarists believe that the crisis is consequence of the Governments of the Member States which failed to meet fiscal obligations according to the Maastricht criteria. Post-Keynesians, on the other hand, believe that the crisis arises from inadequate economic policy mix which is due to the Maastricht Treaty. Some authors[12] take the view that the crisis derives from faulty institutional design rather than the wrong combination of measures. Faulty institutional design was embedded in the Maastricht Treaty in 1993 with restrictions and ceiling of the deficit and the public debt to GDP ratio. Primary belief was that a monetary stability means low inflation and low government borrowing.

Inadequate institutional arrangements are reflected in the following: Euro zone countries have a common central bank without a common government, governments without a central banks and banks without an effective lender of last resort. Such a system has no mechanism for eliminating excessive debt in the economy. Euro zone regime to maintain low inflation turned out into deflation without the possibility of increasing the budget deficit. The deficiencies of the Maastricht criteria in the current situation can be felt mostly in request to maintain the current debt to GDP set targets. In 2011, the average public debt in the euro zone reached 90%, and only smaller economies were below 60% of GDP. Even Germany, which is located in the heart of the political and economic developments of the Euro zone, has a public debt of 82% - 88% of GDP. (see Table 3. App.)

According to the Maastricht criteria all economically significant countries should achieve fiscal surpluses until their debt is reduced to the set target. Fiscal surplus in turn means a reduction in GDP unless it is compensated by the trade surpluses or private sector investments. Meanwhile, the current investments in the private sector are declining

[12] *Toporowski, J. (2012). International Credit, Financial Integration, and the Euro. Paper presented at the PKSG workshop. SOAS. June 2012. pp. 1-2*

and they further accelerate the deflation. (see Table 1. App.) This is the simplest example of the inadequacy of the public debt ceilings. Euro zone is under pressure to maintain its own competitiveness. The competitiveness can be achieved either through low wages or through a devalued national currency or the two measures together. Due to the requirements of monetary union the possibility of devaluation of the national currency is rejected, so that the only alternative is the reduction of wages. Lower wages in turn means a reduction in consumer spending and consequently the overall aggregate demand. Thus the possibility of reducing the public debt by increasing public revenues is an impossible decision.[13]

The original structure of EMU proved unable to provide long stability in suboptimal monetary union, especially as a consequence of the financial crisis. The root causes of instability EMU are as follows:

• Hopping that the monetary union itself will encourage convergence, proved to be too optimistic.

• The single monetary policy was not adequate for the both groups of the Euro zone countries: the core and the peripheral countries and cause asymmetrical pro-cyclical effects.

• The lack of macroeconomic coordination and reverse direction of movement of the wages with productivity growth meant significant differences in competitiveness and creation of a high current account deficits in some countries and large surpluses in other countries.

• The Fiscal rules could not prevent the sharp rise in the budget deficits and public debts before or during the crisis.

• The risk of sovereign default of the member states was neglected. Mistaken assessments of risk by some financial investors contribute in some countries to develop

[13] *Toporowski, J. (2012). International Credit, Financial Integration, and the Euro. Paper presented at the PKSG workshop. SOAS. June 2012. pp. 3*

inappropriately low interest rates. That in turn led to the fueled credit-driven demand and price bubbles.

• The absence of a lender of last resort for countries meant self-reinforcing fiscal crisis.

• Decentralized and insufficient banking regulation and lack of trust and transparency has led to fragmentation of financial markets during the crisis and creation of insolvency of states and banks.

• Fiscal rescue measures have taken precedence over the broader socio-economic objectives as set out in The Europe 2020 target.[14]

3. Possible scenarios

Euro crisis is now officially in its fourth year. It was launched in October 2009 when the Greek government admitted that the budget deficit is much higher from the one previously presented. In the years that followed, not only the crisis has deepened in Greece, but also has spread to other countries and revealed serious deficiencies in the management of the euro and the Euro zone. Euro crisis includes: debt crisis, banking crisis, a crisis of growth, a crisis of labor market and competitiveness. Resolving this crisis seems to be a Gordian knot. Maastricht criteria neither provided prevention of excessive budget deficits or removal of threats to the euro. The euro did not initiate dynamism conducive to reforms and higher competitiveness. At the current stage the question that arises is how to redesign and improve the governance structure for prevention of future crises and how to find a way out of this one.

Conceptually there are two main dimensions to reform the euro zone. The first is political integration. The question is whether the Euro zone needs deeper political integration and transfer of decision-making at the European level or to give priority to the individual countries to make an economic boost. The second dimension covers fiscal transfers between member states. These requirements imply the centralization

[14] *Aiginger, K., Cramme, O., Ederer, S., Liddle, R. & Thillaye, R. (2012). Reconciling the short and the long run: governance reforms to solve the crisis and beyond. European Policy Brief No. 1 D404.1. September 2012. pp. 2-3*

of fiscal policies and the establishment of European Ministry of Finance with adequate competencies. To make this possible requires political strength and unity.[15]

In academic circles is debating about the existence of four scenarios[16] to overcome the current state of affairs in the Euro zone. Although theoretically possible, they will be difficult to be implemented in pure form.

Scenario one recommends applying a restrictive financial policy of the euro, particularly in relation to fiscal policy. This will consist of a strict budget expenditure control, reducing the budgetary costs, and where feasible an increase in budget revenues. Conventional macro economics believes that the fiscal savings can be achieved only at the cost of reduced output and employment. Tight fiscal policy reduces the aggregate demand for goods and services. With rigid prices, the reducing of the nominal demand will result in a reduction in real output. However, tight fiscal policy means that something must be taken away from someone. Budget cuts are mainly cited in three areas, namely, education, health care and pension funds. In addition, it will be necessary to raise taxes and cut public sector wages. Experience in Greece shows how painful such a policy can be in practice.

The second scenario involves the restructuring of the debt. Debt restructuring will reduce all debts of peripheral countries and their responsible entities. This program is already underway in Greece. Implementation of the restructuring program is based on the assumption that the debt will pull down both the debtors and the creditors, because both sides were initially too optimistic in borrowing money and lending. Another problem is that this encourages other countries and companies to seek debt restructuring. Of course, it is impossible to meet the requirements of all stakeholders.

[15] *Borsch, A. (2012). Eurozone: Four Models for Future Governance. Global Economic Outlook: 4th Quarter 2012. Deloitte University Press pp. 7*

[16] *Nowak, Z.A. & Shachmurove, A. (2012). Failing Institutions Are at the Core of the Euro. PIER Working Paper No. 12-041. October 19, 2012. pp. 13-16*

Consequently, this scenario also has little chance of success, although it cannot be completely ruled out.

The third scenario is the devaluation of the euro in order to improve the competitiveness of the economy of the Euro zone countries, to stimulate economic activity and to increase revenues to the state budgets. Given the political impetus for the formation of the Euro zone must be realized the importance of the euro and the Euro zone as a stabilizing force in the global economy. As a result, devaluation of the euro would mean not only destabilization of the Euro zone, but also destabilization of the global finance and global politics.

The fourth scenario is based on the assumption that the EU countries must return to common wise way of thinking in terms of solidarity. Certain countries succumb to nationalistic and individualistic tendencies. Sooner or later, Europe will have to face the important question of whether to develop as a confederation or federation. For this scenario will need deep political change. It will have to establish appropriate institutions to take responsibility for the supervision and coordination of economic and fiscal policy of the European Union. Such a fiscal union will actually mean that a part of the budget policy will be transferred from the national to the community level.

Other 4 possible scenarios[17] for the future of Euro zone countries are:

- Monetary expansion (coordinated action of the ECB and EFSF);
- Restructuring economies of the indebted countries through voluntary debt reduction and its control;
- Abandoning the Euro zone by Greece;
- Establishment of a new Euro-bloc currency with integrated monetary and fiscal institutions and the vulnerable countries to leave the Euro-zone

[17] *What next for the Eurozone? – Possible scenarios for 2012, PricewaterhouseCoopers, December 2011, available at www.economics.pwc.com pp.4*

The most feasible (and most realistic) scenario is monetary expansion. In that case, the ECB will buy bonds, which will reduce the debt burden. It will allow borrowing with lower interest rates (the main driver of that scenario). It will enable countries to have access to loans with a reasonable price and to encourage private sector demand. Although this is a relatively benign way to reduce the Euro zone's debt burden and makes the essential structural adjustments, it can have cost perceived in the lower medium-term growth rates. The reason for this is that the ECB will have to return expectations for low inflation in that period. And this can be done only through increased interest rates and accordingly by lower growth rates.

Second scenario predicts voluntary debt restructuring the vulnerable economies. Long-term consequences can be continued reliance on these economies of the fiscal support from the rest of the Euro zone. These countries will have to implement the program of fiscal tightening. In the long term, the vulnerable economies may face the problem of renewed access to the financial markets, as it will be necessary long-term assistance from European institutions.

Although it is unlikely to be realized, the impact of the third scenario in which Greece will leave the Euro-zone would be small. However, the Euro zone must act in the direction of preventing the spread of this scenario among other vulnerable countries and to restore confidence in the euro. Thus, in the case of realization of this scenario, "the Euro zone leaders will have to act in order to protect the single currency for the other Member States and to take the package of recapitalizing the Greek banks that are exposed.

The fourth scenario is formation of a new currency bloc (new Euro), with integrated monetary and fiscal institutions would include Germany, France, the Netherlands, Finland and some of the other stronger members of the Euro-zone. Among them the cheap capital will boost domestic demand.[18]

4. Concluding observations

One of the often cited reasons for the crisis in the Euro zone is the high level of deficit and debt in many European countries after the creation of the single currency. The global financial crisis has exacerbated the problem of rising debt in peripheral countries and their effects spread throughout the Euro zone.

Euro symbolized a new phase in European integration and monetary union was supposed to be a demonstration of the success of EU cooperation. However, it is not effective. In order to move forward, something more is required. This is why as the crisis progressed political leaders talked more and more about the political, fiscal and banking Union. The problem is that these changes are more complex and difficult to implement. It will take years to take effect. Meanwhile, the euro is in danger of disintegration as a result of high debt of some Euro zone countries.

The question is whether there was an error in Euro zone governance and the implementation of fiscal constraints in the European Union. The problem of high deficit and debt was actually foreseen by the drafters of the Maastricht Treaty. The basics for the establishment of the euro were displayed in the Treaty where certain criteria were defined for convergence, especially the limit of government finances, which had to be met by each Member State before it passes into the third stage of monetary union.

More than four years after the start of the Greek debt crisis, the future of the European Monetary Union (EMU), however, seems uncertain. Despite numerous changes in economic governance, Europe failed to deal with the uncertain dynamics due to the financial crisis. Economic and political damage is already considerable, as the economy

[18] *What next for the Eurozone? – Possible scenarios for 2012, PricewaterhouseCoopers, December 2011, available at* www.economics.pwc.com *pp.5-11*

is dragged into recession, increasing unemployment and widening on euro-skepticism.[19]

Market pressure on several Euro zone countries increased during the summer of 2012, when there were concerns that the crisis spread from Greece, Ireland and Portugal, three relatively small economies, to Italy and Spain, the third and fourth largest economy in the Euro zone. Many of the fundamental challenges in the Euro zone remain, including the lack of economic growth, high unemployment, and internal trade imbalances, and many still doubt the future of the Euro zone. More economists and politicians are openly questioning whether Greece will remain in the Euro zone, and wonder whether other countries could follow if Greece exits. Others are optimistic that European leaders and institutions will eventually do whatever it takes to keep the Euro zone intact, and that the EU could come out of the crisis stronger and even more integrated.

On the one hand, the crisis has caused the EU member states to continue with new and unprecedented agreements that serve to tighten economic integration, including the creation of the EFSF and ESM legislation with more central supervision of economic governance, and the proposed fiscal compact for greater economic coordination. ECB also expanded its role on a new and significant way, and some argue that the solution to the crisis lies in the movement towards the fiscal union, in which member states will give up control over their national budgets. On the other hand, the crisis has also raised tensions between the EU Member States. The crisis has raised the question of legitimacy and moral hazard, and many people in the core of the Euro zone continue oppose the use of taxpayer money to bail out profligate governments.

[19]*19 Aiginger, K., Cramme, O., Ederer, S., Liddle, R. & Thillaye, R. (2012). Reconciling the short and the long run: governance reforms to solve the crisis and beyond. European Policy Brief No. 1 D404.1. September 2012. pp. 8-9*

It is inevitable harshly adjustment to the new fiscal reality, no matter which way the politicians will decide to follow. Without this adjustment it will be required a permanent fiscal transfer from surplus to deficit countries, for sustained currency union.[20]

The future of the Euro represents the future of EMU and EU and the total future monetary and economic picture of the world. The question is should be Greece rescued or not? The rescue of Greece is rescue of the Euro. But what will be the process if the model of Greece should be applied to Italy and Spain? Then there is no salvation for the euro. Solution: to make a precedent. Exclusion of Greece from the Euro zone is one of the possible scenarios!

Possible solutions to the crisis:
- Debts write-off;
- Fiscal discipline in individual countries;
- Fiscal rules instead fiscal discretion;
- EU Constitution;
- Fiscal Union;
- Internal devaluation as a way out of the crisis of individual countries;
- Involuntary administration in specific countries - eliminating their fiscal sovereignty;
- Putting state assets in mortgage for approved new loans;
- Debt restructuring (unsubscribe, reprogramming, changing conditions, new collateral, monitoring, costly borrowing abroad, utilization of domestic resources, confiscation of illegal wealth);
- Changing the economic model of growth of all member states of the EMU.

New actions are needed to overcome existing imbalances and establish fiscal consolidation in the Euro area to: reduce the debts of individual countries, strengthen the banking system and establish a foundation for new integrated strategy for economic growth as a condition for the survival of the Euro. "Leaders need to act in the direction of marking the reasons, not just the symptoms of the crisis"[21] and to take appropriate actions regardless of what scenario in Euro zone would be carried out in future.

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xv. *What next for the Eurozone? – Possible scenarios for 2012, PricewaterhouseCoopers, December 2011, available at www.economics.pwc.com pp.4*

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APPENDIX

Table 1. Inflation rate in EU and Euro zone countries in the period 2001-2012, Annual average rate of change (%)

HICP - inflation rate (%)												
geo\time	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
European Union (27 countries)	2,2	2,1	2	2	2,2	2,2	2,3	3,7	1	2,1	3,1	2,6
Euro area (17 countries)	2,4	2,3	2,1	2,2	2,2	2,2	2,1	3,3	0,3	1,6	2,7	2,5
Belgium	2,4	1,6	1,5	1,9	2,5	2,3	1,8	4,5	0	2,3	3,4	2,6
Bulgaria	7,4	5,8	2,3	6,1	6	7,4	7,6	12	2,5	3	3,4	2,4
Czech Republic	4,5	1,4	-0,1	2,6	1,6	2,1	3	6,3	0,6	1,2	2,1	3,5
Denmark	2,3	2,4	2	0,9	1,7	1,9	1,7	3,6	1,1	2,2	2,7	2,4
Germany	1,9	1,4	1	1,8	1,9	1,8	2,3	2,8	0,2	1,2	2,5	2,1
Estonia	5,6	3,6	1,4	3	4,1	4,4	6,7	10,6	0,2	2,7	5,1	4,2
Ireland	4	4,7	4	2,3	2,2	2,7	2,9	3,1	-1,7	-1,6	1,2	1,9
Greece	3,7	3,9	3,4	3	3,5	3,3	3	4,2	1,3	4,7	3,1	1
Spain	2,8	3,6	3,1	3,1	3,4	3,6	2,8	4,1	-0,2	2	3,1	2,4
France	1,8	1,9	2,2	2,3	1,9	1,9	1,6	3,2	0,1	1,7	2,3	2,2
Italy	2,3	2,6	2,8	2,3	2,2	2,2	2	3,5	0,8	1,6	2,9	3,3
Cyprus	2	2,8	4	1,9	2	2,2	2,2	4,4	0,2	2,6	3,5	3,1

Latvia	2,5	2	2,9	6,2	6,9	6,6	10,1	15,3	3,3	-1,2	4,2	2,3
Lithuania	1,6	0,3	-1,1	1,2	2,7	3,8	5,8	11,1	4,2	1,2	4,1	3,2
Luxembourg	2,4	2,1	2,5	3,2	3,8	3	2,7	4,1	0	2,8	3,7	2,9
Hungary	9,1	5,2	4,7	6,8	3,5	4	7,9	6	4	4,7	3,9	5,7
Malta	2,5	2,6	1,9	2,7	2,5	2,6	0,7	4,7	1,8	2	2,5	3,2
Netherlands	5,1	3,9	2,2	1,4	1,5	1,7	1,6	2,2	1	0,9	2,5	2,8
Austria	2,3	1,7	1,3	2	2,1	1,7	2,2	3,2	0,4	1,7	3,6	2,6
Poland	5,3	1,9	0,7	3,6	2,2	1,3	2,6	4,2	4	2,7	3,9	3,7
Portugal	4,4	3,7	3,3	2,5	2,1	3	2,4	2,7	-0,9	1,4	3,6	2,8
Romania	34,5	22,5	15,3	11,9	9,1	6,6	4,9	7,9	5,6	6,1	5,8	3,4
Slovenia	8,6	7,5	5,7	3,7	2,5	2,5	3,8	5,5	0,9	2,1	2,1	2,8
Slovakia	7,2	3,5	8,4	7,5	2,8	4,3	1,9	3,9	0,9	0,7	4,1	3,7
Finland	2,7	2	1,3	0,1	0,8	1,3	1,6	3,9	1,6	1,7	3,3	3,2
Sweden	2,7	1,9	2,3	1	0,8	1,5	1,7	3,3	1,9	1,9	1,4	0,9
United Kingdom	1,2	1,3	1,4	1,3	2,1	2,3	2,3	3,6	2,2	3,3	4,5	2,8

Source of Data: Eurostat (last update: 15.03.2013)
Hyperlink to the table:
http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tec00118
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Table 2. Government deficit/ surplus as a % of GDP in EU and Euro zone countries in the period 2000-2011

General government deficit/surplus - % of GDP												
geo\time	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
EU (27 countries)	0,6	-1,5	-2,6	-3,2	-2,9	-2,5	-1,5	-0,9	-2,4	-6,9	-6,5	-4,4
Euro area (17 countries)	-0,1	-1,9	-2,6	-3,1	-2,9	-2,5	-1,3	-0,7	-2,1	-6,3	-6,2	-4,1
Belgium	0	0,4	-0,1	-0,1	-0,1	-2,5	0,4	-0,1	-1	-5,5	-3,8	-3,7
Bulgaria	-0,5	1,1	-1,2	-0,4	1,9	1	1,9	1,2	1,7	-4,3	-3,1	-2
Czech Republic	-3,6	-5,6	-6,5	-6,7	-2,8	-3,2	-2,4	-0,7	-2,2	-5,8	-4,8	-3,3
Denmark	2,3	1,5	0,4	0,1	2,1	5,2	5,2	4,8	3,2	-2,7	-2,5	-1,8
Germany	1,1	-3,1	-3,8	-4,2	-3,8	-3,3	-1,6	0,2	-0,1	-3,1	-4,1	-0,8
Estonia	-0,2	-0,1	0,3	1,7	1,6	1,6	2,5	2,4	-2,9	-2	0,2	1,1
Ireland	4,7	0,9	-0,4	0,4	1,4	1,7	2,9	0,1	-7,4	-13,9	-30,9	-13,4
Greece	-3,7	-4,5	-4,8	-5,6	-7,5	-5,2	-5,7	-6,5	-9,8	-15,6	-10,7	-9,4
Spain	-0,9	-0,5	-0,2	-0,3	-0,1	1,3	2,4	1,9	-4,5	-11,2	-9,7	-9,4
France	-1,5	-1,5	-3,1	-4,1	-3,6	-2,9	-2,3	-2,7	-3,3	-7,5	-7,1	-5,2
Italy	-0,8	-3,1	-3,1	-3,6	-3,5	-4,4	-3,4	-1,6	-2,7	-5,4	-4,5	-3,9
Cyprus	-2,3	-2,2	-4,4	-6,6	-4,1	-2,4	-1,2	3,5	0,9	-6,1	-5,3	-6,3
Latvia	-2,8	-2	-2,3	-1,6	-1	-0,4	-0,5	-0,4	-4,2	-9,8	-8,1	-3,4
Lithuania	-3,2	-3,5	-1,9	-1,3	-1,5	-0,5	-0,4	-1	-3,3	-9,4	-7,2	-5,5
Luxembourg	6	6,1	2,1	0,5	-1,1	0	1,4	3,7	3,2	-0,8	-0,8	-0,3
Hungary	-3	-4,1	-9	-7,3	-6,5	-7,9	-9,4	-5,1	-3,7	-4,6	-4,4	4,3

Malta	-5,8	-6,4	-5,8	-9,2	-4,7	-2,9	-2,8	-2,3	-4,6	-3,9	-3,6	-2,7
Netherlands	2	-0,2	-2,1	-3,1	-1,7	-0,3	0,5	0,2	0,5	-5,6	-5,1	-4,5
Austria	-1,7	0	-0,7	-1,5	-4,4	-1,7	-1,5	-0,9	-0,9	-4,1	-4,5	-2,5
Poland	-3	-5,3	-5	-6,2	-5,4	-4,1	-3,6	-1,9	-3,7	-7,4	-7,9	-5
Portugal	-3,3	-4,8	-3,4	-3,7	-4	-6,5	-4,6	-3,1	-3,6	-10,2	-9,8	-4,4
Romania	-4,7	-3,5	-2	-1,5	-1,2	-1,2	-2,2	-2,9	-5,7	-9	-6,8	-5,5
Slovenia	-3,7	-4	-2,4	-2,7	-2,3	-1,5	-1,4	0	-1,9	-6	-5,7	-6,4
Slovakia	-12,3	-6,5	-8,2	-2,8	-2,4	-2,8	-3,2	-1,8	-2,1	-8	-7,7	-4,9
Finland	7	5,1	4,2	2,6	2,5	2,9	4,2	5,3	4,4	-2,5	-2,5	-0,6
Sweden	3,6	1,5	-1,3	-1	0,6	2,2	2,3	3,6	2,2	-0,7	0,3	0,4
United Kingdom	3,6	0,5	-2,1	-3,4	-3,5	-3,4	-2,7	-2,8	-5,1	-11,5	-10,2	-7,8

Source of Data: Eurostat (last update: 13.03.2013)
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Table 3. Government gross debt in % of GDP – annual data of EU and Euro zone countries in the period 2001-2011

General government gross debt (Maastricht debt) in % of GDP											
geo\time	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Belgium	106,5	103,4	98,4	94	92	88	84	89,2	95,7	95,5	97,8
Bulgaria	66	52,4	44,4	37	27,5	21,6	17,2	13,7	14,6	16,2	16,3
Czech Republic	23,9	27,1	28,6	28,9	28,4	28,3	27,9	28,7	34,2	37,8	40,8
Denmark	49,6	49,5	47,2	45,1	37,8	32,1	27,1	33,4	40,7	42,7	46,4
Germany	59,1	60,7	64,4	66,2	68,5	68	65,2	66,8	74,5	82,5	80,5
Estonia	4,8	5,7	5,6	5	4,6	4,4	3,7	4,5	7,2	6,7	6,1
Ireland	35,2	32	30,7	29,5	27,3	24,6	25,1	44,5	64,9	92,2	106,4
Greece	103,7	101,7	97,4	98,9	101,2	107,5	107,2	112,9	129,7	148,3	170,6
Spain	55,6	52,6	48,8	46,3	43,2	39,7	36,3	40,2	53,9	61,5	69,3
France	56,9	59	63,2	65	66,7	64	64,2	68,2	79,2	82,3	86
Italy	108,2	105,1	103,9	103,4	105,7	106,3	103,3	106,1	116,4	119,3	120,8
Cyprus	61,2	65,1	69,7	70,9	69,4	64,7	58,8	48,9	58,5	61,3	71,1
Latvia	14,1	13,6	14,7	15	12,5	10,7	9	19,8	36,7	44,5	42,2
Lithuania	23	22,2	21	19,3	18,3	17,9	16,8	15,5	29,3	37,9	38,5
Luxembourg	6,3	6,3	6,1	6,3	6,1	6,7	6,7	14,4	15,3	19,2	18,3
Hungary	52,7	55,9	58,6	59,5	61,7	65,9	67	73	79,8	81,8	81,4
Malta	58,9	57,9	66	69,8	68	62,5	60,7	60,9	66,4	67,4	70,3
Netherlands	50,7	50,5	52	52,4	51,8	47,4	45,3	58,5	60,8	63,1	65,5
Austria	66,8	66,2	65,3	64,7	64,2	62,3	60,2	63,8	69,2	72	72,4
Poland	37,6	42,2	47,1	45,7	47,1	47,7	45	47,1	50,9	54,8	56,4
Portugal	53,8	56,8	59,4	61,9	67,7	69,4	68,4	71,7	83,2	93,5	108

