

*Az eurózóna adósságválsága felszínre hozta az egységes piac egyik szerkezeti problémáját. Az egységes valuta rögzített átváltási árfolyamot teremtett az eurózóna tagállamai között. Így a kevésbé versenyképes országok nem tudják javítani a bérv versenyképességüket a leértékelésen keresztül, ellenben arra ösztönzi őket a rendszer, hogy előrehozzák a fogyasztást, mivel az egységes jegybanki alapkamat és az övezet stabilitása olcsóvá tette számukra az adósságfinanszírozást. A tanulmány áttekinti az ún. fordított Balassa–Samuelson hatás folyamatát, hogy ezen keresztül magyarázza el a külső eladósodás jelentőségét az adósságválság esetében.*

## 1. INTRODUCTION

Learning and reading from professor Palánkai always has been a stable base to understand the European integration procedures. The more precise and deeper knowledge acquired by a young researcher from Palánkai [2003] and Palánkai [2004], the more confidence arose about his own ability to understand the processes of the monetary integration and the optimum currency area model by Mundell [1961], Kenen [1969] and McKinnon [1963]. Although it got clear, also, from Palánkai [2005] and Palánkai et al. [2011] that the EMU is not an optimum currency area in the euro-12 or euro-17 form, the young researcher was convinced that the euro zone is “too big to fail”. Notwithstanding, Palánkai [2000], among others, already recognized the structural problems of euro zone in its early years. But the volume of euro zone crisis found unprepared not only many researchers but the political leaders of the zone, too. Many theories and models remained set aside before the Greek default seems to be necessary to be implemented in the mainstream of integration economics. In the following, such a model will be interpreted.

The U.S. financial crisis shocked the EU in several ways. Among them, the prolonged euro zone debt crisis seems to be the biggest challenge of the Community. The period of 2010–2012 proved, that the periphery of euro zone has had complex structural problem. In first view, many of these countries in the euro zone face to an endless debt unsustainability problem originated in two parallel procedure, the remaining annual budget deficit and the declining production. However, it can be originated in a deeper structural problem, namely the external imbalance. Moreover, this structural problem endangers the member states appearing to be stable among the periphery countries in the single currency zone.

Of course, several factors can be enlisted behind the European crisis. For example, the expansion of indebtedness of households through the products of financial innovation, the speculative bubble in the real estate market and service sector [Neményi & Oblath 2012], or the plenty of liquidity, the expansionary monetary policy [Bini Smaghy, 2010]. However, it was recognized by Neményi and Oblath

[2012: 596] that not only those countries got into trouble, who have been under excessive deficit procedure of the Community. Baltic sudden stop in 2007 or the Slovenian indebtedness problems in 2012 appeared in countries with sustainable budget balance. Divergence in inflation, competitiveness and relative wage cost was already observable among the euro zone countries.\*

In the single European market, it seems that the individual external balance of member states became neglected aspect. In the catching-up member states with inflation beyond the average, the single central bank rate proved to be too low in the sense that credit was very cheap and it was preferable to spend in the current present instead of saving for future. Meanwhile, the single currency caused unadjustable real appreciation, since it has been working as a peg inward the single market. This ruined wage competitiveness of these countries by increasing wage demand because of higher inflation. The additional inflation and the increasing wages were originated in external credit money creating additional demand. The relatively cheap credit – which a priori originated from non-local sources – financed mostly consumption of imported products and services. This could have happened until any of the global financial actors were willing to seek risky emerging market items. The debt crisis situation – originated in the external indebtedness – reveals the trap of those periphery countries in the euro zone which wasted the single currency advantages to finance the cheap import from foreign (public and private) credit. These countries can not neither devalue their currency to improve the current account nor have the public debt to depreciate through inflation. Even the exit from the currency union can not be easy solution for these externally indebted countries as the debt would remain in euro, what would only multiply their debt crisis, since sharp foreign exchange depreciation is expectable after their exit. [Kutasi 2012:717–718]

The multi-level inflation with a single interest rate of ECB has preferred the high-inflation countries as a counter-selection in the loan market, but for their fate, this also has discouraged the private savings in these countries. It can be followed in time series of effective exchange rate and unit labour cost that their has been real appreciation in the member sates with high inflation in comparison to ones with low inflation, in the single currency zone without any local monetary intervention. This Reverse Balassa–Samuelson impact would have been motivation for excessive intra-community import in externally indebted countries. The survey on less and less competitive wage of countries suffering from real appreciation is an explanation for loss of competitiveness in their export and for relative cheapness of import.