Romania	25,7	24,9	21,5	18,7	15,8	12,4	12,8	13,4	23,6	30,5	34,7
Slovenia	26,5	27,8	27,2	27,3	26,7	26,4	23,1	22	35	38,6	46,9
Slovakia	48,9	43,4	42,4	41,5	34,2	30,5	29,6	27,9	35,6	41	43,3
Finland	42,5	41,5	44,5	44,4	41,7	39,6	35,2	33,9	43,5	48,6	49
Sweden	54,7	52,5	51,7	50,3	50,4	45,3	40,2	38,8	42,6	39,5	38,4
United Kingdom	37,8	37,7	39,1	41	42,2	43,3	44,2	52,3	67,8	79,4	85,2

Source of Data: Eurostat
Last update: 12.03.2013
Hyperlink to the table:
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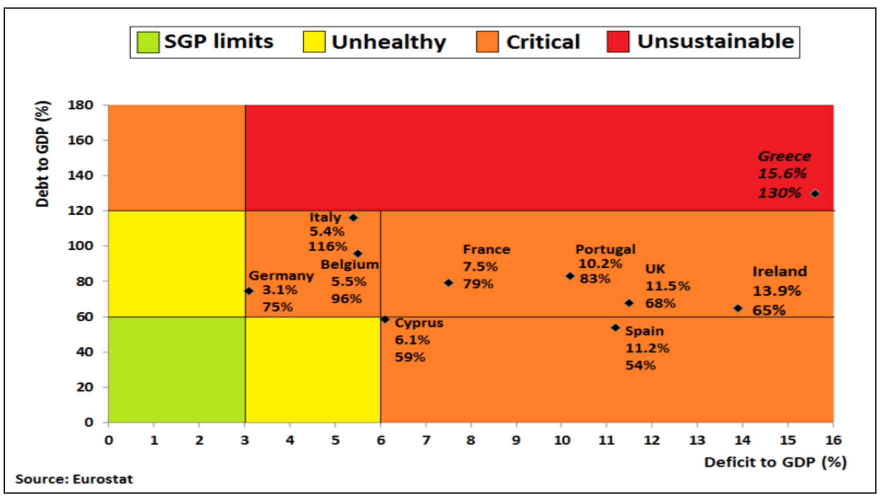
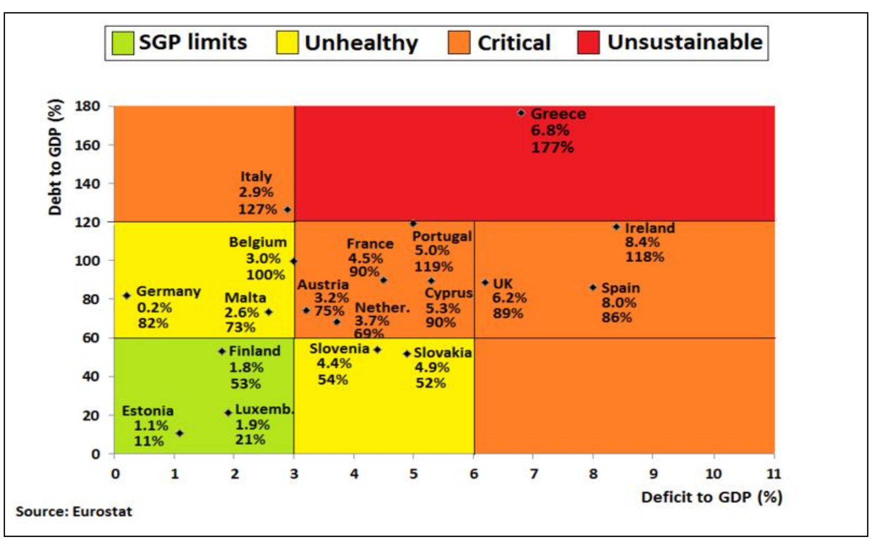
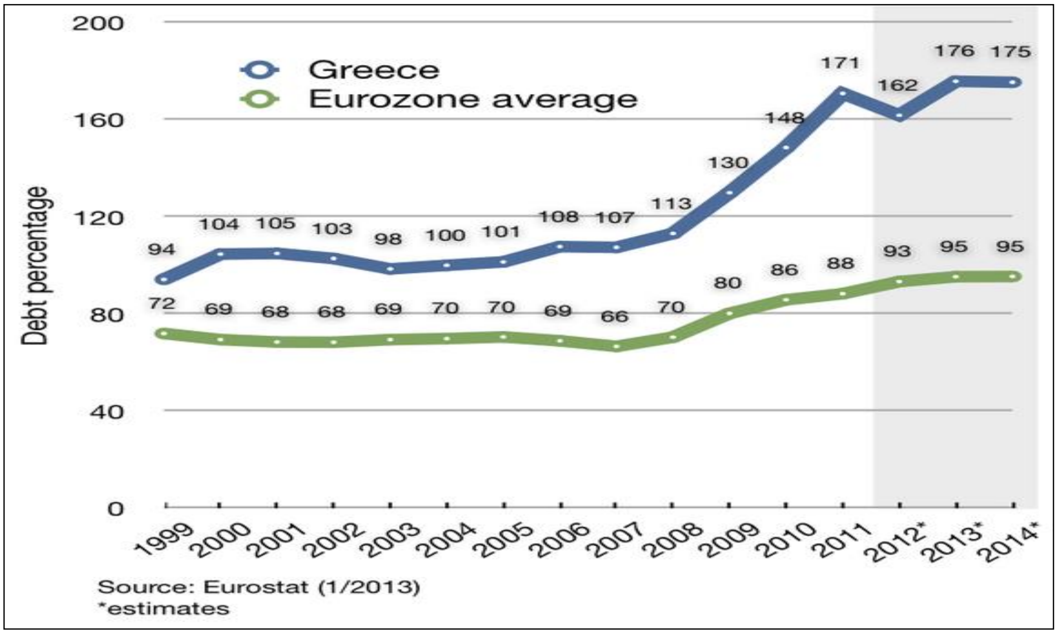
Graph 1. Budget deficit and public debt ratio to GDP in 2009



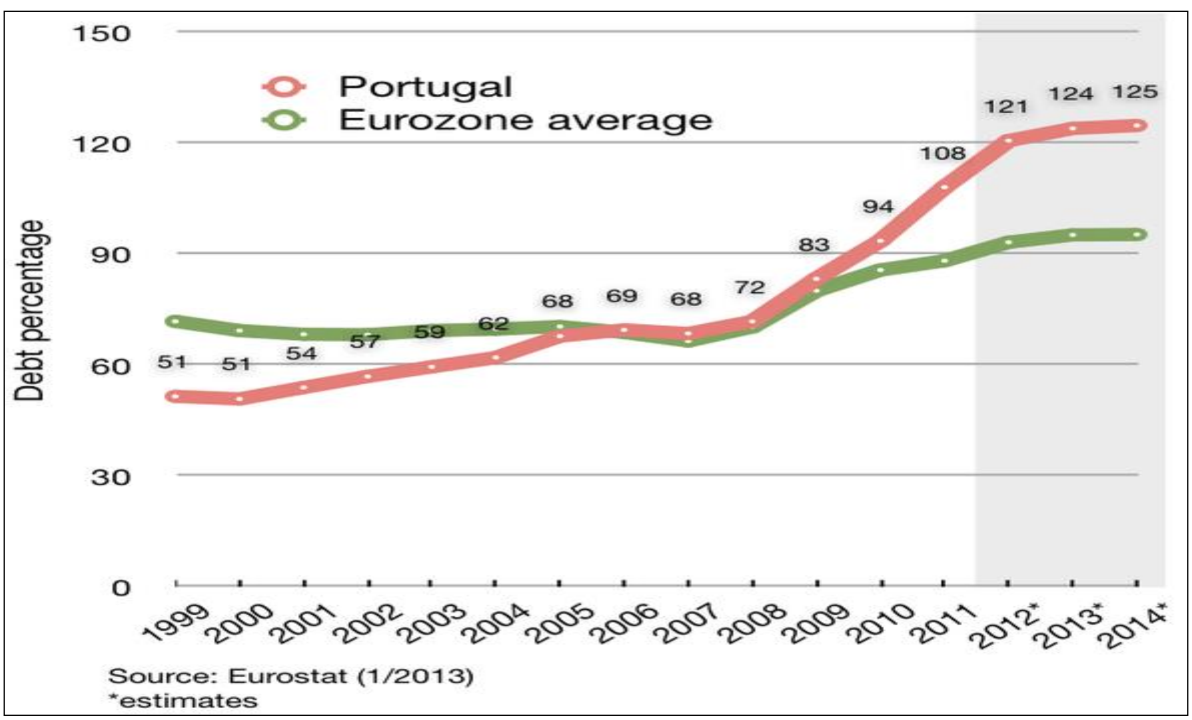
Graph 2. Budget deficit and public debt ratio to GDP in 2012



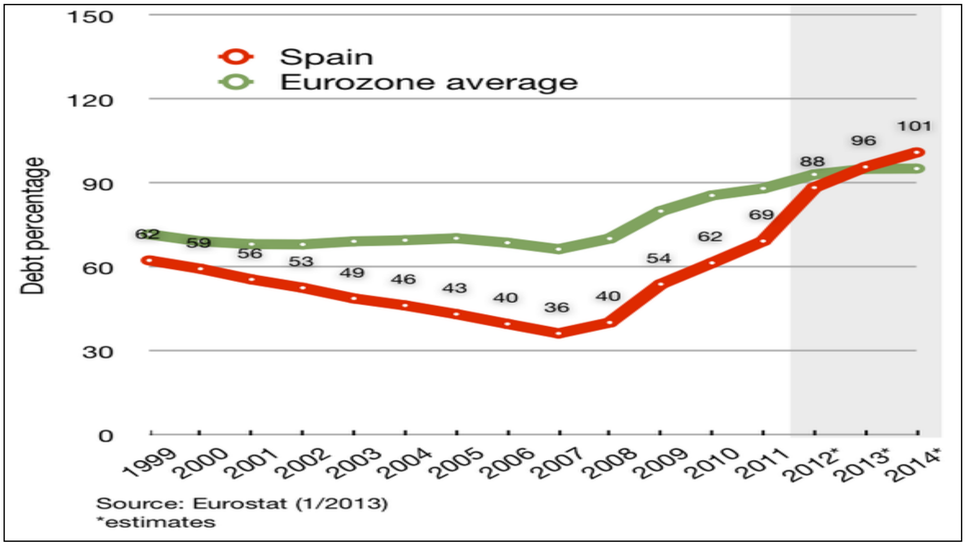
Graph 3. Public debt to GDP ratio in Greece compared to Euro zone average



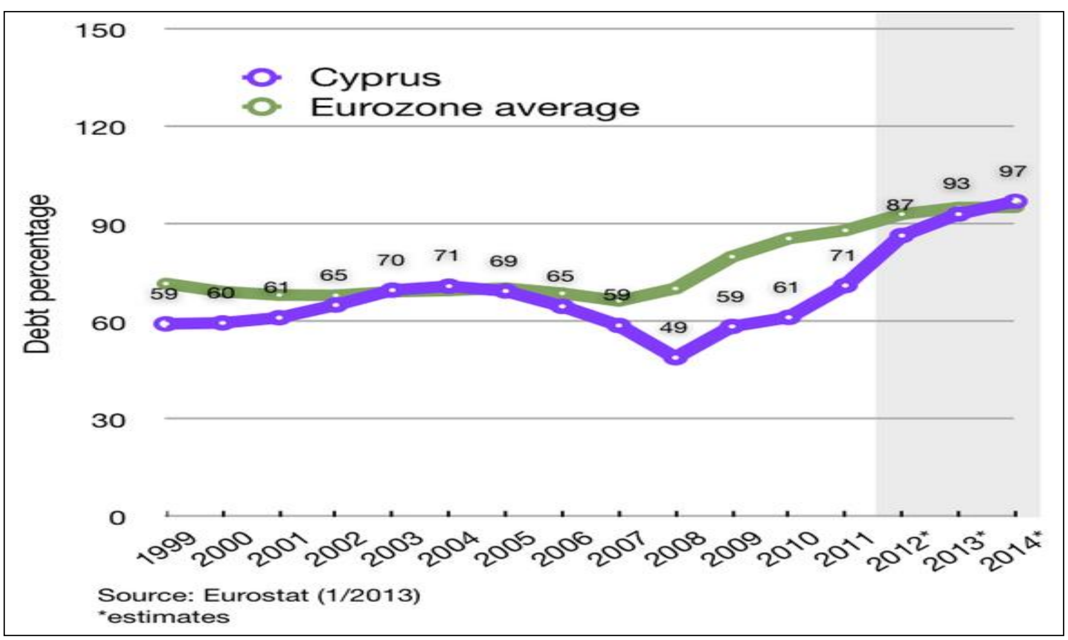
Graph 4. Public debt to GDP ratio in Portugal compared to Euro zone average



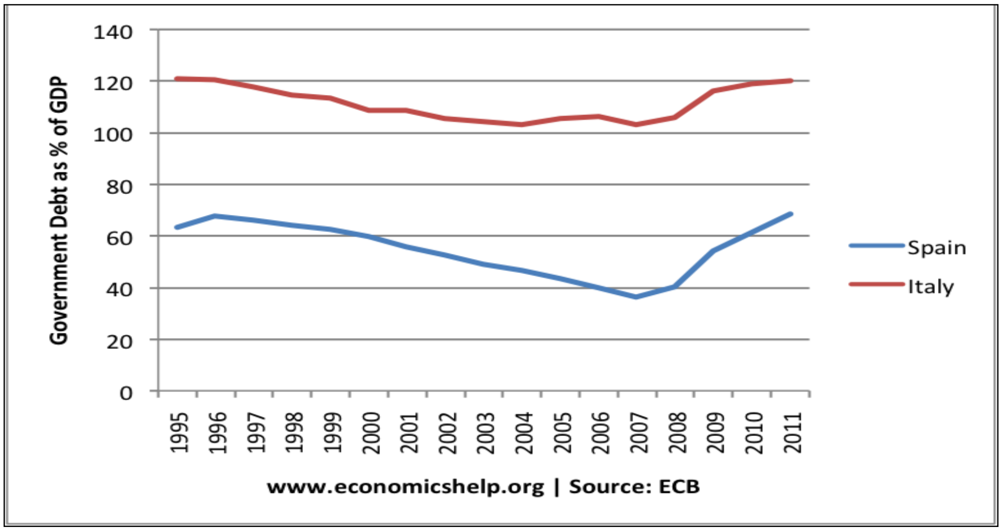
Graph 5. Public debt to GDP ratio in Spain compared to Euro zone average



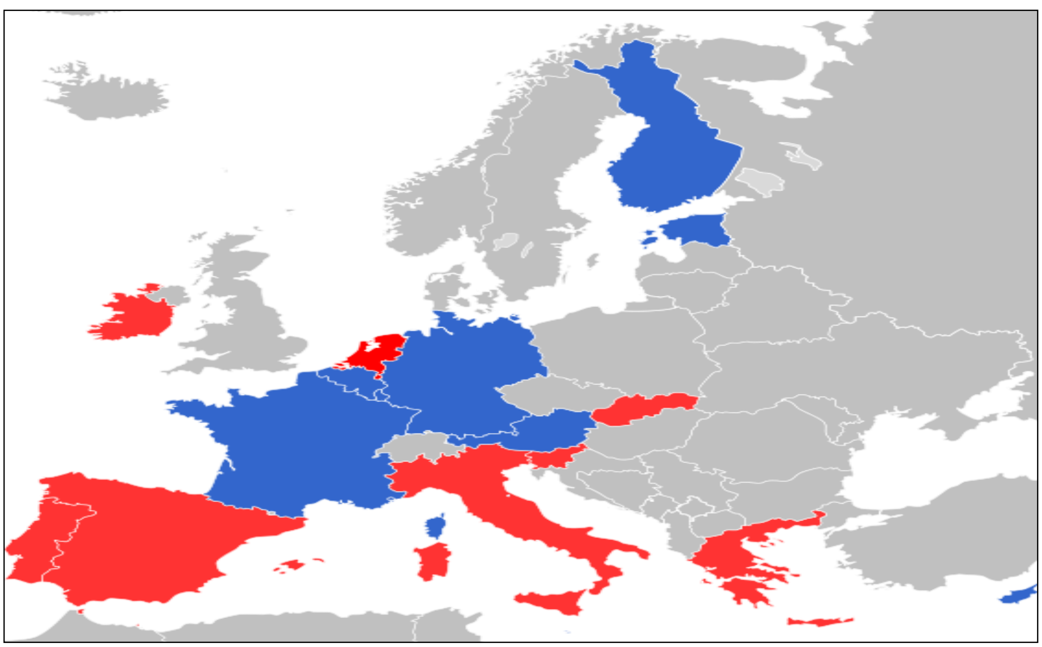
Graph 6. Public debt to GDP ratio in Cyprus compared to Euro zone average



Graph. 7. Government debt as a % of GDP in Italy and Spain



Picture 1. Unscheduled change of governments in Euro countries (marked red) due to the crisis



UDC: 339.744

ADJUSTMENT OF CURRENCY CONVERTIBILITY

Agis Shajnoski PhD[1], Krste Shajnoski PhD[2]

ABSTRACT

Although it is a very important economic issue, the currency convertibility has become one of the most neglected issues in the modern economic theory, particularly after the abolition of dollar convertibility into gold in 1971. Nowadays, it is said that the currency convertibility is a technique for exchange of one currency to other currencies at floating rates in the cross rates of exchange in the world and it is treated as a consequent solution into the evolution of currency convertibility. However, the facts are contrary to the treatment of such a kind. The exchange of one currency to other currencies at floating rates is a digression in the evolution of currency convertibility because its effects upon the rationality of the process of international division of labour have been corrected by this type of convertibility. This is a priority function within the original meaning of currency convertibility. However, this function cannot be fulfilled effectively without creating a global currency by which the national currencies will be connected to fixed, but adjustable exchange rates.

Keywords: **currency convertibility, dematerialization of money, system of gold standard, fixed rates, floating rates, global currency**

JEL Classification: **E42, E5**

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INTRODUCTION

Historically viewed, the currency convertibility is a key institute of the national monetary systems and the International Monetary System (IMS) because it makes it possible for money to perform its functions maximally and effectively in the national economies and global economy, creating conditions for unhindered economic development on the basis of the principle of rational international division of labour. The need for establishing currency convertibility has imposed itself because of the development of the objective process of dematerialization of money. Within this context, we will follow up the original meaning of currency convertibility in the system of gold specie standard and its role in improving the payments in the national economies and the international payments as a basis for more intensive development of the international economic relations.

The rise in sales in separate countries and between them and the absence of an adequate growth in the production of gold forced the development of new types of currency convertibility. The convertibility into gold bullion (gold bullion standard) and convertibility into currencies exchangeable for gold (gold exchange standard) being used in combination, were a logic consequence of the development of the process of dematerialization of money within the framework of the national borders of separate countries and of the direct need for providing convertibility of the national currencies into gold for the needs of international payments. The reasons why they lasted briefly are not in their position, in the mechanism of their functioning, but, above all, in the change of the social-economic goals of the development of separate countries, particularly after the Great World Depression when it has been assumed the internal balance to be over the external one and the interventionism over the liberalism in the relations abroad.

In the evolution of currency convertibility, an important place takes the type of convertibility known as gold exchange standard determined in the Statute of IMF. It has been a reflection of the needs of time and the relations between the forces during and after World War II. It maintains the connection with gold and at the same time there is provided convertibility of currencies being exchangeable for gold. Within this context, a special place takes the unilateral decision of the U.S. Treasury on purchasing dollars at a price of 35 dollars for one ounce of pure gold. This decision has made easier the change-over from gold exchange standard to gold-dollar exchange standard, and after the elimination of gold from IMF, also to dollar standard while the currency convertibility has profiled itself as an exchange of one currency to other currencies at floating rates.

Despite making easier the process of dematerialization of money in the national economies and global economy, the currency convertibility has in its original meaning the promotion of multilateralism as a condition for rational international division of labour, being in interest of every country and the world economy on the whole, which is contrary to bilateralism. In order to achieve the already mentioned goal in the Statute of IMF, it has been determined a proposition for establishing external convertibility of national currencies as a minimum level of multilateralism. However, the higher level is assuming liberalization not only of the current but also of the capital transactions.

By abandoning the convertibility of dollar into gold and by changing over the floating rates in the cross rates of exchange in the world, it can be said from the aspect of the original meaning of convertibility that it has been registered forced validity of the national currencies used freely within the international payments. In spite of the obligation to repay a certain quantity of gold or a certain amount of currencies being convertible into gold, the creditors have to satisfy themselves in the international exchange with the payment by certain national currencies which can be easily exchanged for other currencies, but are prone to a change of their value and are largely dependent upon the national interests and policies of the countries with such currencies. The practice sanctioned several national currencies to perform also a role of world money.

The problems out of digression in the evolution of currency convertibility have resulted in the biggest global crisis after the Great Depression in the 1930s. The developed countries, whose currencies perform functions of world money, hidden behind the possibility for exchanging their currencies for other currencies at floating rates, irrespective of the reasons, led a relaxed monetary and fiscal policy which ended up in bubbles of the real and financial assets. In addition, the developed countries did not upset themselves as a result of that because they are carrying part of their problems in the countries which make the international payments by their own currencies and they have been brought in such a situation because there is not and there is no desire to be brought in a global currency. In its absence, the less developed are condemned to suffer the consequences of the maladministration of the elites in the developed countries and to hope that the demands they are going to meet with their help, will not lose much of their value. However, the hopes are getting more and more minor because the way for mitigating the contradictions between the labour and capital and the means for stimulating the economic growth and employment are found into the manipulation of the value of national currencies.

The original meaning and evolution of currency convertibility

The currency convertibility occurs in relation to the development of money in the process of their dematerialization, and this means that it follows and affects the changes of the types of money, guaranteeing that the money without a material substance (paper and giro money) represents the monetary goods – the gold.

The nuclei of currency convertibility can be looked for within the process of dematerialization of money which has begun with the London goldsmiths' practice of issuing the individuals who deposited their ready money (gold coins) at the goldsmith's with notes of receipt which gave the holders the right to withdraw the deposited amount of money from the goldsmith whenever they wanted. Conditioned by the credibility that the goldsmiths enjoyed, the given right was sufficient enough for the certifications i.e. the notes of receipt to start circulating in the turnover instead of the deposited legal tender. Those certificates are not money, but they serve as money (they are a monetary surrogate). By initiating them in the pertinent monetary system, there are not any crucial changes. The circulation does not increase because if the certificates do not circulate, then the gold or silver coins will circulate instead. The initiation of certificates presents only "*technical improvement of the circulation of metal money*"[3]. The problems in relation to the need for minting coins of larger amounts and their unwieldiness were solved by them and thus, there were reduced the costs and dangers upon the transport of larger amounts of coins.

The need of convertibility, in an economic sense, occurred when the goldsmiths on the basis of their experience – certificates were more often received than coins and they were more seldom returned for repayment of the deposited money – started to issue certificates despite the deposited total amount of coins. Very soon, only the banks began to deal with this type of work and because of that the money was named bank notes. Therefore, the text on the certificates could not read any more as follows: "I received in deposit 10 pounds of coined gold which I am going to repay at the request of the bearer of this certificate" because it did not respond to the real state of affairs, but only like this: "I will pay 10 pounds in coined gold at the request of the bearer of this slip of paper"[4].

The obligation is obviously the same, but the difference is the fact that the guarantee in the first situation is 100 per cent whereas in the second situation, it is opened the possibility that the issuer cannot pay off the appropriate amount of gold without delay and at the same time at the request of the owners of the bank notes. However, the obligation for exchange (convertibility) of bank notes for coins has undoubtedly provided their more intensive use in the turnover. The registered legal obligation to receive them as a means of payment only sanctions the permanent practice.

That the interchangeability was only a technical question results from the fact that the certificates had 100 per cent legal currency coverage (gold and/or silver). However, the obligation to exchange the monetary surrogates (the certificates and bank notes) for legal currency, under conditions when their 100 per cent coverage started to reduce, gets a remarkable role in the unhindered development of the process of dematerialization of money prompted by the discrepancy between the rapid growth of

[3] Dr Vjekoslav Majhsner: The Basic Sciences of Money, University - Skopje, 1958, page no.48.
[4] Ibid., page no.49.

commodity trading and the slow growth of gold as monetary commodity. The convertibility made possible the potential tendency towards deflation to be outweighed by issuing bank notes to the amount of gold money that the turnover should have, but there was opened the possibility for inflation as long as the amount of issued bank notes outweighed that ratio.

The positive practice of their interchangeability made possible the further development of the process of dematerialization of money by the larger increase in the incomplete coverage of bank notes in monetary metals up to the abolition of convertibility of bank notes into gold money and their convertibility into paper money at a legal rate. Thus, the money has become independent of whatever natural restrictions in relation to its creation. However, it has not changed its essence. The essence of money does not change even when it gets the form of giro money. It also represents the gold. Its ratio towards gold is a ratio of representation.

The original meaning of convertibility turns us towards the historical moment when the gold as commodity transformed itself into money. This happened because the gold gave the commodity world a material for expressing the values, presenting them as eponymous dimensions being qualitatively equal and quantitatively comparable. Thus, this functions as a general measure of value and as a result of this function, the specific equivalent commodity i.e. the gold becomes money. Therefore, it can be said that out of the convertibility of real money (gold) into commodity rises, in fact, the need for convertibility of monetary surrogates into gold as an absolutely convertible commodity.

The essence of currency convertibility of the system of gold specie standard is maintained even when it comes down to gold bullion standard and gold exchange standard. In the gold bullion standard, the convertibility of currencies is limited to the possibility for exchange of larger amounts of gold (gold bullion) whereas in the gold exchange standard, it is a matter of exchange of currencies being convertible into gold. Both these currencies and the gold served as a basis for emission of money in the country that kept them as a monetary reserve and as a form of demands in the foreign banks. In all these types of currency convertibility, the national currencies have a fixed gold parity (a fixed amount of gold) whereas the exchange rate towards the other currencies is determined through the ratio of the gold parities of two currencies.

The Great Depression of the 1930s and World War I put an end to the hopes for the establishment of the changed but, yet, gold standard whereas the world relied itself on the measures of the arsenal of interventionism to regulate the internal flows and economic relations abroad.

After World War II the currency convertibility was an organized answer of the international community for outweighing the thorough currency and economic bilateralism of the economic relations in separate countries with the purpose to multilateralize them in the interest of every country separately and in the interest of the world economy on the whole. The knowledge about the advantages of multilateralism was indisputable, but the problem was that such a mechanism in the face of the system of gold standard was abandoned during the Great Depression and there was established currency interventionism which has crystallized itself, in the process of time, into an instrument of general maintenance of full employment as a new principle of economic policy.

The way out of currency interventionism was tracked down in the founding of the International Monetary Fund and the World Bank as institutions which will take care of the world liquidity and of providing the less developed with an additional support as a compensation for the liberalization of their relations abroad and of putting an effort into their multilateralism as part of the total efforts of multilateralism of the monetary and economic relations of the world. With the implementation of such a concept, it was wanted to diminish the interests in bilateralism in the economic relations and to prompt the efforts for liberalization and multilateralism, at least for current transactions (external convertibility of the national currencies).

In the concept of the Fund, the convertibility is based on the conversion of currencies into gold and into currencies being convertible into gold; on the fixed exchange rates which may change only to 10% without the approval of the Fund and on the support of the Fund for overcoming the problems of short-term balance of payments in the member countries. The World Bank had to help the member countries provide long-term means for development. Under such conditions, the obligation of the member country which insisted on establishing the convertibility of national currency, was to liberalize gradually the economic relations with the foreign countries, but once it assumes the obligations of Article VIII, it has to provide conversion of the non-residents' demands, arisen on the basis of current transactions, into its own currency and not to impose new external trade and exchange restrictions i.e. to liberalize further on the relations with the foreign countries.

It is a matter of the concept of external convertibility and current payments. However, it should be taken into account that this concept undergoes corrections in practice. Even at the beginning, with the unilateral decision of the USA to buy dollars earned by non-residents at a fixed price of 35 dollars per ounce, it has been intervened in favour of the functioning of dollar as world money, in addition to the gold. It was everything all right until the earned dollars of the applicants were converted into gold. However, the policy of such a kind could not last long. Nevertheless, it is a fact that the Americans forced the rest of the world to observe the dollar as gold although it proved soon that it is not like that. This was approved by the decision of creating Special Drawing Rights of the so-called "paper gold" through which the national currencies determined their values.

The biggest change of the concept of convertibility in IMF has occurred with the abolition of the convertibility of dollar into gold and with the elimination of gold from the International Monetary Fund and at the same time by abandoning the fixed and changing over to floating rates in the cross rates of exchange in the world. This change has an effect of establishing forced validity of the national currencies used freely in the international payment transactions, first on the dollar and later on the other hard currencies. Instead of going along the way of developing the Special Drawing Rights, several countries' national currencies functioning as world money have imposed themselves on the world as "paper gold" and they have boiled the currency convertibility down to exchange of one currency to other currencies at floating rates. This is in essential opposition with the importance of gold parities in the system of gold standard and with the fixed but adjustable rates of exchange in the Bretton Woods system (up to the abolition of convertibility of dollar into gold).

It has also come to a further degradation of the currency convertibility due to the forced practice of IMF of accepting formally the obligations of Article VIII (external convertibility) from countries which were not objectively qualified to assume such an obligation. In practice, the external convertibility has realized itself as internal convertibility of home currency (exchange of the home currency to other convertible currencies in the country). Thus, the efforts for multilateralism of the national currencies have reduced to acquisition of hard currencies by providing a status of external currency convertibility in order to fulfil the obligations towards abroad. It is absent the economic necessity of rational incorporation in the international division of labour being imposed by the status of external convertibility as a result of the obligation to convert the demands of the foreigners on the basis of current transactions into currencies for mass use. The volume of their exchange boils down to the amount of the acquired currencies, and is not in the interest of the foreign exporters. Therefore, there are few countries, with allegedly external, but factually internal convertibility of their currencies, which pay the import with national currencies. Thus, the efforts for direct multilateralism of their national currencies have been reduced because they pay with currencies used freely and their efforts are directed towards the acquisition of such currencies. Therefore, their value is very variable and it cannot be treated as solid information for allocation of the investments and for marketing of the production and services.

The currency convertibility through promotion of multilateralism

By reducing the level of coverage of paper money and their convertibility into gold, the process of dematerialization of money in the national economies ended up in building monetary systems which do not cross the borders of separate countries. Despite the home implications, the system of gold standard had "greater importance in the international monetary relations. The stabilization of the currency exchange rates was probably one of the most significant moments of gold standard and the main reason that it spread so and it still has a great reputation for considerable number of theoreticians and even more practitioners"[5]. The quotation is said long time ago, but it is relevant and nowadays, considering the mutual accusations of separate countries of depreciation and overvaluation of the rates of national currencies and the warnings of danger of currency wars.

The functioning of the system of gold standard has undoubtedly provided dynamic changes in the balance of economic forces of separate capitalist countries in favour of those which were producing more productively. The purpose of the international gold standard was to stabilize the international ratio of value of separate currencies if possible by tying up every separate value to the same standard of values and thus to make easier not only the international payment transactions but also the international trade and the international capital movement at high liberalization in the progress of the factors of production. In conditions like these, there was present the tendency towards optimal utilization of the factors of production on the basis of the international division of labour.

It was the same and the purpose of the Bretton Woods system (up to the demonetization of gold from the international monetary system), but it had a reduced influence as a result of the emphasis on promoting the current transactions in the international economic relations. In such a context, it is particularly important the fact that the stability of rates is regarded as a base of the settled international relations and once the parity of the member country was determined it could change itself only to correct "the fundamental disequilibrium" in its balance of payment.

The stable rates of exchange forced efforts out of all countries i.e. of their manufacturers in order to increase the productivity and business efficiency, to provide

[5] Dr Vjekoslav Majhsner: Money in the Development of Human Thoughts, Yearbook of the Faculty of Economics - Skopje 1959, page no. 171.

competitiveness at the world market whereas the possibility for depreciation of the value of national currencies was a safety-valve for mitigation of the internal contradictions of all countries.

The effects of currency convertibility have been reducing by strengthening the protectionism in the international exchange and by changing over the floating rates to cross rates of exchange, as a result of the possibilities for dropping part of their own burden in other countries, by taking various protectionist measures, by manipulating the rate of exchange, but being to the detriment of the rational international division of labour. However, the functioning in the already mentioned direction is not abolished and this is of great importance for the smaller countries which are relatively more dependent upon the international exchange i.e. their autarkic development leads towards larger economic losses.

Taking into consideration the previously mentioned, it is obvious that the need for convertibility of the national currencies into world money (as an expression of uniqueness of the world production of values), irrespective of the doer of that role (the gold, convertible currencies into gold or determined national currencies, with all the limitations in their role), is being immanent in the commodity production. This rises out of the fact that the utility of the social labour being part of certain products – goods is being verified only when they convert into national and/or world money. The level of rationality of the international division of labour depends on the type of currency convertibility and the regime of the rates of exchange. Therefore, it is undeniable that the rationality is the highest under conditions of global currency and fixed rates in the cross rates of exchange.

Degradation of the institute of currency convertibility and the need of global currency

The development of the types of currency convertibility has showed that it was bypassed the evolutionary path of commodity money to world paper money. For sake of the truth, it has come to constitution of Special Drawing Rights, but it has not been continued in that direction. Instead, it has been abandoned the convertibility of dollar into gold and in fact, it has been established forced validity of currencies, but first of all, of the dollar in the developed countries. Instead of developing SDRs in the direction of world paper money, it was started the practice of placing the national currencies in the function of world paper money.

There is no doubt that the abolition of the convertibility of dollar was a logic move in the further, although paradoxical consolidation of the U.S. currency in the international finances. This most often comes to the fore by stating that the world went on to dollar standard i.e. that earlier on the international monetary system did not suit the interests of a single country to such an extent as it used to in the 1970s, particularly after the sanctioning of the practice of floating rates in the cross rates of exchange in the world.

The Americans converted the weakness of the dollar into power. By abolishing its convertibility into gold, it has fallen down the last refuge from the dollar whose purchasing power has been decreasing every day. However, the world is being forced to use the dollar in the international payments further on because SDRs are still not brought in a situation to replace the dollar in the international transactions. But, being free from the obligation to convert the dollars into gold in the world and to maintain a fixed parity, the Americans as a powerful economic force have created a space for unhindered manipulation with their own currency and its rate. This comes to the fore particularly after the decay of the Bretton Woods system under conditions of new underdeveloped international monetary system, taking into consideration the changes that were made and which continued to be in the line of solving the problems having arisen between the developed capitalist countries due to the change in the ratio of forces among them, particularly between the USA on one hand and the Federal Republic of Germany and Japan on the other hand. In the settling of their contradictions, it has been sanctioned the new type of convertibility – the exchange of one currency to other currencies (all being inconvertible into gold) at floating rates in the cross rates of exchange in the world.

It is interesting that this essential change has been overcome as something which is irrelevant, logical and even inevitable. This is completely unjustifiable because the convertibility is not a technique which is neutral in the economic events, but as it has been showed by the previous experience, it is an important category of commodity money being prone and favourable to manipulation. The convertibility of dollar into gold at a fixed price has enthroned the dollar as world money. In addition to this, the Americans were making "extra monetary profits" as a result of the crediting of the USA by the countries which were keeping dollars in their monetary reserves. After they made a practice of identifying the dollars in the world as gold, they could not resist the possibility for making even larger profits by a process of inflationary emission of dollars for international needs despite the risks of their factual inconvertibility. They soon sacrificed the prestige in their own economic interest, abolishing the convertibility of dollar into gold in order to use freely the position they obtained in the international finances through the guarantee of the exchange of dollar to gold. The change-over to currency convertibility, being regarded as exchange of one currency to another one, only permitted the currencies of the economically most powerful capitalist countries to appear in the role of dollar.

There is no doubt that the way out from the situation caused by the digression in the development of money as world money (by the determination of a dollar price on the gold and the culmination in the abolition of the convertibility of dollar into gold, the abandonment of fixed rates as well as the imposition of convertibility of one currency into another one) has to be looked for within the abolition of the reserved function of national currencies of the economically most powerful countries in the world in the international monetary relations. This is associated with the creation of world money in the full sense of the word, similarly to the way in which national money is being created within the national borders. Although, for a start, it is desirable the newly created world money to be convertible into gold, it is not the most important thing if it is led a consistent policy on keeping in the circulation as much money as there is a need of gold. On the basis of that and in the course of time, it will be completed the process of dematerialization of money at a world level. It is a matter of a system which can simulate the automatism of the gold standard.

In favour of the need for creating a global currency speaks the fact that several years, it has been discussed over global imbalances which are menacing to threaten the survival of liberal trade in the world[6], but it is obvious that they cannot be abated bilaterally. It is high time to be looked for a consequent global solution to the global problems i.e. a solution which will be inspired not only by the interests of the whole world, but also by the interests of the countries whose currencies "are used freely". Just remember that the alternative suggestion of John Maynard Keynes for creation of a new international currency (bancor), brought forward at the Bretton Woods Conference, offers a multilateral solution on the potential global imbalances. In the line of global solution, it is also present the continuation of activities for materializing the Special Drawing Rights into a global currency of the type of commodity money, as it was the original idea.

At the beginning of the new millennium, the ratio of forces in the world is considerably changed, but it is difficult to believe that it can come to reversal soon. The economic, military and political power of the USA is still such that without their approval, it is difficult to start that process. For the time being, there are prevailing opinions among the economists that in order not to fall into strengthening of the protectionist practice, the world has to approach the equilibrium of the global imbalance. However, the path to this is seen in one direction i.e. only in decreasing the huge surpluses of separate countries, in the need for appreciating their own currencies, reducing the savings and spending more. The indications that the USA i.e. the deficient countries have to improve their productivity on behalf of the supply by increasing the national productivity, increasing the savings and reducing the current account deficit are rare. This is so because the reversal in that direction can be provided only by the creation of global currency i.e. by supplanting the national currencies in the role of world money. Because

[6] The Economists' Forum: Global imbalances threaten the survival of liberal trade, Financial Times (www.ft.com December 3, 2008).

that move is eliminating the privileges of their international role, it will not probably come to reversal soon although it is inevitable. Let us hope that this will happen only before the world undergoes cataclysm out of which there will be born a global solution.

CONCLUSION

In the evolution of currency convertibility, out of the system of gold standard, there have been risen by now a lot of "types" of convertibility which, by explaining the technique, are obscuring the economic essence of the concept i.e. the need for multilateralism in the international payments.

The convertibility of national currencies into gold also provided multilateralism in the international payments. With the formation of IMF, it was consciously approached the building of a mechanism for promotion of the necessary multilateralism which provides more efficient international division of labour. The problem is that as a result of the subsequent corrections of the Fund, it has been deviated from the original meaning of the concept of currency convertibility. The creation of a practice of exchange of one currency to another one at floating rates presents a digression in the evolution of commodity money which, logically, should have ended up as world paper money (with a global currency), similarly to the gold money which have ended up as national paper money within national borders. Instead of this, the currencies of a few of the most developed economies in the world have been promoted in the function of world money, and the currency convertibility has boiled down to exchange of one currency to another one at floating rates.

The transformation of the types of currency convertibility has led to a deviation from the evolutionary path of commodity money in the process of their dematerialization. Therefore, the adjustment of the types of currency convertibility was in favour of the countries whose currencies are used freely. However, by reducing the currency convertibility to exchange of one currency to other currencies at floating rates in the cross rates of exchange in the world, it has come to reduction of the level of multilateralism in the international payments, which is an essential feature of convertibility. As a result of this, the rationality of the objective processes of the international division of labour got worse.

A reversal of the unfavourable tendency in the evolution of money and currency convertibility is possible only by creating a global currency at fixed, but adjustable rates. Only in such conditions, there will be avoided the problems of the countries whose currencies are used widely to be treated as world problems rather than national ones, which is of great importance in the world economy. However, the citizens of those countries will suffer the consequences of the unsuccessful policies and the possibility for carrying the consequences in other countries will be smaller.

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MONETARY POLICY EFFECTS ON CPI IN RECESSIONARY TIMES: A SIMPLE PRICE-ADJUSTMENT MODEL

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ABSTRACT

The paper presents the monetary effects on the overall price level in R. Macedonia, using a price-adjustment model which incorporates the basic Keynesian and Classical factor of monetary policy. The econometric model offers a modification to the basic model, by replacing M2 with domestic credit to private sector and accounting for its lag effects. The interest rate is the best instrument at the disposal of the Central Bank for affecting the overall price level. The concept of "easy money" is less applicable, mainly because of the lack of discretionary power of the Central Bank.

Keywords: **monetary policy, CPI, economic recession, interest rate, domestic credit to private sector**

JEL classification: **N10, E12, E13, E31, E43, E51**

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Introduction

Both economic schools of thought are generally in agreement with the famous dictum that "inflation is always and everywhere a monetary phenomenon".[2] In the long-run, inflation finds its causes in the monetary policy of the Central Bank. In the short-run, besides monetarist origins, inflation is affected by a number of diverse factors. This paper examines exclusively the monetarist foundations of inflation, in the short term, using a model that incorporates the basic monetary policy instruments from both economic schools of thought.

When discussing inflation, one has to refer to the various measurements that exist and are utilized for measuring it. Focusing the analysis on R. Macedonia, the CPI (Consumer Price Index) is the statistics used since the beginning of the 1990's. The CPI measures the weighted average of the monthly prices of products and services that form the consumption baskets of households. According to OECD, the CPI index is defined as a change in the price level of the goods and services that certain population purchases, uses or consumes. The Bureau for Labor Statistics of the USA, institution that measures the CPI, defines it as a measure of the average change of prices of the basic basket of goods and services, purchased by the consumers in a certain period. Despite its many drawbacks, this statistic remains as one of the most widely used in calculating the changes in the overall price level.

There are a number of studies that opt for different measurements in analyzing the effect of monetary policy on the overall price level in different periods throughout the business cycle. In contrast to developed countries, where strong evidence for the effects of monetary policy on the price level does exist (Bernanke and Mihov 1998; Lawrence, Eichenbaum and Evans 1998) this evidence is lacking in developing economies. Accounting for these differences are number of factors: the dependence of the Central Bank, the lower credibility, inflexibility of the financial system etc.

[2] Friedman, M. "Inflation: Causes and Consequences", 1963, reprinted in Dollars and Deficits, 1968, pg. 39, Prentice Hall

In contrast to the monetary approach, in which its main influence is achieved through the supply of money, the new Keynesian models are built around the assumption that the Central Bank can affect the economic activity only through interest rates. The model used in Section 3 incorporates both approaches.

This paper is structured in the following manner: the next Section offers a literature review of the research subject; Section 3 presents the mathematical and the econometric model, the methodology and the analyzed data. Section 4 presents the results of the analysis, which are summarized in the conclusion. The results and various testing techniques are presented in the Annexes listed at the end.

2. Literature Review

Monetary policy in R. Macedonia has the main goal of maintaining financial and price stability.[3] The main arithmetic used for measuring the overall price stability since 2000 is the consumer price index (CPI). For accomplishing its goal, NBRM sets intermediate goals, which should be correlated to the overall goal, and provide discretionary power to the policymakers for achieving them. In the period 1992-1995 monetary targeting (M1) was the intermediate goal, and from 2002 the intermediate goal in the conduction of monetary policy is the stability of the exchange rate of the denar in relation to the euro.[4]

In the economic literature there are various opinions on whether the CPI is a relevant measure of the inflation rate. Boskin et al (1996) point to the large and consistent discrepancies between the index and the actual rate of inflation. Bils and Klenow (2002) and Lebov and Ruud (2003) offer additional evidence to the conclusions presented in the previously mentioned paper and state that the CPI index is not an accurate measure of the actual rate of inflation. On the other hand Bryan and Chechetti (1993) conduct a series of analyses which examine the accuracy with which the CPI measures the inflation in the periods between 1967-1981 and 1982-1992. With high level of certainty

[3] Strategic plan of the Central Bank of R. Macedonia for the period 2013-2015 – NBRM, June 2012,
[4] Monetary Policy – Set Up, NBRM official website: www.nbrm.mk

the CPI is presented as a relatively accurate measure of the actual inflation in each of these two periods.

There are a number of alternative approaches in calculating the inflation rate, that measure current and expected inflation. All of these views stress the predicting importance that a utilized inflation metric should possess. When it comes to inflation targeting, according to Roger (1998) the measure of the inflation rate should be timely, possessing credibility, easily communicable to the public, and without major discrepancies from the targeted inflation. Wayne (1999) additionally states that the inflation rate measurement should be calculated in present values and contains predicting ability, taking into account that one of the main ways of conducting monetary policy is through setting inflation related goals. According to Ha (2002) the CPI is the most appropriate measure of the inflation rate in small developing economies.

Friedman and Schwartz (1963) are the first researchers that conducted a time series analysis in order to present the relationship between the price level and the money supply. Further, Cagan (1972) analyzes and defines the relation between the monetary aggregates M1 and M2 and the overall price level. The monetary aggregates have a positive influence on the dynamic nature of the output in the short-term and the changes in the price level in the long-term. Holman et al (1993) point to the positive relationship between the monetary aggregate M2 and the price level using time series data divided in two separate periods: 1870-1954 and 1955-1988.Their analysis confirms previous findings while strengthening the use of M2 as the basic instrument for affecting the inflation rate.

The Keynesian school of thought offers a specific concept, known as a liquidity trap, which alters the basic function of monetary policy and undermines in a certain way the results from the studies aforementioned. A liquidity trap is an economic condition in which the increase in the money supply doesn't result in changes in the price level. According to Eggertsson and Woodford (2003), Krugman (1998), Svensson (2003) the liquidity trap occurs when the Central Bank is no longer capable of decreasing the nominal interest rates through conventional monetary policy instruments. The main assumption in the aforementioned models is that the monetary policy can only influence the economy through the interest rates. Since short-term rates are close to zero, people decide to increase personal savings in fear of deflation. This doesn't increase neither public nor private saving, since people do not opt to save in commercial banks because of the near-zero interest rates. In this case increasing the money supply doesn't have any effect on the economy.

The sole use of various monetary aggregates as the main monetarist influence on the overall price level is insufficient because they are subject to a number of different factors: money demand, the business cycle, the operation of the banking sector etc. This is the main reason for including interest rates (usually short-term (overnight bank loans)) in a combination with the monetary aggregates M1 and M2 when analyzing the effects of monetary policy on inflation. This paper uses a version of a simple price adjustment model which analyzes the effect of the monetary policy presented through the monetary aggregate M2 and the overnight bank rate, alternatively including an additional term and lags.