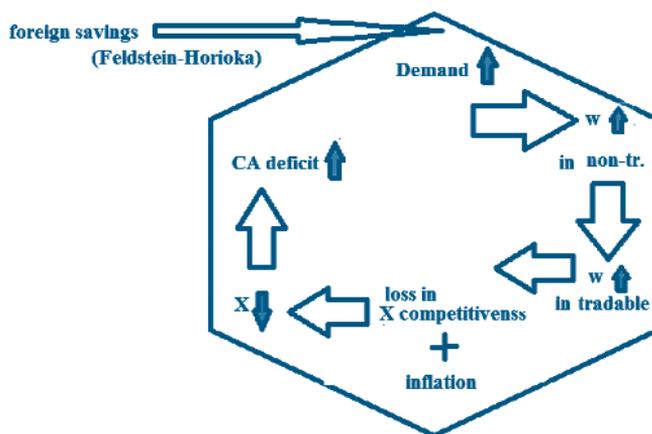
## 2. THEORY OF THE EFFECT

As Alessandrini et al. [2012] explains, only fiscal union can solve the external imbalance problem by mechanism of redistribution just like inward a country.

\* For example, the cumulated growth of ULC (unit labour cost) between 1999 and 2006 was 1,5% in Germany, but 25,2% in Greece, 23,2% in Spain, 27,7% in Portugal. (Neményi & Oblath, 2012: table 1)

Until there is no fiscal union, the credit and bond markets will redistribute fund for counties having external deficit, but in an uncontrolled way what result opportunity for speculative attacks again euro zone states one by one. The foreign/national rate in the composition of public and private debt determines the yield, thus a cumulative imbalance of current account results higher yield on debt. As Komáromi [2008:15] examined through empirical data, the net financing capability of a country depends on the current and the capital account. The higher is the weight of demand for net financing through current account – namely the debt generating items, – the more unfavourable is the structure of the external indebtedness. As Garber [1999:211] described, the fear of default and the fear of exit from euro zone will finally result shortage of credit supply and, thus, a debt crisis.

It is worth to emphasize, that in an open economy it is very likely that savings and investments correlate very weakly to each other, unlike in a closed economy assumed by Keynes where savings and investments assumed to be equal. Obstfeld and Rogoff [1996], in their 'new open economy model', emphasized the phenomenon of free international movement of national savings, thus, the free international financing of investments, what is called Feldstein–Horioka puzzle [see Feldstein & Horioka 1980]. According to the Feldstein–Horioka puzzle, Afonso and Rault [2008] stated that, if savings and investments are not correlated, the budget deficit and the current account deficit “tend to move jointly”.



*Demand*: demand of consumption, *w in non-tr.*: wage level in non-tradable sector, *w in tradable*: wage level in tradable sector, *X*: export, *CA*: current account; white arrows show the causal relations, grey arrows show change of variable (↑ means increase, ↓ means decrease)  
Source: author's own construction

### Figure 1 Mechanism of Reverse Balassa–Samuelson effect in a national economy

As there has been neither individual devaluation nor federal bail-out mechanism, the unsolved external imbalance can result divergence, regression and degradation of externally indebted countries. This is the so called Reverse Balassa–Samuelson effect. [see Grafe & Wyplosz 1997; Jakab & Kovács 2000:144]. The orig-

inal Balassa–Samuelson effect derives the higher inflation of catching-up countries from the development of productivity in the catching-up tradable sector which causes wage increase and thus inflation pressure in the non-tradable sector. [Balassa 1964] The Reverse Balassa–Samuelson effect means that the relative change of price leads to divergence of productivity in the following way: In the euro zone, the quick convergence of interest rate (*see figure 2*) imposed overheating in consumption in periphery economies of the euro zone. The expectations of households based on sharply decreasing interest rate were unfounded, but resulted quick private indebtedness particularly through consumption of non-tradable services. This latter impact raised the wage demands in the local non-tradable sector what spilled over to the tradable (export) sector. Thus, the export competitiveness deteriorated, meanwhile the local inflation rose by the higher wage cost. [Mongelli & Wyplosz 2008; Neményi & Oblath 2012]

Moreover, Lane and Perotti [1998], Beetsma et al. [2008], Benetrix and Lane [2009] found that the increasing public spending in the euro zone countries shifted the demand toward the non-tradable sector what resulted increasing wages logically there. Namely, the fiscal processes contributed to the emergence of Reverse Balassa–Samuelson effect. However, Lane and Milesi-Feretti [2002] found limited correlation between public debt and external imbalance in high developed countries.