3. Methodology, Data and the Model

This paper constructs its analysis around a simple price-adjustment model used in the papers of Browne and Cronin (2007) and Okwu et al (2011). The model assumes that there are two types of goods (flexible (F) and nonflexible good (S)) which are only intended for consumption (no inventories), and together produce the total output (Y) in the economy. The overall price level, (P) presents a weighted average of the two goods, PF and PS are the prices of both flexible and nonflexible goods. The share of each of the goods is presented by (ω) and $(\omega - 1)$ respectively. The price level is as follows:

$$P = \omega PF + (1 - \omega)PS \; where \; 0 < \omega < 1$$

The relationship between the price level and the money supply is presented by the familiar identity:

$$\mathrm{M} = PY$$

Where M is the nominal amount of circulating money, P is the price level and Y is the output.

When the economy is performing at its natural rate of unemployment, (Y) doesn't change, so the price level changes in accordance to the changes in the nominal value of money. When the money supply increases φ percent in period t, the price level in period t is presented by:

$$P_t = (1 + \varphi_t)P_{t-1}$$

PS, the price of the nonflexible good doesn't change up to period $(t + 1)$ while the price of the flexible good changes each period. In period t we have:

$$P_t = (1 + \varphi_t)P_{t-1} = \omega PF_t + (1 - \omega)PS_{t-1}$$

In period (t+1), the price S adjusts to reflect the new equilibrium:

$$PS_{(t+1)} = (1 + \varphi_t)PS_{(t-1)}$$

$$P_{(t+1)} = \omega PF_{(t+1)} + (1 - \omega)PS_{(t+1)}$$

By taking into account that the money supply remains constant both in period t and t+1, the right sides of equations (2) и (4) can be presented as one identity:

$$\omega PF_t + (1 - \omega)PS_{t-1} = \omega PF_{(t+1)} + (1 - \omega)PS_{(t+1)}$$

Because $PS_{(t-1)}$ is equal to PS_t *and* $PF_{(t+1)}$ is equal to $(1 + \varphi_t)PF_{(t-1)}$ the following must be true:

$$\omega PF_t + (1 - \omega)PS_t = \omega(1 + \varphi_t)PF_{(t-1)} + (1 - \omega)PS_{(t+1)}$$

$$(1 - \omega)\left[PS_{(t+1)} - PS_t\right] = \omega[PF_t - (1 + \varphi_t)PF_{(t-1)}$$

$$PS_{(t+1)} - PS_t = \left[\frac{\omega}{(1 - \omega)}\right][PF_t - (1 + \varphi_t)PF_{(t-1)}$$

This equation shows that once the money supply increases the price of good (F) increases and it surpasses its equilibrium value in period t, before decreasing and equating its price in the equilibrium state in period (t+1). The amount for which PF surpasses its equilibrium price is equal to the coefficient$\left[\frac{\omega}{(1-\omega}\right]$. At the end of period (t+1), PS и PF increased proportionally to the increase in the money supply.

3.1. Methodology and Data

This paper presents the relationship between the monetary policy, monetary aggregates and the overall price level, using a multiple regression model, which is adequately adapted to the presented mathematical model in Section 3, with the aim of ensuring the relevancy of the variable which are crucial to this paper. The overall price level (P) is represented by the CPI, the money supply (M) is represented by the monetary aggregate (M2). In the primary model one change is the overnight bank rate, which together with the interest rate on T-bills is a reference rate and one of the most important monetary tools available to the Central Bank for conducting monetary policy.

The data used in this paper are collected from the official database on the website of the Central Bank of R. Macedonia and from the Quarterly Notifications of NBRM. Monthly data starting from 2009 until 2013, the 2nd quarter are presented in Table 1. There are two basic reasons for choosing this period: the global economic recession the officially started in USA in 2007, officially started in R. Macedonia in the beginning of 2009. The official definition of an economic recession is the negative growth of GDP in two successive quarters. The second reason are the methodological changes in calculating the monetary aggregate (M2) from the first quarter of 2009, and the CPI from the first quarter of 2007. The available data for the three variables were available in monthly data in the period between 2009 and 2013. The lack of data in the time of the construction of this paper is the reason why the last two quarters of 2013 are not taken into account.

The model is used to test two hypotheses:

Hypothesis 1

H_0: The monetary policy doesn't affect the price level

H_1: The monetary policy does affect the price level

Hypothesis 2

H_0: The money supply doesn't have a significant effect on the price level

H_1: The money supply has a significant effect on the price level

3.2. The Model

Theoretically, the model presents the CPI as a variable, dependent from the monetary aggregate (M2) and the overnight bank rate (MPR). The CPI is presented by the following equation:

$$CPI = b_0 + b_1 M2 + b_2 MPR + \mu$$

The preliminary predictions from the model are that the exogenous variable $b_1$is expected to be positive, since an increase in the money supply should lead to increased inflation. The exogenous variable b_2 should be negative, since an increase in the interest rates is expected to decrease the inflation rate. The model is specified using the Method of ordinary least squares.

This model doesn't allow for analyzing the lagged effects of the endogenous variables on the price level. This might be important to include, ever so since this lag might be even greater in developing countries. Additionally short-term relationships between the variables are analyzed, which can be also significant in the long-term. Although an analysis of the latter type would be also beneficial, it is important to notify that in the case of R. Macedonia this can be difficult because of three main factors: the lack of long-term time series data of these variables, the constant changes in the methodology of calculating the variables and low information on the specific methodological change undertaken.

In order to include some of the drawbacks and improve the specification of the model two changes are made. First, the version of the model analyzed in this paper includes a different term of the model instead of the monetary aggregate. This change is often made in developing countries with pegged exchange rate regimes, since Central Banks cannot affect the monetary policy directly by controlling the money supply. This paper uses the domestic credit provided to the private sector (both households and companies) as a source of measuring the expansionary policies adopted by the Central Bank. The second difference is the inclusion of lags. Since lags are crucial in the conduction of monetary policy, especially in developing countries, the modified model includes the lagging effects of the variable domestic credit. A number of different lags were estimated within this model, and the version presented in the next Section yields the best estimated results.

The modified model takes the form of:

$$CPI = b_0 + b_1 DCR_{t-10} + b_2 MPR + \mu$$

4. Estimation Results

The estimated model based on the parameters previously addressed is presented below:

$$\underset{(6.14)}{CPI = 17.89873} - \underset{(0.0000374)}{0.0000625 DCR_{t-10}} - \underset{(0.15)}{0.997070 MPR} + \mu$$

The model is well specified and statistically significant according to the obtained value for the F-statistic. Each of the coefficients is significant at a 10% level of significance. Bearing the theoretical construct, the results provide a different than expected outcome of the model. An increase in the CB reference interest rate leads to a decrease in the inflation rate, almost one by one. However an increase in the domestic credit to noncommercial sector is unexpectedly leading to decreasing the inflation rate. While the theoretical foundation for the obtained parameter states that it should be positive, the results show that an increase in domestic credit to the nongovernment sector lowers inflation, although the effect is minimal. Further analysis show that the coefficient is insignificant at the 5% level of significance, thus pointing to the fact that the use of "easy money" to stimulate the private sector is not effective in the case of R. Macedonia. This confirms the practical implementation of the monetary policy by the Central Bank, and its high dependence on auctioning with interest rates.

5. Conclusion

The results obtained in this paper are both indicative and contradictory with the theoretical background from which the analysis emerges. The overnight bank rate assumes the expected role of having an inverse relationship with the inflation rate. When the interest rate rises, it increases the opportunity cost of holding money, thus stimulating greater aggregate consumption in the present and raising the overall price level. The rise in the price level can occur after a time lag dependent on the structure of the economy, and the effectiveness of the mechanism. On the other hand, the minimal negative effect of the domestic credit to the private sector demands further investigation in the nature of the variable and the causes for this effect. The lower significance range of the variable is perfectly aligned with the current operations of monetary policy in R. Macedonia.

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[13]Website of the statistics database Central Bank of Republic of Macedonia: www.nbrm.mk

[14] Website of the State Statistical Office: www.stat.gov.mk

ANNEX 1

Dependent Variable: CPI
Method: Least Squares
Date: 12/02/13 Time: 22:29
Sample (adjusted): 2009M11 2013M06
Included observations: 44 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.89873	6.143637	2.913376	0.0058
DCR10	-6.52E-05	3.74E-05	-1.742234	0.0890
MPR	-0.997070	0.153908	-6.478337	0.0000

R-squared	0.648977	Mean dependent var	2.793182
Adjusted R-squared	0.631854	S.D. dependent var	1.701763
S.E. of regression	1.032545	Akaike info criterion	2.967677
Sum squared resid	43.71213	Schwarz criterion	3.089326
Log likelihood	-62.28889	Hannan-Quinn criter.	3.012790
F-statistic	37.90079	Durbin-Watson stat	0.462236
Prob(F-statistic)	0.000000		

	CPI	DCR10	MPR
CPI	1.000000	0.538201	-0.789297
DCR10	0.538201	1.000000	-0.803467
MPR	-0.789297	-0.803467	1.000000

ANNEX 2

Ramsey RESET Test:

F-statistic	1.900397	Prob. F(1,40)	0.1757
Log likelihood ratio	2.042297	Prob. Chi-Square(1)	0.1530

Test Equation:
Dependent Variable: CPI
Method: Least Squares
Date: 12/02/13 Time: 22:31
Sample: 2009M11 2013M06
Included observations: 44

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	20.84612	6.442392	3.235773	0.0024
DCR10	-6.34E-05	3.70E-05	-1.713165	0.0944
MPR	-1.337636	0.290191	-4.609497	0.0000
FITTED^2	-0.131083	0.095088	-1.378549	0.1757

R-squared	0.664898	Mean dependent var	2.793182
Adjusted R-squared	0.639765	S.D. dependent var	1.701763
S.E. of regression	1.021391	Akaike info criterion	2.966715
Sum squared resid	41.72956	Schwarz criterion	3.128914
Log likelihood	-61.26774	Hannan-Quinn criter.	3.026867
F-statistic	26.45555	Durbin-Watson stat	0.473844
Prob(F-statistic)	0.000000		

ANNEX 3

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.560730	Prob. F(2,41)	0.2222
Obs*R-squared	3.112866	Prob. Chi-Square(2)	0.2109
Scaled explained SS	2.093848	Prob. Chi-Square(2)	0.3510

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 12/02/13 Time: 22:32
Sample: 2009M11 2013M06
Included observations: 44

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.98146	7.347564	1.630671	0.1106
DCR10	-6.31E-05	4.47E-05	-1.410816	0.1658
MPR	-0.325195	0.184069	-1.766705	0.0847

R-squared	0.070747	Mean dependent var	0.993458
Adjusted R-squared	0.025418	S.D. dependent var	1.250886
S.E. of regression	1.234886	Akaike info criterion	3.325581
Sum squared resid	62.52269	Schwarz criterion	3.447230
Log likelihood	-70.16277	Hannan-Quinn criter.	3.370694
F-statistic	1.560730	Durbin-Watson stat	0.907215
Prob(F-statistic)	0.222201		

Heteroskedasticity Test: White

F-statistic	1.169962	Prob. F(2,41)	0.3205
Obs*R-squared	2.375562	Prob. Chi-Square(2)	0.3049
Scaled explained SS	1.597905	Prob. Chi-Square(2)	0.4498

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 12/02/13 Time: 22:33
Sample: 2009M11 2013M06
Included observations: 44

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.702926	3.053789	1.540030	0.1312
DCR10^2	-1.47E-10	1.31E-10	-1.125377	0.2670
MPR^2	-0.017639	0.011536	-1.528989	0.1339

R-squared	0.053990	Mean dependent var	0.993458
Adjusted R-squared	0.007843	S.D. dependent var	1.250886
S.E. of regression	1.245970	Akaike info criterion	3.343453
Sum squared resid	63.65014	Schwarz criterion	3.465102
Log likelihood	-70.55596	Hannan-Quinn criter.	3.388566
F-statistic	1.169962	Durbin-Watson stat	0.891090
Prob(F-statistic)	0.320525		

ANNEX 4

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	54.05909	Prob. F(1,40)	0.0000
Obs*R-squared	25.28836	Prob. Chi-Square(1)	0.0000

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 12/02/13 Time: 22:31
Sample: 2009M11 2013M06
Included observations: 44
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.850152	4.057827	0.209509	0.8351
DCR10	-4.33E-06	2.47E-05	-0.175299	0.8617
MPR	-0.037789	0.101744	-0.371411	0.7123
RESID(-1)	0.761408	0.103558	7.352489	0.0000

R-squared	0.574735	Mean dependent var	2.23E-15
Adjusted R-squared	0.542841	S.D. dependent var	1.008247
S.E. of regression	0.681711	Akaike info criterion	2.158088
Sum squared resid	18.58922	Schwarz criterion	2.320287
Log likelihood	-43.47793	Hannan-Quinn criter.	2.218239
F-statistic	18.01970	Durbin-Watson stat	1.502172
Prob(F-statistic)	0.000000		

Table 1:

obs	CPI	DCR10	MPR
2009M01	1.700000	NA	8.500000
2009M02	0.700000	NA	8.500000
2009M03	0.200000	NA	8.500000
2009M04	-0.500000	NA	10.50000
2009M05	0.400000	NA	10.50000
2009M06	-1.700000	NA	10.50000
2009M07	-1.300000	NA	10.50000
2009M08	-1.400000	NA	10.50000
2009M09	-1.400000	NA	10.50000
2009M10	-2.400000	NA	10.50000
2009M11	-2.300000	133925.0	10.50000
2009M12	-1.600000	135992.0	10.00000
2010M01	0.100000	136900.0	9.500000
2010M02	0.600000	137156.0	9.000000
2010M03	0.700000	137334.0	9.000000
2010M04	1.400000	136884.0	8.000000
2010M05	0.200000	137406.0	7.500000
2010M06	1.800000	137151.0	6.500000
2010M07	1.500000	137052.0	6.500000
2010M08	1.900000	137201.0	6.000000
2010M09	2.000000	138212.0	6.000000
2010M10	2.700000	139197.0	6.000000
2010M11	2.900000	139660.0	6.000000
2010M12	3.000000	139771.0	5.500000
2011M01	3.200000	140391.0	5.500000
2011M02	3.900000	141241.0	5.500000
2011M03	5.200000	141366.0	5.500000
2011M04	4.800000	141971.0	5.500000

2011M05	5.200000	143432.0	5.500000
2011M06	4.100000	144184.0	5.500000
2011M07	3.800000	144577.0	5.500000
2011M08	3.600000	145072.0	5.500000
2011M09	3.400000	144779.0	5.500000
2011M10	3.300000	142457.0	5.500000
2011M11	3.500000	142417.0	5.500000
2011M12	2.800000	143569.0	5.500000
2012M01	3.400000	144952.0	5.500000
2012M02	2.900000	146645.0	5.500000
2012M03	1.400000	147621.0	5.500000
2012M04	2.200000	148839.0	4.440000
2012M05	2.000000	148719.0	4.210000
2012M06	2.100000	148038.0	4.230000
2012M07	2.300000	148537.0	4.230000

Source: Website of the Central Bank of R. Macedonia (www.nbrm.mk)

UDC: 336.7(100-773)

REINVENTING THE BANKING FOR POOR CONCEPT FOR TRANSITIONAL COUNTRIES

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ABSTRACT

Banking for the poor concept has managed to improve the life of millions of people in poverty regions. It objective is to provide loans to unbanked population lacking financial resources for establishing a family business. In spite of it popularity in underdeveloped regions, banking for the poor haven't produce desirable economic development for poor population in transitional countries. For this reason, modifications should be made in the core concept and its characteristics. This adaptation is needed for the purpose of increasing the economic development, increase employment and increase the standard of living for poor population in transitional countries.

Keywords: **banking for the poor, transitional countries, economic development, micro financing, and poverty region.**

JEL Classification: **O12, P2**

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1. Introduction

Banking for the poor has paved its way as a successful concept for supporting the business activities of poor entrepreneurs in underdeveloped regions. Main characteristics of this concept is to offer small loans on the basis of group lending to people living in high poverty regions. Along with the loan offers, this concept had the objective of promoting savings among poor entrepreneurs, where the collected savings are used to further finance activities of micro-financing institutions.

Although this concept has managed to increase income potential of entrepreneurs in third world countries, it has failed to provide successful support of impact businesses in transitional and developing countries. The modern dilemma is not whether banking for poor concept would be applicable for local and regional development in transitional country. The dilemma is how to modify the banking for the poor concept in order for it to be applicable for the poor entrepreneurs in transitional countries.

The aim of this paper was to present the possible areas of banking for the poor concept where necessary modifications should be made. Analysis show that, crucial modifications should be made in terms of the loan amount issued as well as rethinking the group lending practices, and replace the same with value chain lending. Moreover, micro-financing institutions should relocate their offices in the rural regions where most of the poor population is living within the transitional countries. Analyses also show that because micro-financing institutions need capital for their activities, a governmental intervention should be made to provide the necessary funds. Benefits of governmental funds would be consisted in the possibility for charging lower interest rates on loans issues. The tendency though, should be directed toward increase in deposit levels, which will be used in the future to finance entrepreneurial activities in transitional economies.

2. The notion behind banking for poor concept

Banking for the poor concept has been introduced with the aim of opening access to financial services to the low income families in underdeveloped and developing countries. The main goal of this concept was to offer financial services to specific groups of individuals who were excluded from the traditional channels of banking services. This exclusion was as a result of the weak financial situation of these individuals. Moreover, the low income category required smaller amount of loans, which were unprofitable for the conventional banks. Lack of collateral was yet another reason why banks were sceptic in lending to low income households, since these households have been perceived as a highly risky. Aside of the avoidance of the poor borrowers by the commercial banks, banking for poor prove that this group of customers can be highly profitable for financial institutions.[3]

Banking for the poor, has managed to eliminate the barriers faced by the poor and unbanked population in underdeveloped regions. This concept is offering small loans to individuals in order to support their business activities. The collateral barrier is eliminated with the so called group lending concept. In the group lending, if the client fails to repay the loan, none of the other groups' members will be issued a loan.

Aside of opening access to small loans for business development, banking for the poor, has managed to promote and motivate savings among low income population. Individuals were obliged to make small and regular deposits on short term basis, thus achieve financial responsibility and money management.

The experiences of Grameen bank in Bangladesh as well as the experience of micro-financing institutions in other underdeveloped regions are pointing out the lessons learned after three decades.[4] Namely, the poor people would like to have access to other financial services besides the business loans. Moreover, they are willing to save,

[3] Knight Tonya, Hossain Farhad, and Rees J. Christopher "Microfinance and the commercial banking system: perspectives from Barbados", Progress in Development Studies. April, 2009, Vol. 9 Issue 2, pp.123.

[4] CGAP, Good practice guidelines for funders of microfinance, Microfinance consensus guidelines, October 2006, 2nd Edition, pp. 7.

but the lack of formal saving channels is forcing them to use highly risky, informal approaches of saving.[5] Maybe the most important lesson learned after three decades is that the services of banking for the poor should be responsive in accordance to client's need, instead of supply driven. The last should be carefully considered when implementing the banking for the poor and micro financing in transitional economies.

3. Micro-financing environment in Eastern Europe and Central Asia

Before presenting the barriers for micro-financing in transitional countries along with the need for adaptation of the concept, the micro-financing environment in transitional countries in Eastern Europe and Central Asia should be discussed. Table 1 is presenting the main profile of micro-financing in the mentioned regions. The number of micro-financing institutions in each country shows poor establishment of such institutions. Namely, in 10 of the countries taken into consideration the number of micro-financing institutions is five or less than five. As for comparison, the number of micro-financing institutions in Bangladesh (the birth country of banking for the poor) at the end of 2011 was 576 institutions with more than 18,000 serving approximately 20 million borrowers which are more than 12% of the Bangladesh population.[6] For comparison, Azerbaijan with largest number of borrowers served has captured only 5% of its overall population.

Table 1: Micro-financing profile in Eastern Europe and Central Asia

Country	Number of micro-financing institutions	Number of active borrowers	Gross loan portfolio (USD)	Average loan per borrower (USD)
Azerbaijan	24	502,944	1,711,931,112	3,403
Albania	5	45,243	321,665,540	7,109
Armenia	9	156,169	291,167,391	1,864
Bosnia and Herzegovina	10	232,907	367,436,540	1,577
Bulgaria	9	2,914	14,338,328	4,920
Georgia	11	213,040	310,099,103	1,455
Kosovo	6	32,361	61,139,858	1,889

[5] Dupas, P and Robinson, J. "Why don't the poor save more? Evidence from health saving experiments", NBER, Working Paper 17255, July, 2011, pp.27. Available onlline:http://www.nber.org/papers/w17255.pdf (accessed 04.february, 2012)

[6] http://www.mra.gov.bd/index.php?option=com_content&view=category&layout=blog&id=29&Itemid=80

Kyrgyzstan	11	292,676,	271,895,090	928
Macedonia	3	13,023	37,961,389	2,914
Moldova	2	7,339	18,213,826	2,481
Mongolia	5	269,384	1,294,813,826	4,806
Montenegro	2	16,655	28,623,870	1,718
Poland	1	21,303	260,530,689	12,229
Romania	3	14,610	84,566,778	5,788
Serbia	3	30,221	78,875,777	2,609
Turkey	1	52,271	19,926,510	381
Tajikistan	32	172,593	299,313,139	1,734
Ukraine	1	1,148	1,847,234	1,609

Source:http://www.mixmarket.org/mfi/region/Eastern%20Europe%20and%20Central%20Asia#ixzz2oInJTBT0

Moreover, the table presents the average loans issued per borrower. It could be said that in 13 countries the average loan amount could not be considered as a sufficient for self-employment activities or starting up a family business. Considering the cost of the loans for the borrower, most of the loans are priced above market interest rates thus, increasing the burden to poor entrepreneurs in transitional countries.

Aside of the loans and borrowers of micro financing institutions, a closer look of the savings should be considered. More precisely, special focus should be given on the average deposit balance per depositor and the number of depositors. For the purpose of deposit analysis a specific country would be taken into consideration. Table 2 is presenting the average deposit balance per depositor in each of the three micro-financing institutions.

Table 2: Average deposit balance per depositor in Macedonia

Name of institution	2006	2007	2008	2009	2010
Fulm	784	474	441	457	374
Horizonti	121	104	90	76	41
Moznosti	268	442	409	353	913

Source:http://www.mixmarket.org/mfi/trends/products_and_clients.number_of_depositors/2006-2010?country[0]=Macedonia&mix_region__c=All

The movement of the deposit balance shows gradual decrease in two out of the three existing institution. This decrease is presenting an obstacle for the possibility for micro-financing activities to be financed by the savings of poor population. Thus it is imposing the need for governmental intervention that will provide financial support for loans issued to the poor entrepreneurs. In addition, micro-financing institutions should be promoting it saving schemes to the poor population.

Table 3 : Number of depositors in Macedonia

Name of institution	2006	2007	2008	2009	2010
Fulm	3648	7809	8487	7925	7516
Horizonti	2141	2853	2976	3044	2979
Moznosti	9018	11363	14383	15681	7813

Source:http://www.mixmarket.org/mfi/trends/products_and_clients.number_of_depositors/2006-2010?country[0]=Macedonia&mix_region__c=All

Comparing the data in table 2 and 3 it can be concluded that although the average balance per depositor in two institutions has been declining, the number of depositors in the same institutions is continually increasing during the five year period. This is means that the poor population is willing to save, but the free capital they have available for savings is continually decreasing. Improving the income of this population might significantly increase deposit level that could be exploited in the future for financing of poor entrepreneurs.

The data for all countries taken into considerations show that micro-financing is still in its early stage of development in the transitional countries in Eastern Europe an Central Asia. Most of the micro-financing institutions are providing loans which are not sufficient for starting up a family business. In addition, the savings side of microfinancing institutions in most of the countries is presenting the same trend as it was the case in Macedonia. Namely, poor population is showing willingness to save, but limited income is major obstacle for high level of deposits to be collected from this population.

4. Barriers for successful implementation of banking for the poor concept in transitional countries

Although banking for the poor concept has been successful in underdeveloped economies, its application in transitional economies is impeded by certain barriers. First and foremost, lack of social objectives and concrete objectives for financing a social impact business is the primary barrier for financial institutions in transitional economies. Although there are micro financing institutions with social objectives set on paper, in reality their social objectives are rarely fulfilled. These social objectives should be aimed toward the introduction of adequate product development strategies along with the long run social impact goals.[7] Moreover, financial institutions should be proactive and offer their services to the poor people at the present, instead of waiting for their economic situation to be improved.[8] This passiveness of financial institutions can be seen in their justification that poor people are risky clients, and they cannot repay their loans issues. On the other hand, the possibility for poor people to get the needed amount of loan will help them establish a business. They are satisfying their financial need through informal lending channels such as the payday loans, or loan sharks, the fact that these lenders are earning descent profits, shows that the poor people are profitable market.[9]

The amount of loan issued is another obstacle for micro financing in transitional economies. Namely, in poor countries with underdeveloped economy, small loans can significantly help local population in their small scale business activities. The transitional countries have certain degree of economic development and the small loans offered under the banking for poor concept are not sufficient for the purpose of supporting social impact businesses. Namely, due to the economic development, the costs of doing

[7] Campion Anita & Linder Chris with Knotts Katherine. Putting the "social" into performance management: A practice-based guide for Microfinance. Institute od Development Studies. 2008, pp.62.
[8] Moore David "FInancial services for everyone", McKinsey Quarterly, 2000, Issue 1, p.131.
[9] Krebsbach Karen " Americas Bank to the Poor Teams Up With H&R Block", U.S. Banker. July, 2007, Vol. 117 Issue 7, pp. 14.

business are higher, but the population has limited access to the conventional banking services.

Another barrier of the traditional concept is the group lending. Banking for poor has been primarily offered in Bangladesh in rural areas. The inhabitants in these areas are living in small communities with close family ties. So the group lending was a viable solution for the lack of collateral. Unlike the rural areas in poor countries, inhabitants in rural areas of transitional countries are not bound by close family ties, or community relationships. Any attempt to introduce group lending might result in defaulted loans. Thus, before introducing the banking for poor concept in transitional economies, the collateral issues should be carefully analyzed. It should be kept in mind that there is a difference between the population in poor countries and transitional countries. For instance, populations in poor countries don’t have an adequate property that could be left as collateral, unlike the transitional economies, where the population owns some form of property. This difference could be taken into consideration when designing the collateral aspect of the lending.

Branchless banking or mobile banking also represents an obstacle for implementation of banking for poor concept in transitional economies. Through mobile banking, banks were able to decrease their operating costs in poor economies. This cost cutting cannot be performed in transitional economies. Another obstacle regarding the physical presence of micro financing institutions in transitional countries is their regional concentration. In other words, micro financing products offered are highly concentrated in the urban area, while most of the poor population lives in the rural area. Thus the access to financial services of poor clients is highly limited. Commercial banks are prone to open up a branch in wealthy urban areas, thus closing the potential access to financial resources for poor customers.[10] This should be a primary driver for micro-financing institutions to conduct their activities in these areas. Unfortunately, the

[10] Moorer D. Talise Poor banking ops for low-income New Yorkers”, New York Amsterdam News. 1/5/2006, Vol. 97 Issue 2, pp. 3.

limited number of micro-financing institutions is capturing low geographical area, with high concentration in urban regions.

Moreover, there is a short loan repayment period. Meaning that, population in transitional economies has the need of at least medium term repayment period, instead of up to one year period noticeable in underdeveloped countries.

5. The need to adapt the banking for the poor concept and micro-financing

Primary reason for offering micro loans directed toward social impact businesses is the need for decreasing poverty through financing poor people thus achieving local and regional economic development.[11] Financing an impact business would accomplish the need for new job creation, increasing self-employment, social inclusion and decrease of poverty in rural areas.[12]

Rethinking the banking business model should initially take into consideration elimination of processes and activities that poor population doesn't need.[13] The adaptation of the concept could be performed in couple of areas. Namely, the amount of loans, the cost of loan application, collateral required, and activities financed. For the purpose of achieving regional economic development, the loan amount should be increased. Higher loan amount is required due to the higher economic costs in transitional countries. Since banks are sceptic to lend larger amounts to risky clients, the solution would be close collaboration with governmental bodies who will actively participate in the financing process. An example that should be followed is the establishing of Grameen bank. In addition, this skepticism of the banks is somehow unjustifiable considering the fact that large number of poor people, for the purpose of

[11] Grusch, Sonja, Socialist Left Party, CWI, Austria "Micro credits founder wins Nobel prize" Neo-Colonial World. 1 page. 7.January 2007.

[12] Jayo, Barbara, Rico, Silvia, Lacalle, Maricruz, 'Overview od the Microcredit sector in the European Union 2006-2007' EMN Working paper nr. 5; Fundacion Nantik Lum, Madrid, July 2008.

[13] Mas Ignacio and Almazan Mireya "Transaction-Based Model Best for Poor", American Banker. 11/5/2010, Vol. 175, Issue F343, pp. 9.

financing their business are applying for high interest loans from loan sharks.[14] The interesting fact is that they manage to repay their loans even thought there are high cost associated with this loans.

The cost of loan application is relatively high, and spending valuable resources that could otherwise be directed toward economic development. The need for in-depth analysis, and loan management, are increasing the costs for both, the bank and clients. Partly these costs are decrease through the elimination of branches and introduction of mobile banking. Moreover, the banking for the poor concept has been criticized for the high interest rates charged on loans for poor customers. Namely, micro loans are aimed at helping poor borrowers, and the high interest rates are additional burden to their business, draining their financial resources.[15]

Considering the collateral required, it should be blended in with the activities eligible for financing under this concept. The value chain financing and collateral is a new issues introduced in the banking for poor concept in transitional economies. Instead of just financing individual while other individuals serve as guarantee, under the new concept this would be done through the value chain. The group lending would be replaced with value chain lending, where all participants in the value chain will assure on time loan repayment. In case of loan default, other value chain members are responsible for full loan repayment. The exclusion of value chain with default loan from future lending should also be applied.

The financing of the specific loans should be carried out with the savings collected from the specific area. The experiences in India shows that capital needed for the functioning of lending system can be supplemented by promotion of self-help savings and credit groups.[16]Thus, the banking for transitional economies will also promote capital

[14] Graves M. Steven "Landscapes of Predation, Landscapes of Neglect: A Location Analysis of Payday Lenders and Banks", Professional Geographer, August, 2003, Vol. 55 Issue 3, p303-317.
[15] Mega-interest on Microcredit: Are Lenders Exploiting the Poor? By: Sandberg, Joakim. Journal of Applied Philosophy. Aug2012, Vol. 29 Issue 3, p169.
[16] Savitha, B. and Jyothi, P. "Micro Credit as a means of Socio Economic Empowerment-A Survey in Andhra Pradesh", Advances in Management, September, 2012, Vol. 5 Issue 9, pp.12.

formation, but on a local or regional level. This capital formation will ensure adequate money management for the clients, and low capital cost for the banks

The problem with this banking for transitional economies through value chain loans is in the mind-set of local inhabitants. Namely, it would be difficult to promote close collaboration and high dependence between the inhabitants, because of their desire for independence.

6. Concluding remarks

Modifying the banking for the poor concept is a challenge for everyone who has the objective of achieving sustainable development in transitional countries. Although this concept is a proven success for development of impact business and financing of entrepreneurial activities in underdeveloped regions, its application in transitional economies is limited. These limitations are because of higher economic development of transitional countries in relation to underdeveloped countries. Thus, micro loans, group lending and above market interest rates are the first areas requiring modification. Namely, couple of hundreds of dollar is insufficient for establishing a family business. In additional, group lending is limited because of the lack of close family ties and close relationship on local level as well as limited mindset of local population. The problem with group lending can be overcome through the application of value chain lending, where loans would be guaranteed by other businesses in your value chain.

Analysis shows that in most of the transitional countries, major problem is underdeveloped network of micro-financing institutions. Namely, there are very few micro-financing institutions not capable to satisfy the business activities of poor population. As far as the loan amount, analysis show that it is in accordance to the expectations, namely, the loan amount offered is not adequate for self-employment, thus the effect on income positional is none, or negative, considering the high interest rates.

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ECONOMIC INSTRUMENTS FOR EU CRISIS MANAGEMENT

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ABSTRACT

In the implementation of crisis management missions, European Union uses a number of different instruments which aim to affect all phases of crisis management, from the first signs of the existence of potential crisis hotspot through the intervention during the culmination of the crisis, to post incidental stages and removal of crisis causes which can reinstate the crisis. To eliminate the root of the crisis is the basic prerequisite for sustainable development of the intervened society, which has actual crisis potential. The main objective of the instruments used in crisis management missions is to provide institutional and political reforms in the crisis society that would eliminate the roots or causes that contributed to the crisis outbreak.

In this paper the economic instruments used by the European Union in the implementation of its policy for crisis management will be analyzed. These instruments, which primarily have stabilizing effect in potential crisis situations, are intended to achieve long-term and sustainable results aimed at structural changes in society, which in ultima linea should mean creating conditions for sustainable development of the society.

Keywords: **European Union, crisis management, sustainable development, economic instruments, funds, economic sanctions.**

JEL Classification: **O19, F51, F53**

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Introduction

Starting point for sustainable development in societies with potential for crisis is identification and elimination of reasons for existence of this potential. These societies are serious threat for stability and development of their neighborhood and of the wider international community. Their destabilizing political and economic potential is the underlying motive for international subjects who tend to be respectable influential actors in international politics to take a series of measures and apply numerous mechanisms for ceasing and eliminating the causes of the crisis, adequate to their nature.

The ambition of the EU member states to overcome the qualification of the EU as a political dwarf on the one hand and to confront with the needs of the international security environment on the other resulted with multiple amendments on the constitutive acts, including interventions in the area of Common Security and Defense Policy (CSDP), in addition to other areas.

The Lisbon Treaty[2] gave a new dimension on external actions of the Union through putting them under the umbrella of the European External Action Service with the High Representative of the Union for Foreign Affairs and Security Policy/Vise President of European Commission as their representative.

The failure of the EU to get involved in the resolution of armed conflicts that took place in Southeast Europe, which actually meant failure to prevent military actions in the neighborhood, was the deciding factor for intensifying the capacity building process of EU crisis management. Despite the formal establishment of the Common Foreign and Security Policy (CFSP) on the example of the Kosovo crisis in 1999 persistent inability of the EU to deal with the ethnic conflicts in former Yugoslavia is evident. Learning mostly from its own experience the Union seeks to build its own model for civilian and

[2] Lisbon Treaty, signed on 13.12.2007, came into force on 01.12.2009. It is also known as the reform Treaty publicly, emphasizing the expectations of it.

military crisis management which is implemented within the CFSP and will be suitable to its nature and capacity.

This paper represents beginning in the series of analysis of the instruments that the Union uses with the aim of initiating stabilization of the situation in a crisis area, the instruments used in all missions in the Balkans, and which, above all, should have an impact on the sustainable development in the intervened societies. Instruments analyzed in this paper are of economic nature and have direct economic implications in crisis regions. Aside of this group of instruments, the Union applies a number of other instruments as well, mostly with diplomatic and political characteristics. However, it should be emphasized that this division of instruments with economic and political/diplomatic features is imprecise because essentially all instruments used in crisis management are according to the Union's political logic of crisis management. The objective would be coming to an understanding as to in which conditions the aforementioned instruments are applied and what are the results of their application, as well as the Union policy prescribed for their application.

Results are generated by analyzing official legal and political acts and using literature analyzes connected with the issue.

1. The European Union's crisis management instruments

The instruments used in the application of crisis management policy implemented within the CFSP are created by the institutions of the Union, and according to their responsibilities prescribed by the constitutive acts. Like any other policy carried out by the Union, so are the instruments used in this policy aimed at promoting the values[3] and achieving the objectives of the Union.[4]

[3] In Article 2 of the Lisbon Treaty as fundamental values of the EU respect for human dignity, freedom, democracy, equaliity, the rule of law and human rights respect, including the minority rights are determined.

[4] In Article 3 of the Lisbon Treaty following specific objectives the EU will seek to realize:
- offer freedom to the people, security and justice, without internal frontiers existence;

The instruments with which the Union implements crisis management policy can be grouped into two broad categories:

1. Instruments with stabilizing effect. This group consists of instruments whose objective is to remove crisis causes. These instruments are used commonly in pre-incidental or post-incidental stage of a crisis, and are part of crisis management. These instruments are also known as soft power of the EU.
2. Security missions, as a manifestation of the operational capability of the EU within the CSDP. This group icludes military mission and civilian crisis management, and each of them in fact encompasses a set of instruments for crisis management. Some authors refer to these instruments as hard power of the Union.[5]

This division of the instruments is neither precise, nor correct for several reasons:

1. Most of the instruments with stabilizing effects are used during civil and military crisis management operations, even combined. But separate usage is not excluded.
2. The order and combination of instruments used depends on the characteristics of the particular crisis, and above all on the reasons that produced the crisis.

-work for sustainable development of Europe, based on balanced economic growth and price stability, highly copmetitive social market economy geared towards full employment and social progress, with a high level of enviromental protection;
- fight against social exclusion and discriminations, and shall promote social justice and protection.
- promote economic, social and territorial cohesion and solidarity among member-states;
- remain commited to economic and monetary union and the euro as its currency;
-promote the values of the EU and the wider world, contribute to peace, security, sustainable development, solidarity and respect among peoples, free and fair trade and poverty eradication.
-contribute to the protection of human rights, especially the rights of the children, as well as strict observance and development of international law, including respect for the Charter of the United Nations.
The provisions of the Lisbon Treaty are designed to enable instruments of the European Union for realization of these goals.

[5]For the separation of the instruments of the Union of hard power and soft power read Gori L. European Union and West Balkan-Europian Prespective of regions (1996-2007). Hesperia edu., Belgrade p.66

3. There is a constant modification of the existing crisis management instruments, as well as establishment of new instruments, as a result of experience gained through practicing crisis management and managing actual crises.

However, the end goal to both groups of instruments is the prevention of the occurrence of open violence or stopping armed violence and affecting the causes that lead to a crisis situation.

2. Instruments with stabilizing effects

For the purpose of this paper, instruments which have, or are expected to have a stabilizing effect, will be divided into two subcategories. The first category includes the instruments with relatively economic nature. The second group consists of the instruments who have political nature, such as monitoring missions, special representatives, the so-called European perspective, permanent structural cooperation, early warning etc.[6]

2.1 Economic instruments

Economic instruments the Union uses during crisis management include the sum of all economic measures used to influence the structural reasons that can lead to a crisis, which created the crisis or that may have an impact on its reoccurrence. In this group of instruments on the one side there are the measures that provide financial assistance, such as funds and credit lines, and on the other side economic blockades and sanctions, which are applied as coercive measures to a particular country/region which represents a source of instability and crisis.

[6] The divison is made for this paper,by the author of the work, taking into account basic charactheristics of instruments and their initial and obvious implications in crisis regions,in order to be more understandable\to explain the issue that is subject of analysis.

2.1.1 Union funds which provide economic assistance in (potential) crisis regions

The overall goal of financial (funding) instruments is the eradication of poverty in third countries and regions in the context of sustainable development. In the countries where this kind of intervention is used to poverty is identified as a main cause of crisis.

Financial instruments (funds) of the Union, by content can be classified into two groups: instruments with geographic nature and instruments with thematic nature.

For the period 2007-2013[7] form the financial perspective the EU has adopted a package of new instruments for the implementation of external assistance.

External action is mainly based on three "geographical" instruments: Development Cooperation Instrument (DCI), European Neighborhood and Partnership Instrument (ENPI), European Development Fund (EDF). Total funding available for this period (2007-2013), for this instruments is 43,938 billion Euros[8].

The EU's thematic development programs and instruments seek to help developing countries meet the relevant Millennium Development Goals by focusing on specific themes[9].Total funding available for thematic instruments, for the period 2007-2013 is 9, 062 billion Euros[10].

In a relatively short period of using these funds, about 30 geographic and 50 thematic instruments have occurred, which are now streamlined into six categories of instruments for external action, including:

Three horizontal instruments serving to answer specific needs:

[7] EU institutions already have adopted financial framework for the period 2014-2020 for external action from wich can be make conclusions about Unions development tendencies and external policy.
[8] The data is taken from the official website of the European Commission
[9]External action is based on this "thematic" instruments: European Instrument for Democracy & Human Rights (EIDHR), Nuclear Safety Co-operation Instrument (NSCI), Development Co-operation Instrument (DCI)-Environment and sustainable management of natural resources including energy, DCI- Non-state actors and local authorities in development, DCI- Food security, DCI- Migration and asylum, DCI- Investing in people, DCI -Restructuring of sugar production, EU food facility, Instrument for Stability
[10] The data is taken from the official website of the European Commission

- Instrument for Providing Humanitarian Assistance;
- Instrument for Stability (IfS);
- Instrument for Microfinancing.

Three instruments with geographical coverage for implementing certain politics:

- Instrument for Pre-accessions Assistance (IPA);
- Instrument for the European Neighborhood and Partnership;
- Instrument for Development and Economic Cooperation.

From the aforementioned financial instruments, the most suitable in its nature for using in crisis situation is the Instrument of Stability launched in 2007[11], as a follow up to the Rapid Reaction Mechanism. This is a strategic instrument with which work in the area of conflict prevention, crisis management and peace building is intensified. The instrument can be used for wide range of issues, such as trust building, strengthening the rule of law, transitional justice. These activities can be supported in a crisis situation, or when expecting a crisis situation, when timely financial support form other EU sources is not applicable.

This instrument is designed to accomplish three goals:

- To provide quick, effective and appropriate response to the need of a certain amount of funds, in cases of political crisis or natural disaster;
- To develop a long-term action for dealing with security threats arising from organized crime, trafficking, terrorism;
- To establish long-term measures for capacity building of international organizations with a mandate for crisis management.

The implementation of such set goals is subject to a consultation procedure established by the join declaration of the Council and the EU Commission.[12] A complete picture of the significance of this tool can be accomplished if it is considered that 85%

[11] Established by regulations made under Europian Commission NO 1717/2006 OJ L 327 24.11.2006, entired info force on 14.12.2007
[12] Ibid

of EU funds for external actions are provided for this instrument alone. The Instrument for Stability prescribes that 77% of the funds should be used in responding to crisis, 13% in preventing the spread of weapons of mass destruction, 6% in transnational security threats and 4% in administration.[13]

Commonly the Instrument for Stability is used as a follow up to humanitarian assistance.[14]

2.1.2 Economic sanctions

Economic sanctions or restrictive measures are instruments of an economic nature[15] which target third countries, individuals or non governmental entities (such as terrorist organizations) seeking to bring changes in their acting or policy such as violation of democratic principles or human rights.

When using this economic measure over in managing a particular crisis, the integrative nature of EU and the contact between the area of foreign and security policies and other areas of EU law are distinguished.

According to the articles contained in the Lisbon Treaty, there are two cases when economic sanctions against certain countries/regions that are the source of security threats in the international community are prescribed.[16]

According to the article 75 of the Treaty, in order to establish the Union as an area of freedom, security and justice in which fundamental rights of the different law systems of the member states are respected, and in that sense terrorism is prevented and a foundation to combat it is created, the European Parliament and Council of Ministers are authorized to adopt the regulations, in common legal procedure (procedure set for these acts) with which administrative measures such as freezing of funds or financial

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[13] Georgieva L. Evropska bezbednost. Filozofski fakultet, Skopje, 2010

[14] Deliverin humanitarian assistance, according to the Council's Resolution number 1257/96 can be considered a tool for crisis managment since it activates only on the basis of needs and cant be subsumed under the political logic of crisis managment.

[15]Also this instrument have a diplomatic nature, especially from the Union`s aspect

[16]With this provision comes into contact foregin and security policy and the former third pillar (justice and home affairs) that the Treaty of Lisbon is integrated in comunitarian area

assets owned by an individual or legal person, particular state or group of states will be established. The Council on a proposition of the European Commission makes decisions for enforcement of regulations adopted in this manner. Since these regulations introduce restrictive measures on certain rights and towards certain individuals or legal entities, these measures can be subject of judiciary protection.[17]

In the second case with article 215 from the Treaty on European Union it is foreseen that decisions taken in the area of CFSP and legal acts from former communitarian fields should come into direct contact, meaning that in realization of this article legal acts should be adopted in both areas, according to both procedures. In this article imposition of economic sanctions from the EU to third countries is prescribed.

This particular article regulates the procedure according to which economic sanctions are imposed, when the Union's decision – position, attitude or action taken in the area of CFSP predict complete or partial cease of economic relations with one or more third countries, at a proposal by the Commission, the Council is authorized to adopt necessary emergency measures, by a qualified majority.

It is important to say that there is no automatism between positions and actions taken under the CFSP and the decisions of the Council for measure that enables economic sanctions. The process of making the latter decision is completely autonomous. The Commissions as the proposing party and the Council as authorized to accept or reject the proposed measure, can independently decide which measures are necessary. Measures accepted on the basis of the aforementioned article relate not only to the diminishing or cease of trade relations, but may also include restrictions related to the movement of capital and payments.[18]

[17] The practical application and implementation of the provisions contained in article 215 and article 75 of the TEU(which under other numbering existed in previous versions of the constitutivetreaties)ocured in territoty of former Yugoslavia in the 90`s, through the economic sanctions of the Union to Serbia and Montenegro. And in this case sanctions were used as an instrument of policy for crisis managment of the Union.

[18] Article 75 of the Treaty of Lisbon

The implementations of the provisions contained in these articles, in practice mean introduction of economic sanctions by the Union to certain natural and legal persons and often to the states or group of states based on previously adopted foreign policy positions and actions of the Member States. In this case Council is authorized to adopt emergency measures by a qualified majority.[19]

From the provisions contained in the aforementioned two articles and the aim they should accomplish arises indisputably the need of coordinated action in different areas of the Union, because of which the principle of consistency is established as on of the two founding organizational values of the Union. Moreover, embedded in the constitutive treaties are specific procedures that provide continuous and consistent action of the Union in all areas.

This passerelle[20] or overpass between the deferent areas of integration can not be prejudiced, nor arbitrarily distributed. In other words, assets and mechanisms available in communitarian area cannot be used outside Treaty envisaged situations in order to achieve the objectives set out in the areas of intergovernmental cooperation. The Court of Justice in the Kadi Case[21] undoubtedly gives this direction, underlining that the coexistence of the different areas of the Union as an integral whole, does not change the fact that different legal procedures are applicable in these areas, which prevents the spread of so-called passerelle beyond articles of the Agreement that explicitly create a link between communitarian area and the area of the Common and Security Policy of EU. In the same way, authorizations given to the institutions and member states in the field of intergovernmental cooperations must never permeate the powers of communitarian area. Moreover, an authorization from the communitarian area has special status, even priority.

[19] Article 215 of the Treaty of Lisbon
[20] Passerelle is a French word adopted in the EU Law, with meaning overpass
[21] C-402/05 и C-415/05 Kadi v.Counsle of European Union, Judgment of the Court, 3 September 2008

2.2 Application of economic instruments for crisis management in practice

As mentioned before the EU funds that provide economic assistance to third countries are used when the Union identifies a particular region as a potential danger to their surroundings and the wider community due to the high level of poverty which can be the root of the emergence of the crisis. By activating financial instruments it is intended to eliminate poverty in order to provide sustainable development of the society. Namely, instruments which are analyzed in this paper in terms of crisis management are actually Development aid which EU delivered in third countries as an external aid. Responsible for designing EU development policies and delivering development aid through funding instruments is Development and Cooperation – Europe Aid, a new Directorate within the institutional structure of the Union. There is a comprehensive and complex EU regulation regarding jurisdiction and decision making procedure, which makes this issue "perfectly" regulated but complex for practical use. However the facts that a new Directorate is anticipated specialized for this issue suggests that the Union is changing its institutional structure in order to adapt these issues of change envisaged in the Lisbon Treaty.

On the other hand, economic sanctions, as they assume restrictive measures for rights of individuals and legal entities, are used in precisely prescribed situations, provided by Constitutional Act and they represent a very specific issue for independent but cumulative decision-making of the European Commission and the Council.

Since 1991, the Union practices crisis management policy in the Balkan, and as nowhere else activates all available foreign policy tools and economic instruments for crisis management. The Union has approved trade facilitation, has applied the most important instruments of the enlargement process, has applied all instruments that had been prescribed for crisis management and has created new ones based on the needs and experiences gained in the field, which makes it particularly relevant topic for analysis in this social environment.

Conclusion

Today, more than 10 years after first crisis management mission, after 26 established missions and many applied instruments, the Union still modifies its own normative and institutional structure for crisis management trying to build a respectable system for crisis management. The EU crisis management policy is relevant for the Balkan states because its creation has begun here, it has been developed and changed here and all EU instruments for crisis management have been applied / are being applied here.

Funds as a direct financial contribution from the EU budget or from the European Development Fund are the basic instruments through which the Union seeks to eliminate the structural reasons for the existence of a crisis potential in third countries, such as poverty, violation of basic human rights, lack of conditions for fulfillment of basic human needs. The removal of these threats to the basic human rights and needs is the first step on the road to creating conditions that will enable sustainable development.

The sanctions are the other extreme, actually the instruments which have economic implications and are applied as a measure of last resort when other methods of influencing potential crises in society are exhausted or impossible.

The ability to adapt the instruments to a specific crisis and the ability to modify them resulting from experience gained on the field represent the positive side of the EU crisis management model.

If it is considered that EU`s normative power can be analyzed through prism of its greatest straight and its greatest weakness, in this area/policy of the Union the same problems arise as in the other EU policies. On the one side there are precisely established institution and agencies with concrete responsibilities, a precision in legitimizing based on the assumption of precisely established procedures, on the other side this formality assumes strictly established and extensive procedures and authority for decision-making, making it slow and inefficient, which contributes the realization of the EU’s policy for crisis management to be contrary to its nature.

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14. C-402/05 и C-415/05 Kadi v.Counsle of European Union, Judgment of the Court, 3 September 2008
15. Regulation (EC) OJ L 327 from 24.11.2006/ 14.12.2007
16. Lisbon Treaty (13.12.2007/01.12.2009)

UDC: 332.146.2:[334.722.012.63/.64:658.14/.17

THE ROLE OF VENTURE CAPITAL FINANICNG IN PROMOTING SUSTAINABLE DEVELOPMENT

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ABSTRACT

Sustainable development is the focal point of development and growth, in terms of social, economic and environmental aspects of improving quality of life. Since there is evidence that an ambiguous relation between venture capital employment and economic growth exists in most systems, it can be assumed that venture capital funds can play a role in promoting sustainable development. However, there are issues to be considered in the employment of venture capital funds for financing sustainable development. Recently, specialized sustainable or "green" venture funds have been organized, mostly for long-term financial support of start-up companies and SMEs whose ideas contribute towards sustainable development. Additionally, special venture capital funds for socially responsible innovations and entities have been at a rise for the past decade. But the actual relation between venture capital investments and sustainable development is yet to be explored.

Keywords: ***venture capital, sustainable development, socially responsible investments, impact investing, clean technology***

JEL Classification: ***G24; Q01***

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Introduction

Venture capital funds have always been vaguely connected to growth and development in an economic system. Although researches on the relation between venture capital and economic growth always showed an elusive connection between the two, with the rapid awareness of sustainable development as the long-term solution for improvement of quality of human life, the connection between venture capital and sustainable development appears to become a prime focal point of research. But can such a connection be established?

While a concise definition of venture capital has never been constructed, it is a form of private equity funding, especially useful for financing start-up companies or growth in small and medium-sized businesses. Venture capital companies are usually companies which invest their funds into different entities, for a relatively short period of time, and expect return on their investment. The most important characteristic venture capital investors share is their eagerness to invest in private and entrepreneurial companies above all others.[2] In that sense, they are often seen as investors to the economy's backbone – start-up companies and small and medium-sized enterprises (SMEs).

On the other hand, sustainable development is described as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[3] Despite this broad popular definition, sustainable development in practice is defined as the development in social, economic and environmental aspects of long-term quality of life. The thematic of sustainable development is based on motivating various initiatives to improve quality of life of present and also future generations. In those terms, one of the major economic (but also social and environmental) issues is the financing of sustainable growth. In general, it can be understood that nations and/or governments are responsible for the economic and financial support of sustainable development. Moreover, international

2 Amit, R. et al. Why do venture capital firms exist? Theory and Canadian evidence. *Journal of Business Venturing,* 13, pp.441-466,1998.
3World Commission on Environment and Development, Our common future, pp.8, 1987.

organizations are often seen as "in charge" of this issue. But if this issue is to be treated as embedded in national economies, it seems that it starts at the smallest form of economic organization – the start-ups and small entities. Therefore, the connection often made with venture capital and economic development, through innovative start-ups and small businesses can be transferred to this issue as well. Moreover, the new development in the world is already seeking to be in terms of sustainability, so the economic relation between venture capital and development in essence becomes the relation between venture capital and sustainable development.

1. Venture capital funds and their primary goals

One of the most popular equity financing sources is undoubtedly venture capital financing. In terms of innovative start-up companies, venture capital has been one of the most praised generators of funds. Famous companies using venture capital as a starting point include Apple, Intel, FedEx, Lotus, Microsoft and many more.[4] Venture capital investment funds are different in size and shape, but usually consist of a bundle of investment sources, tied up and invested in a portfolio of companies. They represent a portfolio of equity investments, but specifically designed as to be invested in new or growing companies, especially prior to their initial public offering.[5] As other equity investments (other than stock investments), a regular definition is hard to come by, since the market is not strictly regulated. However, a trait in all venture capital funds is the investment in entrepreneurial and innovative companies above all. Therefore, entrepreneurs and innovators in developed countries at large rely on venture capital as an early stage financing source. Although not as often, seed financing is also provided by venture capital investors. [6]

4 Sahlman, W.A.. The structure and governance of venture capital organizations. *Journal of financial economics,* 27, pp.473-521. 1990.

5Amit, R. et al. Why do venture capital firms exist? Theory and Canadian evidence. *Journal of business venturing,* 13, pp.441-466. 1998.

6Amit, R. et al., Why do venture capital firms exist? Theory and Canadian evidence., *Journal of Business Venturing*, pp.441-466, 1998.

Why is venture capital appropriate for financing innovations or start-up companies? One of the most appealing aspects of venture capital financing is its contractual adaptive form. Venture capital investors adapt to the needs of the investments companies – each investment may differ in size, required rate of return, maturity period or other demands by the investors. Investors' main goal is profitability, but in order to achieve profitability with start-up companies, venture capital investors realize that adaptation to each investment and tailor-made approach is needed. An additional appealing aspect is the minimization of collateral – which is why start-up companies crave for venture capital investments. Venture capital is an equity-backed financing source, which implies that there is no physical collateral in case of default, only equity collateral. The equity investments are structured as such – if the borrower cannot repay the principle and the pre-determined rate, the lender acquires a pre-determined portion of equity in the company. This makes venture capital investments more appealing for investees, but more risky for investment companies. Logically, the reward expected is higher. Typically, venture capital investors expect up to 50% return on their investments. The form of investment is most commonly timely and legally limited partnership, although there are cases when venture capital companies take over the majority of ownership of a small business, invest time, money and expertise in it for a given period of time, before they sell their "investment" either to another company or offer its ownership publicly. However, in order to have a real effect on their investment, venture capital companies are usually comprised of a management team, consisting of experts in various fields. The main characteristic of these investors is their expertise and consulting, in addition to monetary investment. This implies that investors usually seek to be involved with the investee company's activities, and effectively participate in management and operational decisions. But the main goal of venture capital investors, as always, is profit, and as previously mentioned, a higher percentage of it. Since the venture capital firm invests part of its funds in a given company, its management needs to know that the company will be profitable, and the investment will not be made in vain. The standard investment procedure prescribes part of the profit of the entity to be considered as investors' return, over the eligible investment life. This implies that the venture capital firms usually have a pre-determined annual percentage of return, based on the annual profits made. Additionally, when the venture capital firm provides more than mere management surveillance to the company, it is required that the company pays out management fees as well. Although this might appear to be a high cost of funding, it has to be noted that given the nature of the investment, up to a certain point, venture capital investors will always make decisions in the investee's best interest, given that the sole profit for the investors is the investee's well-being.

All this leads to certain contradictions when considering the relation between sustainable development and venture capital. It is obvious that companies related to innovations of sustainable nature will be appealing to venture capital investments. However, investors compared to useful sustainable development ideas are few – there are more applicable companies to be financed than there are financiers. The financing process is stringent, and few companies may pass the test. However, solace can be found in the fact that "green" and sustainable investments today are not only good for human well-being and improvement of quality of life, but for investors as well. Such companies are highly profitable in the long run, which implies that venture capitalists would be interested to invest in them.

2. VC funds investing in sustainable development

2.1 Environment and energy investments

The prime connection between venture capital investments and environmental sustainability stems from new start-up companies which begin using new technologies in order to sustainable produce energy, especially considering renewable energy sources. Developed countries increasingly rely on such companies nowadays. The importance of venture capital can be seen in such examples as the primary source of funding of these start-ups. As it has been mentioned before, VC funds are more accessible for new technology investments than other sources, and VC investors increasingly perceive new energy sources or technologies connected to them as lucrative investments.

One of the most prominent fields of environmental sustainability is the usage of alternative, environmentally friendly fuels. Venture capital funds have been the first to invest in start-ups that introduced the term "clean fuels" in the beginning. For example, in 2006 many medium cap and small cap venture capital funds have sought to invest in alternative energy sources. However, at this point, the main accent has still been on alternative fuels. Investments dating from this period include fuel cell and hydrogen[7] that can replaced current fuel arrangements. An example of the success of such an investment is the growth of the venture capital company itself, which since 2006 invests in three different geographical areas – North America, Europe and Asia. Today, most of fuel-related investments are connected to algae as a form of alternative fuel and ethanol, an idea researched for a long period of time.[8] Successful stories from "clean fuel" investment have spread to branches such as energy generation, transmission, control and storage, energy use and resource management[9].

It is interesting to note that many of the small cap VC funds have actually been created especially for the purpose of supporting environmentally sustainable ventures. An example is the Siemens Venture Capital Fund, which is set up with the main purpose of investing in new technology providing start-up companies. As a part of Siemens Venture Capital Fund investment portfolio there is a special portfolio sub-section – energy, which consists of investments made in companies which provide new solutions for "generation, transmission and distribution of electrical energy".[10] Two third of these investments include energy sustainable companies, such as Semprius, a company which develops new, low-cost, high-efficiency photovoltaic modules for solar power generation. The financing Siemens Venture Capital has provided for the development of Semprius has led to creating more affordable usage of solar energy in areas with

[7]Chrysalix. Cleantech VC Investor. 2012.
[8]IGEL. Can venture capital really influence environmental sustainability?2011.
[9]Chrysalix. Cleantech VC Investor. 2012.
[10]Siemens Venture Capital. Siemens Venture Capital. 2013

sunny and dry climate. Thus, it can be argued that this particular investment has been a sole booster of environmental sustainability. Another Siemens Venture Capital Fund's successful environmental stories includes the investment in Zolo Technologies, which is today the leading provider of equipment used in monitoring equipment for harmful emission. Zolo Technologies produces combustion monitoring systems which not only monitor and report harmful emissions from various types of furnaces, but also create optimal combustion plans for both higher efficiency and lower harmful CO and CO_2 emissions.

The main areas of investment for venture capitalists in terms of environmental sustainability are the niche markets. As it can be seen from the examples above, venture capital investments are not high-scale investments in the beginning – the main investments are still rarely used in everyday activities. However, the interesting importance of venture capital when investing in "green" or "clean" technology is the ability to create companies from an idea, seed or start-up, which will in the future contribute to environmental awareness and environmental improvements. Therefore, it is important to consider venture capitalists not as the primary moving force in promoting sustainability, but as the developer of quality foundation for promoting sustainability by other agents. But at this point, an ethical question arises – is government promotion in essence promoting of sustainable development? In the USA, answering this question is a difficult task, given that many "cleantech" innovations have been backed by military financing. The ethical issue that arises is the lack of need for USA's military to "share" such innovations with the people of USA. And in these terms, technologies such as the high speed magnetic levitation train never reached public access in the USA – a technology widely used in Europe.[11]

2.2 Social development and venture capital

Over the past decade, a significant portion of innovation has been introduced in social development. Starting with the development of social media, cloud and grid computing,

[11] IGEL. Can venture capital really influence environmental sustainability?, 2011.

all innovations related to these are considered a contribution to the social development, in terms of sustainability. Since then, many entities have been formed to measure and evaluate development in these terms. Social development, which incorporates the sustainability aspect, is considered to be any development brought with the purpose to create social returns in terms of nurturing talents and new skills, addressing and solving economic problems, and leading to reinvestment, thus making development a continuing process.[12] One of the main goals of social sustainability is to target underprivileged groups and minorities, which many of today's innovations have done.

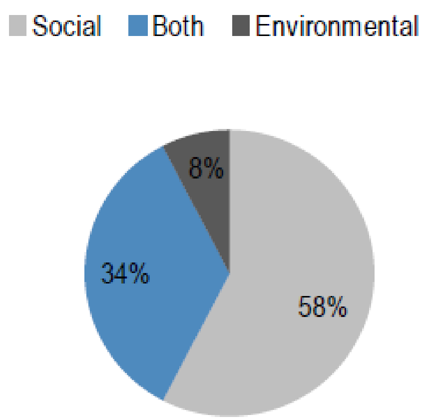
It is important to state that in social sustainability, venture capital plays a major role. It is one of the most frequently used sources for financing social innovations. Most of today's social networks, cloud programmes and grids have begun their journey as venture capital-backed start-up companies.

Social development is maintained through so-called "socially responsible investments"[13] In this sense, socially responsible investments encompass investments which help people build their lives, regenerate and sustain economic development, open up new labour markets and generally benefit social wellbeing. In the past years, a great accent has been given to these types of investments, much of it supported by venture capital. One of the major issues of the 2000 formed Social Investment Task Force was in fact the creating and promotion of venture capital funds, which support socially responsible investments in the UK. Venture capital funds support several types of socially responsible investments – varying in a range from grant making to company support. UK (and worldwide) examples include Permira, CAN, Impetus and many more.[14] For example, Permira financially, but also through management advice, supports socially responsible private healthcare entities, which provide quality services to all UK citizens, for a nominal fee, which is considered more a social than a financial benefit. Other examples of social enterprises funded by venture capital include investments made by

[12] Social Investment Task Force. Social Investment: ten years on. 2010.
[13] Social Investment Task Force. Social Investment: ten years on. 2010.
[14] Social Investment Task Force. Social Investment: ten years on. 2010.

the Bridges Ventures funds, which support social entities such as CommonWeal – research for housing vulnerable groups; Auto 22 – commercial auto repair shop, which specifically trains and employs various groups of disabled people; HCT Group – a transport company offering bus transport and special routes for disabled, or unable to use convenient public transport; and many more[15].

Figure 1: Dispersion of impact investments according to primary impact objective



Source: Saltuk, Y. et al. (2011). Insight Into the Impact Investment Market. *Social Finance*. JP Morgan. 2011.

Venture capital plays a major role in the support of socially responsible developing entities. It is one of the primary sources of funding these types of entities, and it is usually a go-to financing plan until maturity stage for such entities. In contrast to "greentech" or "cleantech" financing, socially responsible entities receive much more investments, both from venture capital and other investors. As it can be seen from **Figure 1,** most investments in sustainable development include socially responsible investments. A portion of "greentech" investments even include social component (about 8% of total sustainable investments). Therefore, it can be assumed that venture capital investments actually contribute and promote sustainable development, when it comes to socially responsible entities.

[15] BridgesVentures. Innovative investments that make a difference. 2013.

2.2 Impact investing

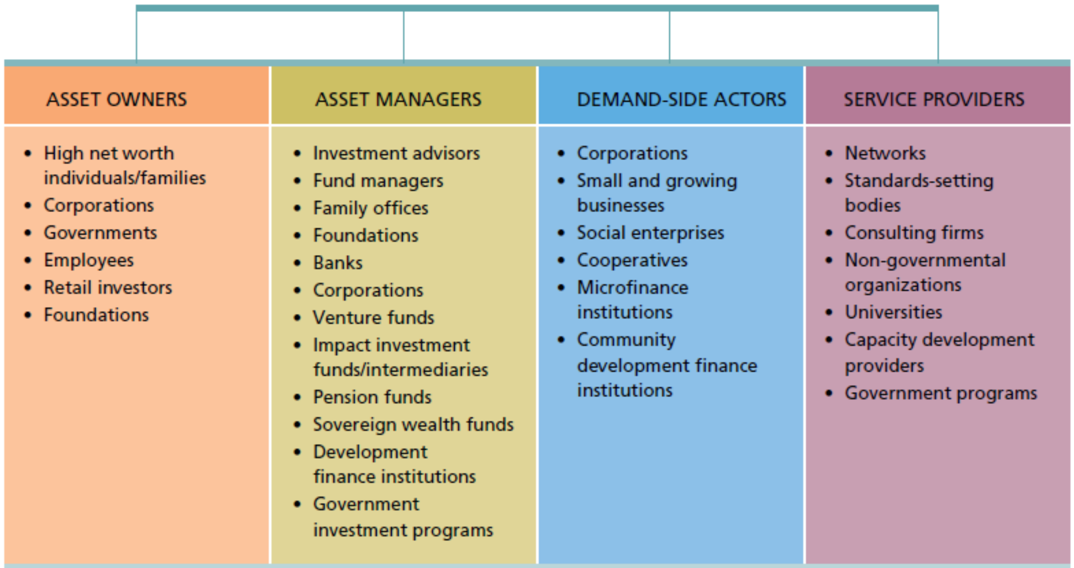
When discussing the role venture capital investments play in sustainable development, it is important to mention the term "impact investing" - a form of socially responsible investing, usually used in order to define investments which generate social and environmental benefits, as an addition to financial benefits.[16] Therefore, it is one of the most appropriate terms to use when discussing investments that promote sustainable development. The two sections discussed above include the two aspects of sustainable, or better impact investing – the social and environmental component. Impact investors usually place capital in both profitable and non-profitable entities, with the main goal being social and environmental benefits. In this sense, one may consider impact investors the opposite of venture capital investors. However, in impact investing, the financial return of the investor is not omitted; it is merely considered equal in decision-making to the environmental and/or social component of the investment. In that sense, venture capital investors can too be impact investors, if being in the right field of investments.

Do venture capitalists contribute the development of impact investing? The obvious answer is yes, since more and more venture capital funds revolve around impact investments. As it has been mentioned before, venture capital companies are considered one of the important agents in sustainable investing – asset managers in the process of impact investing. [17]

[16] Global Impact Investing Network (GIIN). Global Impact Investing Network (GIIN). 2013.

17 E.T.Jackson and Associates Ltd. Accelerating Impact: Achievements, Challenges and What's Next in Building the Impact Investment Industry. Rockefeller Foundation. 2012.

Figure 2: Venture capital investors in the impact investment environment



Source: E.T. Jackson and Associates Ltd. Accelerating Impact: Achievements, Challenges and What's Next in Building the Impact Investment Industry. Rockefeller Foundation, July 2012. pp.5.

The effectiveness and progress of impact investments is examined through six crucial dimensions: unlocking capital, placing and managing capital, demand for capital, assessing impact, creating an enabling environment and building leadership.[18] As it can be seen, capital is one of the focal points, in several portions of impact investments, thus creating a major role for venture capital investors in impact investment. Moreover, in their 2011 JP Morgan-ordered research, Saltuk, Bouri and Leung have found out that nearly a quarter of all impact investments rely on primary equity funds – part of which are venture capital funds as well.[19] Most of this capital has been intended for impact entities in North and South America, but given the demographic distribution, it can be argued that impact investment is globally dispersed. Most common impact investors come from the "Global North" – developed countries such as the USA, Canada and the European Union. Major investees mostly come from the "Global South" – developing

[18] E.T. Jackson and Associates Ltd. Accelerating Impact: Achievements, Challenges and What's Next in Building the Impact Investment Industry. Rockefeller Foundation, July 2012.
[19] Saltuk, Y. et al. Insight Into the Impact Investment Market. *Social Finance*. JP Morgan. 2011

countries in the Southern Hemisphere, but investments in Northern entities are not excluded.[20]

However, in most examples it is paramount to underline that regardless of the amount and type of venture capital investment, most successful impact investment stories rely on government support as well. The impact of venture capital in impact investing can only be seen as a scanning device for larger investment funds, when it comes to sustainable and profitable entities.

Conclusion

This paper offered only a few of the many examples in which venture capital funds have been the sole financier of important innovations regarding sustainability. It is a fact that more and more new companies strive to develop sustainable and environmentally safe products, as the awareness for environmental sustainability rises each day. It is only encouraging to see that venture capital funds each day are more eager to finance these innovations.

But it is most important to note that there are venture capital funds that invest solely in "clean ideas" - innovations which are aligned with sustainability in any aspect. This means that the ethical basis of more and more new venture capital funds trumps profitability. Or perhaps, the investment in sustainability has become indeed a lucrative business at last.

However, scepticism remains, even from the more successful. Especially when it comes to environmental sustainability, many investors still regarding it less lucrative, or important than social innovative products. In order to better understand this division, it is important to look at the dispersion of investments over the global portfolio of both socially and environmentally sustainable entities. As it was previously discussed, socially

[20] The term "Global North" encompasses developed economies in the Northern hemisphere, including North American economies, Western Europe, Japan and Australia. On the other hand "Global South" is used to reference low-income, emerging and/or developing countries, such as Chine, Brazil, India, African emerging economies, Russia. As it can be seen, regardless of the actual geographic location, this division is used to represent economic disparities between investing-investee countries.

sustainable entities are more endorsed by all types of investors, on a global scale, as opposed to environmentally sustainable entities. It can be argued that social networking has contributed largely to this notion, and it is easier to promote effects of social sustainability, than it is of environmental sustainability. The main rationale behind this current division is the still-not-significantly raised awareness of the importance of environmental sustainability. Although in developed countries, environmental sustainability is deemed the most important aspect currently, awareness in other countries is still at a very low level.

Moreover, the full amount of venture capital investments in sustainable development companies is not large enough to create a statistically significant impact. Sustainable innovators constantly argue that government aid is the sole promoter of sustainable companies – other investors are not financially prepared to invest on a large enough scale. However, the notion remains that the initialization of a sustainable idea by a venture capital investor provides assistance in worldwide recognition of said idea in the future. Therefore, although statistically the relation between venture capital employment and sustainable development may be miniscule, it goes without saying that venture capital funds are the quiet promoters of sustainable entities and impact innovation.

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WASTE MANAGEMENT AND MODELS FOR OPTIMIZATION TOWARDS SUSTAINABLE WASTE MANAGEMENT SYSTEMS

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ABSTRACT

The purpose of this paper is to give a brief overview of the most commonly generated waste types along with waste management practices implemented at European level. Though, the main focus is primarily on reviewing some of the approaches used for optimizing the waste management systems.

Data were collected from scientific literature and existing data bases. Three different decision support frameworks: Life Cycle Assessment (LCA), Cost Benefit Analysis (CBA) and Multi-Criteria Decision Analysis (MCDA) were analyzed with regard to their basic models and modifications.

The findings imply that each of the observed models is applicable to selected waste management scenario. In order to have less environmental impact the waste management systems should be analysed using the integrated approach which involves simultaneous use of more than one model.

Keywords: **waste management, optimization model, Life Cycle Assessment, Cost Benefit Analysis, Multi-Criteria Decision Analysis**

JEL Classification: **Q01, Q53, Q56**

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Introduction

As a result of the industrialization, the economic growth and the changes in life style and food habits going on, we are continuously facing with generation of large amounts of waste. Over 1.8 billion tonnes of waste, arising from households, commercial activities, industry, agriculture, construction and demolition projects, mining and production of energy, are being generated each year at European level[1]. Based on the data obtained so far, OECD[2] predicts that the waste production by 2020 will be increased more than 45% compared to 1995.[2] Having previous in mind, the necessity to protect both, the human health and the environment by handling the waste properly is of paramount importance.

The literature review has shown that over the last few years there have been many attempts to deal with waste management problems and to find the practical solution successfully. However, the procedure becomes very complex because there is variety of mutually conflicting factors that influence the waste management process.

The main goal of any waste management policy is to minimise the negative effects of waste on human health and the environment by obeying the five-step waste management hierarchy [3,4] where prevention of waste generation is the preferred option, followed by re-use, recycling and other forms of recovery (including energy recovery through incineration and composting) with disposal to landfill being the last management option.

It is therefore necessary to:

- clarify key concepts such as the definitions of waste and waste types
- highlight waste environmental relevance
- promote a waste management system that moves up the waste management hierarchy
- introduce an approach that takes into account the whole life-cycle of products and materials and not only the waste phase and to

[2] Organisation for Economic Co-operation and Development

- focus on strengthening the economic, so called "added" value of the waste.

It was shown that in practice many waste management projects take from five to ten years to implement.[5]

The aim of this paper is to make an overview of the waste and waste management practices implemented by the European Union along with reviewing some of the approaches used for optimizing the waste management systems.

Definition of waste and waste types

By the definition included in the first Framework Directive on Waste (75/442/EC), waste is *"any substance or object or, more generally, any movable good that the holder has discarded, intends to discard or must discard"* , whereas the waste management legislation at European level with regard to its basic requirements and principles is comprehended in Waste Framework Directive 2008/98/EC that repeals the previous ones: Directive on Waste 2006/12/EC, Directive on hazardous waste 91/689/EC and Directive on Waste Oils 75/439/EC.

According to these Directives the waste can be generally divided in three groups:[6,7] as Non-hazardous, Hazardous and Inert waste.

The non-hazardous waste by definition is the waste that does not have any significant hazardous properties although it could have negative influence on environment and human's health if not managed properly. This waste category represents approximately 14% of all waste generated [8] and includes waste from households and commercial waste, agricultural and biodegradable municipal waste, plastic waste from food packaging, paper, biomass etc.

The inert waste, like concrete, sand, construction and demolition waste, has no hazardous properties and does not undergo any significant physical, chemical or biological transformations when disposed of.

The hazardous waste arises from a wide range of different sources like medicine, industry, commercial activities (shops, restaurants) and household. It includes the medical and nuclear waste, paints, solvents, oils and pesticides which can be harmful for the environment and humans and therefore has to be specially treated before disposing.

At the same time, waste classification can be done regarding its origin when several types of waste are recognized:[9]

- Municipal solid waste
- Industrial waste
- Waste from construction and demolition
- Waste from mining
- Waste from plastic packaging
- Waste from electrical and electronic equipment, WEEE
- Agricultural waste
- Biodegradable waste
- End of life vehicles and tyres

A brief overview of the characteristics of each before mention waste category is given as follows:

The municipal solid waste (MSW) is considered as an urban issue. Knowing that currently "more than 50 percent of the world's population lives in cities and rate of urbanization is increasing very fast" it is obvious that the rate and amount of generated waste, resulting from the increased consumption of goods and services, are much higher when compared to rural areas.[8] MSW is generated from households, commercial and industrial activities and is consisted of materials such as glass, metals, textiles and biodegradable waste (paper, food and garden waste). As shown in Figure 2, the paper constitutes the largest fraction of the municipal waste (35%) where as organics and plastics comprise 25% and 11% of the total MSW, respectively.

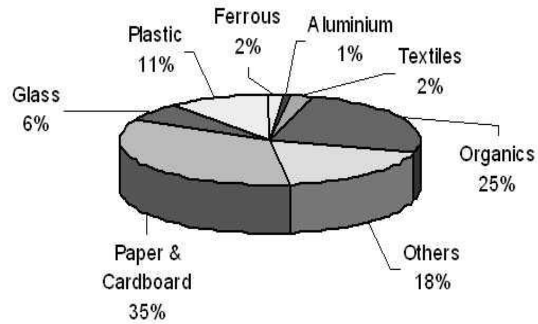

Figure 1. Composition of municipal solid waste [1]

Bearing in mind that according to the waste hierarchy the waste disposal is the last waste management option, several types of most frequently generated municipal solid wastes with their approximate times of degradation,[9] are listed in Table 1:

Table 1. Types of waste and the approximate time it takes to degrade[9]

Waste type	*Essential time for waste degradation*
Organic waste (vegetable and fruit peels)	7-14 days
Paper	10-30 days
Cotton cloth	2-5 months
Wood	10-15 years
Woollen items	1 year
Tin, aluminium and other metal items	100-500 years
Plastic waste	One million years???
Glass bottles	Not determined

It can be seen that disposing of plastic waste becomes a huge problem as it has undefined time of degradation. Therefore, re-using and recycling of plastics as more preferable management options have to be considered with great attention.

Due to the increased human population and especially the advanced technological development the ***recyclable waste category*** is one of the fastest growing waste streams nowadays. It consists mainly of plastic packaging waste and waste from electrical and electronic equipment (WEEE), which constitute 17% and 4% of the MSW, respectively.

The ***plastic packaging waste***, regulated with Directive 94/62/EC on packaging and packaging waste, even thought with a short usage life, presents a huge managing problem if disposed of because of its undefined time of degradation (Table 1). In order to have effective recycling, which will be more discussed in the text later on, it is necessary to select the plastic waste according to different materials so that they can be recycled efficiently.

Also, increased attention has to be given to the ***Waste from Electrical and Electronic Equipment*** (WEEE) coming from all kind of electrical and electronic equipment, IT and telecommunication, refrigerators, washing machines televisions, because it contains potentially hazardous materials which can be harmful to human health and the environment. For that purpose, the European Commission has prepared additional regulative for WEEE in the form of two Directives, the first one, Directive 2002/95/EC, for restricted use of certain hazardous substances in EE equipment and the second one, Directive 2002/96/EC, for collection and recycling of such equipment.

The other MSW waste streams, like the organic waste, paper, cotton cloth and wood, can be more easily managed by their recovering into energy using incineration or composting.

End of Life Vehicles (ELVs) and Tires present another important waste category. Although most of the composing materials of the vehicles (aluminium, steel and plastics) can be recycled it must be done very carefully as the presence of lead, mercury, cadmium, hexavalent chromium, antifreeze and different kind of oils can be harmful for the humans and environment.

The waste from construction and demolition is generated mostly from the construction industry and road infrastructure renovation and maintenance. It is usually made up of concrete, sand, wood, glass, plastics, asbestos, solvents and paints and has to be managed with great attention, too.

The agricultural waste is composed of waste from animal farms and agriculture. It is organic and biodegradable. However, the presence of small amounts of plastics, pesticides, waste oils and veterinary medicines may pose a risk to the environment.

Waste management

The process of waste management is much more than collecting waste. It is the collection, transport, processing, recycling, disposal and monitoring of waste by considering the environmental, economic, technical, legislation and institutional issues.[10]

There exist a variety of different alternatives for treating and managing waste. According to the waste hierarchy they involve prevention and minimisation, re-use, recycling and other forms of recovery and disposal. Following the EU policy, in the case when waste generation can not be prevented the opportunities for its re-use, recycling and recovery should be comprehensively investigated before its disposal.

Let’s shortly explain each step of the management hierarchy pyramid:

Prevention and minimisation are the most favourable waste management practice because they aim at elimination or reducing the generation of waste which is reflected in avoidance of all the other waste management steps. When the ***re-use*** of waste is concerned, the initially used product can be utilized once or more times for the same or other purpose without reprocessing (second hand clothes, donating second used household items, books and magazines, using empty food containers to store leftovers etc.). In that way, the resources like virgin materials and energy that would be consumed for their manufacturing of the completely new product will be preserved.

Recycling is an effective way to manage the waste material once it has been generated and cannot be used furthermore in its original form. It consists of collecting, processing or remanufacturing the waste materials destined for disposal. Collection of recyclables can be achieved in several ways:

- by drop-off

- by buy-back and/or
- by curbside collection.

The drop-off and buy-back collection require delivering the solid waste by citizens to a drop-off site where a recycling centre or a buy-back centre is established, where as the curbside option means that the solid waste is placed in a solid waste containers at curb and collected by the *local authority collection centre*. Afterwards, the recyclables are delivered to a processing facility, where, using the baling technique, they are temporary stored for either incineration or recovery of raw material. The advantage of this management option is that utilization of virgin materials is decreased and landfilling is prevented.[11]

Composting as a waste management option, is an integral part of the total management of the solid waste stream. As municipal solid waste contains up to 70% organic materials composting can greatly reduce the amount of waste that ends up in landfills or incinerators. It is a process of controlled, anaerobic or aerobic, decomposition of organic materials, such as leaves, grass and food scraps by microorganisms resulting in a soil-like material, known as compost. The compost is good soil conditioner and can be used organic fertilizer in landscape applications to improve crop production and to control erosion. Due to the high content of organic matter, the compost enables the soil to increase the water holding capacity, decreasing in that way the necessity for often watering. Also, the balanced microbial communities found in compost enhance plants resistance to disease which results in avoidance of the use of fungicides. It is also effective at limiting erosion, and as a reused resource creates a value added product to enhance plant growth.

After the reducing the waste and conducting the re-use and recycle steps of the waste management hierarchy (including composting) as much as possible, the remaining waste fractions can be used to generate heat and power, a step commonly known as ***'recovery'.*** Different types of treatment can create different types of energy, from biogas to electricity. The combustion of waste at high temperatures, known as waste-to-energy incineration can generate energy while reducing the amount of waste by up to 90% in volume and 75% in weight.

By recovering the energy from leftover fractions the most wanted option to send zero waste to landfill is enabled which may bring added value to local communities and the broader economy.

Landfilling is defined as disposal of waste that cannot be reduced, recycled, composted or incinerated. In a municipal solid landfill the waste is enclosed by cover material at the top and by a liner system at the bottom. In order to control the infiltration of water, gas emission to the atmosphere, and erosion, but also to protect the waste from long-term contact with the environment the cover material is consisted of layers of soil and geosynthetic materials. The role of the liner, usually multilayered clay and geosynthetic materials, is to collect leachate and reduce or prevent contaminant flow to groundwater.

A properly structured MSW landfill should inevitably involve a leachate collection system and a gas control and recovery system.[12]

Importance of Industrial Waste Management

The smog alerts in many urban cities are result not only from harmful emissions of vehicle transportation but also from the industry outputs. Therefore, the industrial waste management is very important issue for environmental point of view. It is common that in order to manufacture different kind of goods a lot of valuable inputs in terms of energy and materials are needed; besides the resulting industrial waste in many cases is very difficult to be managed.

Hence, many countries, governments and local authorities have created specific laws that oblige the industry to take responsibility about the waste that pollutes the air, soil and water. Namely, in order to offset the environment damage extra taxes have been set up for the industries that produce excess amounts of waste or create potentially harmful effects on the air and ecosystem. The industrial producers that generate waste need to pay for the disposal and in particular, need to take caution in the way they dispose of hazardous materials. Using energy more efficiently, reducing the hazardous waste they output into the air and to the landfills and practicing composting and recycling are key factors in improving the way waste is managed.

Summarizing, the need of planning environmentally friendly production processes from industry side is more than necessary.

Waste management optimization models and their impact on sustainable waste management

Apart from the waste management optimization models, dating from the early 70's when certain aspects of waste management were considered separately, the latest ones aim at achieving more sustainable waste management system by balancing social, economic and environmental aspects.[13]

The optimal waste management model has to 1) integrate the changing demands of societies and their market forces, 2) ensure acceptable environmental sustainability of the industry/plant and 3) ensure profitability when action are taken. Therefore, the question "How can be the science put in a function of obtaining flexible waste management models by satisfying all, the SWM needs, market and environmental issues?" is risen.

There are different decision support models employed in the area of solid waste management, with most of them being developed within three decision support frameworks:[14-19]

- *Life Cycle Assessment (LCA)*, focused on the environmental performance of waste management systems,
- *Cost-Benefit Analysis (CBA)*, focused on the economic performance of the waste management systems
- *Multi-Criteria Decision Analysis (MCDA)*

Each decision support framework[3] includes a basic model serving as a guide, and alternative models that can be developed within a framework, by changing the assumptions and constraints, or the objectives set by decision-makers in the basic model.

In the following text we will provide a short overview of above mentioned models and discuss some of their advantages and disadvantages.

Life cycle assessment, LCA. These models are commonly used to quantify the environmental impacts of products throughout their design, production, usage and disposal.[20] The term 'product' includes not only product systems but also service systems, e.g. waste management systems.

The LCA analysis can evaluate the benefits of different waste treatment techniques such as the production of heat and electricity from incineration, production of new raw materials that can replace production from virgin materials, furthermore it can determine quantitatively all the emissions from waste management systems into water, land and air, the time dimension of emissions of greenhouse gases, and can estimate the effects arising from products consummation on humans.

According to the Environmental Management Standards regulated with the ISO 14000[21-22] the simplest LCA model, as presented in Figure 2. consists of four phases[14,23]

[3] "*A decision support framework* can be defined as a broad outline of interlinked items supporting stakeholders in a decision-making approach for specific objectives and also serving as a guide that can be modified as required by adding or deleting items."

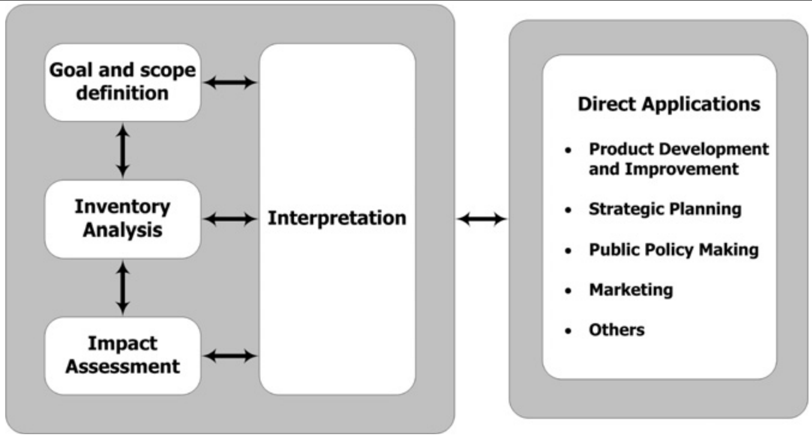

Figure 2. The basic model of LCA framework[15]

In the first phase the investigated product, its relations to the alternative products and the level of analysis are defined.

The second phase includes identification of all inputs and outputs of the studied product. It is not an easy task because involves a lot of information and several assumptions must be considered. However, some databases have been developed regarding the quantification of emissions arising from the product and its management operations.

The significance of the potential environmental impact of the product inputs and outputs for each impact category is determined in the third phase. The environmental indicators are calculated utilizing the following expression[24]

$$S_i = \sum_{1-j} E_j \cdot e_{ij}$$

where are:

i - Impact category (global warming, human toxicity, aquatic eco-toxicity, acidification, non-renewable resource use etc.)

j - Single unit of intervention

E_j - Magnitude of the environmental intervention and

S_i - Score on the impact category

Data analysis and interpretation of obtained results is given in the fourth phase of the LCA. In this phase recommendations about the necessity of minimizing products environmental impact should be also included.

Although it was shown that findings from LCA modelling are consistent and policy-relevant because of some of its disadvantages like the simplification of the model compared to real waste management problems, the subjectivity and arbitrariness of some of the assumptions introduced in the LCA model, it is difficult to generalize the conclusions from case studies to policies.

Cost-Benefit Analysis, CBA. Waste management economics, in particular its cost aspects, is undoubtedly related to environment and health, both in corporate and societal terms. It was shown that a good relation between the industrial preventive environmental protection strategies and substantial savings exists. It was also shown that the efficient management of industrial waste improves the competitiveness if handles the waste properly.[25]

Generally, CBA is analytical tool for estimation of the total costs and benefits from a planned project. Although CBA is typically applied on projects, in the recent years it has been widely used as evaluation technique for waste management systems.

Minimisation of costs is one of the necessary criteria to select the most economical scenario. However, environmental impacts and benefits may divert the recommendations towards sustainability, which is currently more desired by societies seeking long term environmental benefits and conserving natural air, water and soil resources.[26]

Usually the CBA of waste management systems is studied in a case-by-case basis as the environmental benefits and costs are correlated with the project scope (landfilling, incineration, recycling or solid waste baling fuel schemes). Most benefits of investments in waste management usually arise through environmental protection, e.g. saving of groundwater resources and limitation of CO2 emissions.[27] The decision- making on waste management options using CBA should be based on the overall net benefits and costs to society, e.g. although recycling costs are more than the conventional landfilling method, it should be preferred as provides more environmental benefits.

According to the Guide to Cost-benefit Analysis of Investment Projects of the European commission[28] the basic model of the CBA framework is consisted of six phases, graphically presented as follows:

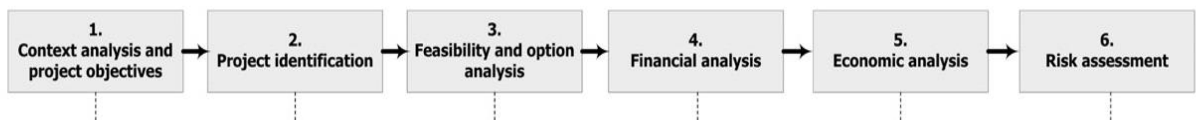

Figure 3. The basic model of CBA framework[15]

In the first phase of the modelling the socio-economic context is analysed and the project goals are identified.

A complete description of the project in terms of defining the life cycle phases and secondly determining what costs and benefits will be introduced in the selected model should be given during the second phase of the CBA framework.

In the third phase the most suitable technology for the waste treatment should be selected and the possible scenarios with and without investment should be considered.

The next phase is to make a financial analysis for the observed waste management system by following the discounted cash flows and using a financial discount rate. Also, in the fourth phase the financial sustainability of the system is assessed by calculating the financial indicators.

In the fifth step the economic indicators, net present value, NPV, internal rate of return-IRR and the ratio benefit/cost, B/C, are evaluated. The waste managing project under observation will be feasible if the B/C value is greater than 1.

In the final, sixth, phase of the CBA framework risk assessment analysis should be carried out in order to check if the selected waste management option satisfies the real-life performance indicators. If it is not the case, measures for risk mitigation should be recommended.

One of the main disadvantages of the CBA for waste management is the difficulty to express in monetary terms the environmental impact of a SWM plant because of the complexity of analyzed ecosystems.

In order to overcome some of the weaknesses of the existing CBA models a lot of work have been done for their modification and as a result the WAMED model was obtained. This latest model enables waste managers to conduct a comparative analysis of estimated, actual and prevented financial damages during the implementation of some waste management scenario.[13]

Multi-criteria decision analysis, MCDA. Design of solid-waste management systems requires consideration of multiple alternative solutions and evaluation criteria because the systems can have complex and conflicting impacts on different stakeholders. Many researchers have found the MCDA as a successful approach to solve this design problem and to help decision makers to select the most preferable decision.

The MCDA models can provide a thorough analysis and understanding of the problem, inclusion of quantitative and qualitative parameters into the decision process, inclusion of different group interests into the analysis process and elasticity of the decision process, which is missing in the economic models. Furthermore it enables to change the results of the modelling by changing the values of subjective parameters. However, MCDA is too complex for operating because of its difficult vocabulary and procedures and only skilled users can do the modelling.

A detailed analysis of the theoretical foundations of different MCDA methods and their strengths and weaknesses is given in I. Linkov and J. Steevens[22]. To comprehend, MCDA methods utilize a decision matrix to provide a systematic analytical approach for integrating risk levels, uncertainty, and valuation, which enables evaluation and ranking of many alternatives. Different techniques, like Simple Weighted Addition method, Weighted Product method, TOPSIS, cooperative game theory, and ELECTRE require diverse types of value information and follow various optimization algorithms. Some techniques rank options, some identify a single optimal alternative, some provide an incomplete ranking, and others differentiate between acceptable and unacceptable alternatives. As a whole, the end result of the application of multi-criteria decision analysis is a comprehensive, structured process for selecting the optimal alternative in any given situation, drawing from stakeholder preferences and value judgments as well as scientific modelling and risk analysis. This structured process would be of great benefit to decision-making for homeland security, where there is currently no structured approach for making justifiable and transparent decisions with explicit trade-offs between social and technical factors. The MCDA framework links technological performance information with decision criteria and weightings elicited from decision-makers, allowing visualization and quantification of the trade-offs involved in the decision-making process. MCDA is of great utility in different areas, e.g. it is used for selection of the optimal landfill location[29], considering the problem influenced by numerous and sometimes contradictory aspects, then for comparing different waste collection and management alternatives[30] as well as for testing the feasibility of a decision-making method developed to be applied in particular conditions in which environmental and social aspects must be considered[31]. In some studies the multi-criteria decision analysis was used alongside with a geospatial analysis for the selection of hazardous waste landfill sites[32]. They employ a two-stage analysis to provide a spatial decision support system for hazardous waste management in a typically under developed region: GIS was used for performing the initial screening process to eliminate unsuitable land and the second stage was utilization of a multi-criteria decision analysis (MCDA) to identify the most suitable sites using the information provided by the regional experts with reference to new chosen criteria. MCDA was also used to evaluate the impact of various operational and construction bioreactor landfill strategies on project economics. [13]

Summarizing, all of the above mentioned models are applicable to selected waste management scenarios and in order to have less environmental impact the waste management systems should be analysed using the integrated approach which involves simultaneous use of more than one model.

Conclusion

An analysis of literature on the work done and reported in publications in the last decade, related to the models used for optimizing waste management systems was performed.

The Life Cycle Assessment, Cost Benefit Analysis and Multi-Criteria Decision Analysis models were analyzed and the findings are as follows:

- Results from LCA modelling are consistent and policy-relevant but because of the simplification of the model compared to real waste management problems and the subjectivity and arbitrariness of some of the assumptions introduced in the LCA model, it is difficult to generalize the conclusions from case studies to policies.
- The CBA of waste management systems is studied in a case-by-case basis as the environmental benefits and costs are closely related with the project scope. One of the main disadvantages of the CBA for waste management is the difficulty to express in monetary terms the environmental impact of a SWM plant because of the complexity of analyzed ecosystems.

  WAMED, the latest modification of the CBA model, overcomes CBA limitations and enables waste managers to conduct a comparative analysis of estimated, actual and prevented financial damages during the implementation of a particular waste management scenario.
- The MCDA framework links technological performance information with decision criteria and allows visualization and quantification of the trade-offs involved in the decision-making process.

Based on the results one can say that there in no dominant municipal solid waste management model and each of the observed models is applicable to selected waste management scenario. However, the LCA models seem to be the best choice when seeking the best sustainable development solutions.

In order to have less environmental impact the waste management systems should be analysed using the integrated approach which involves simultaneous use of more than one model.

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THE CONCEPT OF CLUSTERING AND ITS BENEFICIAL CHARACTER

Ivana Nikiforovska, MSc[1]

ABSTRACT

The clusters are considered to be important tool of regional policy and economic growth. Many economists define them as modern instruments for competitiveness, although the cluster concept is yet to be developed. The area of clustering and its characteristics is challenging for many contemporary economic researchers.

This paper merely attempts to clarify the concept of clusters and highlight the benefits that could be obtained both on national and company level. The advantageous nature of the clusters is presented in this paper providing insight into the effects that can be achieved in a particular economy.

Keywords: **Cluster; Competitiveness; Networking; Regional policy; Benefits**
JEL classification: **R11, R19**

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I. Theoretical aspects

Over the past fifteen years, the clusters have been seen as a tool for promoting growth, innovation and competitiveness at local, regional and national level. Many firms have found clustering as an excellent instrument for joint approach to market and sharing of resources. In order to understand how the cluster model works, it is important to depict some theoretical aspects of defining the clusters.

A cluster is a mix of firms operating in the same line of business, interconnected by same kind of demand, same inputs and knowledge, with a strategy to improve their competiveness on the national and/or international market. It is a group of firms located in same location, trying to utilize the benefits of their proximity. Within a cluster, the firms and the related organizations such as universities, research institutions, and local government can operate more resourcefully by sharing common infrastructure, pools of knowledge and technology. The network of the cluster boosts competitive firms to work side by side and to achieve better results. Clusters are drivers of innovation, firms working closely in geographical concentration learning from each other and creating unique local knowledge. This further allows effect of knowledge spill overs to all the actors in the specific location in question.

For many years, many of the researchers working in the field of economics have been quite familiar with the economic and strategic importance of clusters, however it was until 1990s they made it focus of research.[2]

Michael Porter, a well-known economist who has done a breakthrough in the field of clustering, defines clusters as: Geographic concentrations of interconnected companies, specialized suppliers and service provides, firms in related industries, associated institutions (for example universities, standards agencies and trade associations) in particulate field that compete but also co-operate.[3]

[2] *Entrepreneurship and Business*, Álvaro Cuervo-García, Ángeles Montoro-Sánchez and Ana María Romero-Martínez, Universidad Complutense of Madrid, Madrid, Spain, 2008
[3] *On competition,* M. Porter, Boston, Mass. Harvard Business School Press, 1998

According to Paul Krugman, a Nobel Memorial prize winner in economics, "Clusters are not seen as fixed flows of goods and services, but rather as dynamic arrangements based on knowledge creation, increasing returns and innovation in a broad sense" (Krugman,1991). In order to answer the question: "Why and when does manufacturing become concentrated in a few regions, leaving others relatively undeveloped"[4], Krugman emphases that regions and their population depend on the conditions in the region. He argues that the location decision by the firm or the household is dependable on the conditions created within the region, for example if the transportation costs in a particular region are a subject to change, this might lead to a change in the number and structure of the population.

Morosini is another author exploring the area of clustering, according to which cluster is "socioeconomic entity characterized by a social community of people and population of economic agents localized in close proximity in a specific geographic region" (Morosini, 2004).

The clustering approach finds its niche in the academia as well. The word "cluster" means different things for different researchers in the academic world and even for politicians (Feser and Bergman 2000). Many researchers have access to resources and opportunities to create and develop a new research or innovation in their field of interest. The competitiveness in the cluster stimulates the research community to compete and to develop better solutions for the firms that will allow them to further facilitate their access to the national or the international markets. Also, politicians are beginning to understand the concept of clusters and that this is the way to promote: innovation, growth, employment, entrepreneurship, increasing firms' productivity, and within the cluster, possibility to improve the conditions for workers and raise the local wages.

[4]Journal of Political Economy: *Increasing Returns and Economic Geography*, Paul Krugman, Massachusetts Institute of Technology

The term cluster signifies a group of similar things growing together or located close to each other or a group of people associating with each other.[5]The clustering model contributes to the increase of competitiveness of the local economy and individual businesses; it adds to the business environment by increasing the attractiveness of the cluster' location due to the fact that it is recognizably good place to invest and foreign investors are triggered to explore the opportunities that the location has to offer. This is very important aspect especially for the developing countries, in a sense that the clusters can be used as a tool to promote the country assuring the prospective investors of the good collaborative environment built by all stakeholders.

Porter as the founder of the idea of the cluster concept has been promoting this as a key policy tool for a number of years. This can be seen by the fact that Porter has been invited all over the world by policy makers to help them identify and promote perspective business clusters. Activities of this type contributed to popularizing the cluster concept, to making it a subject of more thorough analysis and to being widely adopted in a number of developed and developing countries.

The main purpose of the cluster policies is to strengthen a particular regional economy, and thus the national economy. However the purpose of the different policy instruments varies depending on the type of cluster and regional needs[6].

Héctor Osvaldo Rocha, economic researcher in the area of clusters, in his paper "Entrepreneurship and Development: The Role of Clusters" elaborates that the clusters have three basic dimensions:[7]

1. Geographical proximity
2. Networks between companies
3. Networks with the organisms and institutions

[5] *The clusters as a factor attracting foreign direct investments in less developed regions,* Romanian Journal of Regional Science, vol.2 No.1, Summer,2008
[6] www.oecd.org/innovation/policyplatform
[7] *Entrepreneurship and development:* The role of clusters, Rocha, H.O, Small Business Economies, 2004

Geographical proximity is the key to defining a cluster. Geographical localization of the firms is the main pillar for success of a cluster. In the cluster, firms are concentrated in one particular area where they know each other and their rivals in the specialized industries. In this way, there is an open window among the companies for new relations to be established and intra networks to be created. These opportunities for collaboration may lead to significant advantage for the inner-cluster firms, and provide a head position to the firms that are not part of the cluster.

Networks with the organisms and institutions are referred to institutional networks and represent the connection between government and nongovernment institutions. Clusters are forming a set of tangible, intangible assets and institutional elements[8]. All these elements are interconnected in the geographical space where the cluster is. First, the tangible assets element refers to the firms that are involved in the cluster and the infrastructure that is created to serve the respective companies. Second, intangible assets are the knowledge, technologies and know-how that are shared and transmitted in the cluster among its participants. Third, the institutional elements are the research centers, universities, public administration that are also part of the cluster. The institutional elements have been often found to have great impact to both the cluster's and therefore national economy's growth.

Also, on many occasions in the literature, the clusters are equated with industrial agglomerations. Cooke and Huggins (2002) define the clusters as "Geographical proximate firms in vertical and horizontal relationships involving a localized enterprise support infrastructure with shared developmental vision for business growth, based on competition and cooperation in a specific market field". The industrial agglomeration is concentration of companies from the same industry that enjoy agglomeration economies. For example, agglomeration is firms concentrated in one geographical place such as Napa Valley (California), famous for the best wines in the United States or New Wall Street where financial institutions are concentrated in this particular area.

[8] *Entrepreneurship and Business*, Álvaro Cuervo-García, Ángeles Montoro-Sánchez and Ana María Romero-Martínez, Universidad Complutense of Madrid, Madrid, Spain, 2008

However, it is important to note that the clusters are more than agglomeration economies and the difference lies in the networks. The interconnectivity among the stakeholders could boost the firms' competitiveness, increase their productivity and enable better access to market.

II. The advantageous nature of the clusters

In accordance to the concept of clustering, competitive firms are trying to be located closer to each other in order to have better market position and to be closer to all firms that are operating in the same industry. Their firm' management understands the clustering as a strategy for improving the competitiveness in the industry they operate in, they will have better access to resources and they can achieve growth that might not be feasible if they operate in a separate location. In this sense, there are many benefits to being a part of a cluster, which can be discussed from different perspectives: on a national level and firm level.

1. Economic benefits from national perspective

- increased productivity – the clusters provide access to specialized inputs, information synergies and public goods that are advantageous to the productivity. The increased productivity by itself can lead to increase in wages, profits or price competeviness of local firms. It further creates an opportunity for cluster expansion that could trigger higher demand of labor and new job openings;
- rapid innovation – the clusters could enable collaborative environment that stimulate the companies to work together and develop innovative strategies that will help them compete on the global market;
- stimulating entrepreneurship – the clusters have a very strong connection to entrepreneurship. They characterize with low barriers to entry, enabling start-up environment that offers the necessary resources, skills and inputs that facilitate the growth of the firms in their launching phase.

Highly developed and recognizable cluster in particular region is beneficial to the overall national economy. It boosts the competiveness and growth of the country by increasing the productivity, stimulating innovation and entrepreneurship, the three benefits described above. All this is a very strong argument why a particular government should support cluster formation. However, establishment of a cluster might not be feasible if the firms being part of same industry are in different stage of development. For example, the different level of compliance with international standards by the firms, might contribute to a lack of mutual interest/possibility of the firms for access to a particular market, i.e. different level of firms' development creates different possibilities for export. The absence of mutual interest challenges the need for cluster formation. On the other hand, having a same type of firms with similar level of development in a particular cluster, could be an excellent environment for a collaborative activities to be established by the firms and for them to work together to secure improved joint access to market, reduced transportation costs, joint promotion etc.

2. Benefits on firm's level

The clustering can prove to be a highly beneficial to a particular firm. There are a number of reasons that encourage the firms to join a cluster, such as:

- **Low costs and better access to intermediary goods**. Being located close to a competitor, could also positively influence your collaboration with your suppliers. Having a number of same industry' firms in one place, stimulates the producers of the appropriate intermediary goods to access the cluster to work with a larger base of buyers, which would mean higher demand, opportunities for economy of scale, lower production and distribution costs and hence lower price of the intermediary goods, which is actually of value for the firms that are part of the cluster.
- **Sharing of labor.** In the cluster, similar pool of workers can be found. The hiring of appropriate labor force should not represent a problem for the firms in the cluster considering the abundance of qualified labor that is expected to be near the clusters. The workers will perceive the large number of competitive

firms in one place as an excellent employment opportunity and any movement of workers from one company to another would not represent serious risk either for the firms being on the labor demand side, either for the worker being part of the labor supply. Workers would be able to more easily find new job if changing employers, and the firms would be able to find appropriate work force considering the large labor pool at their disposal.

- **Knowledge and technological spillovers.** The cluster by itself represent a network of firms operating in same industry, workers working in the same field and due to their proximity they all have a chance to interact between each other and exchange ideas. Furthermore, any movement of workers from one firm to another might could contribute to know-how spillover that can have great effect on firm’s competitiveness.
- **Lack of skills mismatch.** It is very important to stress that clusters are often located close to universities and research institutions with which they cooperate and have established good connections. This level of cooperation contributes to the educational process of the prospective future workers in the cluster and helps in the development of qualified needed work workforce.

III. Conclusion

Although many distinguished economists are investigating the concept of clustering and its importance is evident, still there is no uniform way of understanding the cluster's model and its role as a tool for promoting competitiveness. The cluster can be used in various environments, from concentration of same industry firms to academia, and they all utilize the same basic cluster function, which is networking. Linking stakeholders such as economic operators, research institutions and other country players can be seen as a successful instrument for effective regional policy and economic growth and therefore should be integral part of any country strategy.

Other important feature of the clusters to be mentioned is the efficiency. Being part of a cluster provides a plenty of opportunities for saving resources, starting from opportunities to share resources for research purposes, all the way to the distribution costs of the final product and its access to the foreign market. Also, benefits such as sharing a labour pool and knowledge contribute to the quality of the products being developed. The efficiency combined with the qualitative element bring increased innovation efforts, productivity and ultimately competitiveness on the global market which is the key factor for economic development.

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SUSTAINABILITY OF HANDCRAFTS IN SERVICE OF RURAL ECONOMIC DEVELOPMENT

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ABSTRACT

Modern development has left mainly service jobs in the handicrafts, while in the production and processing, the role of craftsmanship is nearly dead. There are only remains of the craft way of doing business. Unfortunately, the surviving crafts are now more museums or tourist attraction, than a serious possibility of providing safe existence, reliable family business. Survival of the old craft is endangered in almost all old towns in the Balkans and beyond. Solving this problem requires a comprehensive study with an analysis of the current situation and study the way of maintenance and further development of traditional crafts, as well as specific forms of material and spiritual creation.

But not just those very old handcrafts wither away or are nearly dead, but the old traditional architecture and traditional way of life wither away too, which confirms the specificity of national identity. Therefore the need for continued support is emphasized of the handcraft and craft manufacturing institutions, for preserving traditional crafts and other heritage models of individual countries in the region.

Keywords: **reaffirmation of crafts, small business, quality handicrafts, market segmentation, rural development, stability programs**

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Introduction

Traditional crafts have been maintained and handed down from generation to generation for centuries, and their survival is associated with the lifestyle and conservative habit of using items that are used daily. But this tradition was interrupted by the development of tourism, because the tourism changed the habit of using these objects from their practical use to souvenir importance.

Unfortunately, a significant number of traditional trades no longer exist. Only those that have more practical and useful value, have been still held.

Craft, as an existential survival of individuals, families and social groups, includes expertise and specific skills that result in proper performance of the work, in the service market, i.e. obtained products values. Therefore the craft had and should still have special economic and social burden. Craftsman merchandise is sold only in certain places or spatially concentrated stores, so all related trades, as a rule, are placed in the same street. Most of these streets make a kind of Bazaar, as a specific commercial area of the city, or market places while streets are named after trades grouped.

However, the main aspects of the artefacts remain today and they are: *economic* (opportunity for self-/employment of women and young people, enriching the local offer, clients and target market educating, cooperation with the business community, existence of ethnic categories, regional and cross-border cooperation), *cultural* (education of women, young people, marginalized groups, cultural heritage preserving, organizing exhibitions, enrichment of local and regional events, promoting the ancient old heritage, promoting the state, developing new roles of museum quality reproduction and production lines, etc.) and *tourist* (rural development opportunity, ecological and ethnic tourism).

Threats to survival crafts

According to ethno network and institutions dealing with local economic development, economic and social issues over the past decade have suppressed production of artefacts due to influx of low -quality, but cheap foreign products, apparently adapted more to the capabilities of an average consumer. The lack of an organized approach in promoting traditional values of rural tourism, has contributed to decline of old crafts that require time and money, while manufacturers and interested buyers are unable to stop this trend.

Nowadays, foreign and domestic tourists cannot buy quality, designed, well-packaged products, clothing, souvenirs and gifts in rural areas that reflect local traditions, national motives and cultural heritage. That is because techniques (bonds, gold embroidery, weaving, and knitting) and motives of rural areas are not passed to future generations, which should preserve those values.

In most cases these small businesses are still at amateur level because group manufacturing production by women in rural areas, who mainly produce handmade items, which cannot be maintained because of the lack of idea for product design, which even as a souvenir must have a practical value, ensured packaging, certificates and declarations. Sustainability of craft activity is possible only with adequate presentation on the market. Additionally, the lack of quality material prevents design groups to fill their production programme, using the advice of experts and designers and adjusting the business requirements of the local and regional markets.

Assistance provided comes from occasional domestic institutions and foreign donors and usually it is short and insufficiently developed to produce results, usually based on the prejudice that handicrafts and crafts manufacturing are not sustainable and there is no market for these products.

Associations involved in the production and release artefacts often encountered similar problems, and should emphasize the following: uneven quality and standardization of the production needs of the modern market, insufficient quantity of products that can compete and negotiate serious capital and investments; lack of continuity in the production and supply of products on the market (seasonal); social enterprises programs are dependent on project cycles and the unavailability of funds for procurement of materials, labour costs and investment in marketing, lack of access to professional business mainly due to lack of expertise in management, marketing, entrepreneurship and do not have sufficient funds to invest in professional assistance, lack of state support for artefacts associations as economic entities, inability to identify and understand the core and typical obstacles in the organization and acquiring sustainability of such ventures and lack of a legal framework for social entrepreneurship[2].

Sustainability and conditions improvement in the area of traditional crafts

Reaffirmation is possible because the potential for handicrafts production in the countries, especially in the Balkans, is still large but unorganized and undefined in terms of aesthetics and commercial skills. If there is a possibility of production of arts and crafts and handicrafts development, reaffirmation is an employment opportunity for families in rural areas without large investments. Through chain "craft" shops distinctive domestic products market may have great potential as an economic, cultural, and tourist aspect. The question is how to reactivate already extinct crafts, how to preserve the crafts which still exist and persist, but are in danger of their extinction?

1. First we need to **re-invoke the national traditional crafts** as inevitable and valuable art-economic category (goldsmiths, cauldron-making, rug-making and other manufactured products), for their excellence and outstanding design, as well as for the production of unique products that are truly artistic values and should represent a kind of civilization debt toward our culture and tradition. Handmade items contain itself all characteristics of artistic creation, a unique way to meet human needs for beauty and spiritual creativity that binds us with the past, with our ancestors. The support of the old crafts - maintenance and revitalization of the existing should be an activity of institutions dealing with applied art. In a word, the emphasis should be placed of the designated production and service activities in the field of so-called "small businesses".

[2] http:// orbus. be/zbornik/zanati, vreme, ljudi, 2010

The products in the scope of "traditional crafts", "handicrafts" (products for weaving and knitting by hand, embroidery, clothing, etc.), old farming tools, crafts, service tools, blacksmiths items, ceramic tableware, cutlery, storage and maintenance of food, etc., **should be evidenced in the offices and departments in national museums**. They should be systematized, found, and recorded in relevant institutes[3].

2. **The support of the state** is necessary, especially the strategies and action plans for the entrepreneurship and crafts development and measures implementation that will improve the situation in the field of traditional crafts. These action plans should ensure survival and development of traditional crafts, starting from educational segment (planning grants for crafts, prompting the traditional crafts development) through financial support and aid of the local products and souvenirs development, that are incentives which means economic development in rural areas of the country (with the "curriculum" for any old craft or students training - especially for those crafts that withered away in the last century). If some old crafts can no longer be found in the state, they should be sought in neighbouring, traditionally related countries. This should conduct appropriate research, and in certain cases to be implemented[4].

3. Particularly important is the idea of establishing and operation of institutions in the area of the Institute of **entrepreneurship development,** which will conduct research in the market, the technological conditions of performance, advisory activities, marketing services, research in the area of supply and demand, technical assistance contracts, legal assistance, etc. Especially important is **reaffirmation of the old home business trades (**weaving carpets for various purposes, making the fabric, making costumes, weaving, reanimating the old washing machines, embroidery and restoration techniques for "gold" and "silver" embroidery etc.). **Joint action** of all key

[3] Poboljšanje stanja u oblasti tradicionalih i starih zanata, Ministarstvo razvoja, poduzetnistva, obrta, 28.01.2010

[4] http:// www.ethnonetwork.com

concerned parties in order to achieve long-term goals should produce **sustainable family businesses**, for development of rural areas.

If craft activities are reaffirmed, they may represent key for starting a business in all areas of business or employment of the working age population. If it starts from appointed traditional activities or planned activities, significant populations of our cities (and towns), may be involved in certain activities in accordance with traditional products that people can these activities (crafts) perform at home as a sort of "home business" or as artisans in their shops in the bazaar, where they will offer and sell these products, thereby increasing their turnover which will bring satisfaction to citizens, tourists, foreigners. Thus this old "system" will be beneficial from the standpoint of the unemployed working population.

There are ideas for developing **systemic support model for the so-called social entrepreneurs** and through this model education, counselling, marketing services, market connectivity will be implemented. Furthermore, it would be desirable to establish curricula for conducting practical studies of traditional crafts, as well as various areas of interest that would have regional significance. Micro-credit is of immense importance for further encouragement of self-employment and it should be implemented, if we want local and rural development. In order to provide micro-credit to the craft sector, it is necessary to reach a consensus on the holders, areas and targets and measures for social entrepreneurship[5].

4. In terms of setting artefacts, **the brand should be developed and standards for quality handicrafts to be set** and above all, connecting organizations and artisans in the same set. Besides devising a marketing campaign, it should be set up web shops for handicrafts. Regarding organizational form, it is necessary to pay more attention to the type and quality of supply souvenirs in order to avoid those that do not match, i.e. those products that do not belong to the corresponding Old Bazaar. The number of souvenirs will depend on supply and

[5] Neprofitno poduzetništvo u praksi, Izvještaj s održanih radionica, Erdut, 24. travnja 2009

demand, which indicates a strong tourism development, both domestically and overseas. The development of new products for the craft business is the basis for business success achieved by opening new markets, increasing sales of existing product lines, repositioning the company and increase profitability. Quite often the development of new designs craftsmen perceive as development of new products, but the design is just one segment of the process of making a new product on the market including: market research, product design, determination of price and packaging. For successful development of new craft products all elements of a successful product should be taken into account and to observe the stages in the development of new craft products[6].

According to research done with the artisan businesses in RM [7], can be concluded that the process for developing new craft products is already familiar to artisans and it is used frequently, but does not correspond to standards compliance as the stages in the development process. The other problem is not drawing attention to market needs or market research, view to the development of market-oriented products. When developing new craft products, we should pay great attention to elements that are crucial for product success or product line (preferably instead of one product, a line of products to be developed). It allows the initial idea for a product to be applied in other products, which enables costs for products develop to be divided into several products. The experience shows that many consumers choose a line of products against a single product, because the line of products sells more than one product. The quality and particularly appealing souvenirs can be exported as any other goods, if the **export is organized under special trade agreements** through companies that would carry the name of national character. Other products would be presented and sold in shops and specialty stores that also carry a national landmark.

[6] Izvještaj s održanih radionica, Erdut, 24. travnja 2009

[7] Zoran Todorovski "Marketing activities in the development of new handicraft products in the Republic of Macedonia" Skopje, 2011 pages 66-83

5. **The role of NGOs in rural development;** although there are a number of limitations for the achieved results, we need to push for equal status with the public and private sector. Associations need to open discussions that include the following:

- creation of specific organizational programs stability;
- achieving a certain level of financial stability during the first project, and then providing sustainability;
- improve managerial capabilities and skills for projects development and raising funds in association, which should be priorities in the forthcoming period;
- creating a network of cooperation and support organizations, its expansion among key stakeholders and the development of funds of social entrepreneurship;
- Projects establishment in partnership with NGOs and institutions that can provide resources necessary for quality implementation of projects and creation of recommendations for further self-management projects.

6. If we **revitalize Old Bazaars** or old parts of the cities from the past, socio-economic communities in these parts of the cities will be restored. Why? Because they were and still are the best indicator of the socio-political situation and events in the lives of the inhabitants of a country, its level of living and surviving. Revitalization of old crafts and old-appearance bazaars are a basic precondition for application of these old parts under the auspices of UNESCO - recognition as part of the cultural and historical heritage of the world and its protection in the future of the city and of the respective country. Old bazaars are monuments of all people living in the country due to which the rehabilitation and restoration of the past, the old parts of cities should be one of the priority objectives of each country. These parts are testimony of a comprehensive development of the nation (economic, cultural and historical), a testament to the rich coexistence among people living there. Recovery and rehabilitation are essential prerequisites for saving the disappearance of old trades and occupations and their revitalization.

7. **Implemented restoration** should be made on the most attractive areas, where professional activities need to be carried out in the field of traditional crafts, organizing new souvenirs, create new, redesigned products of old crafts. Above all, renewed areas could be **so-called „living museum"** of old crafts, and skilled artisans in traditional costumes, the attendance of folk music performers: flute, accordion, violin, rim-blown flute etc. If there are inns in the old parts of the cities, the existing rooms can be adapted to native lodgings for domestic and foreign accommodation, which would present the long-existing traditional hospitality. Namely, presentations of welcoming so called "first tourist" in the appropriate city would be a **real tourist attraction.** In the cellars of inns can be arranged "production of old products, old trades" in order directly to present to tourists. This concept would be a modest contribution to the development in rural municipalities, according to international experience. So, old crafts have their own perspective and should support the views of the problems listed by state and local governments.

8. It is advisable marketing activities in the old bazaars to be applied in all old parts of cities or large craft centres in the country. **The implementation of segmented market** or marketing concepts and ideas should be implemented "step by step", or in stages. The purpose of market research for new product development is to obtain information about customers, their expectations and needs (design, price, quality, delivery, support), to learn the standard categories of products in the global market, the segments of the market. The research can provide artisans general information and detailed aspects of any market in which they want to enter and to connect with their visions. Experts for handicrafts revival, correlated with economic thought, consider that the best would be if all this is done under the auspices and with the assistance to institutions for entrepreneurship development.

9. Old crafts can especially come to the focus for **further development of the film and theatre industry**, which will always provide work and commitment of the craftsmen. Film production is somehow proper ambassador of each country. With this, younger generation can see all the subtleties and beauty of life in the old parts of cities.

The life of seniors, their defensive wars, mass scenes of war, selected from a range of occupations and similar scenes will require a lot of artefacts equipment, which will further highlight the cultural and historical Macedonian heritage, and also will encourage the development of our future cultural and artistic events. **The development of the theatre arts** should be with placed design, costume design, specific materials and equipment that can be found only in the world of souvenirs and museum collections. This art should stimulate our authors and screenwriters with their work, to verify the history of the state or the old towns.

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