### 3. SIGNS OF REVERSE BALASSA–SAMUELSON EFFECT

The outcome of the reverse B–S effect is a continuous asymmetry in intra-zone trade. *Table 1* shows permanent German surplus in trade relation with euro zone periphery countries.

**Table 1 German trade balance with some euro zone countries, 2004–2007 and 2011**

	2004	2005	2006	2007	2011
Estonia	342	650	954	1078	1018
Greece	4677	4696	5282	5980	3130
Spain	18823	21948	21943	27015	12320
Portugal	2190	3321	3282	3692	2319
Italy	15802	17506	17878	20801	14200
Slovenia	297	472	402	573	-483
Slovakia	-1840	-919	265	-486	-349

Positive value means German surplus, negative means German deficit

Source: DESTAT Statistische Jahrbuch für die Bundesrepublik Deutschland 2008 and 2012, [www.destat.de](http://www.destat.de)

If there is analysis on processes of real effective exchange rate (REER, see figure 2) and nominal unit labour cost (ULC, see figure 3) by country, it gets clear that the past period of euro zone between 1999 and 2011 resulted measurable relative depreciation of German production prices and costs. The REER data series shows in comparison to the rest of euro zone that pegged rate has been very favourable for Germany and disadvantageous to the euro zone periphery – except Slovenia.

The single currency works as a fixed rate – one euro to one euro – in the inter-member state relations. Appreciation means worsening competitiveness in trade and inflowing FDI.

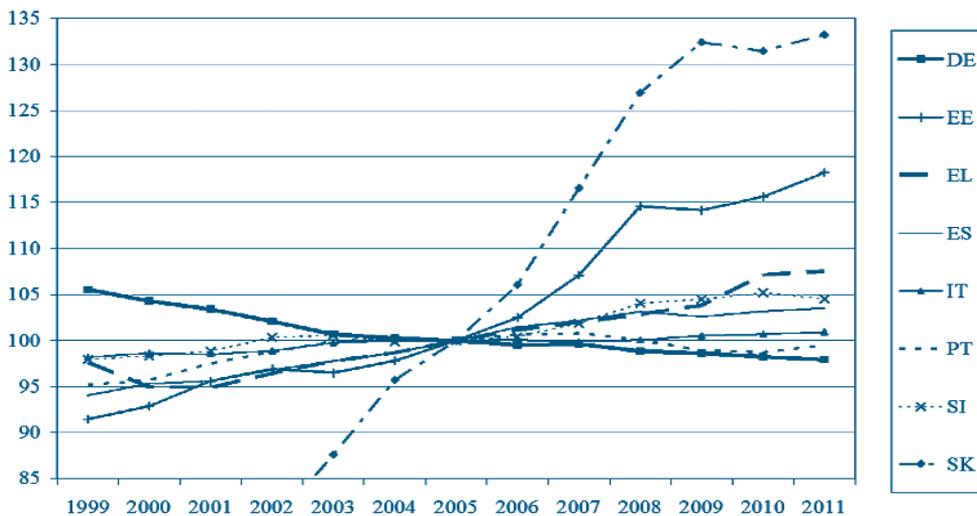
In the trends of ULC, all examined periphery countries has been losing their wage competitiveness in comparison, meanwhile the German one has improved continuously, namely got more competitive. The crisis years made change in the process which created imbalance. The EL, ES, PT, EE and SK ULC indices has made a turn, particularly because of decrease in nominal wages. This turn was established, also, in case of the analysis on current account imbalance, nevertheless, the rebalancing is far from balanced relations

#### 4. CONCLUSIONS

This study explained the national external imbalance problem in the heterogeneous single currency zone. The explanation was based on the impact of pegged foreign exchange, the Feldstein-Horioka puzzle and the Reverse Balassa-Samuelson effect.

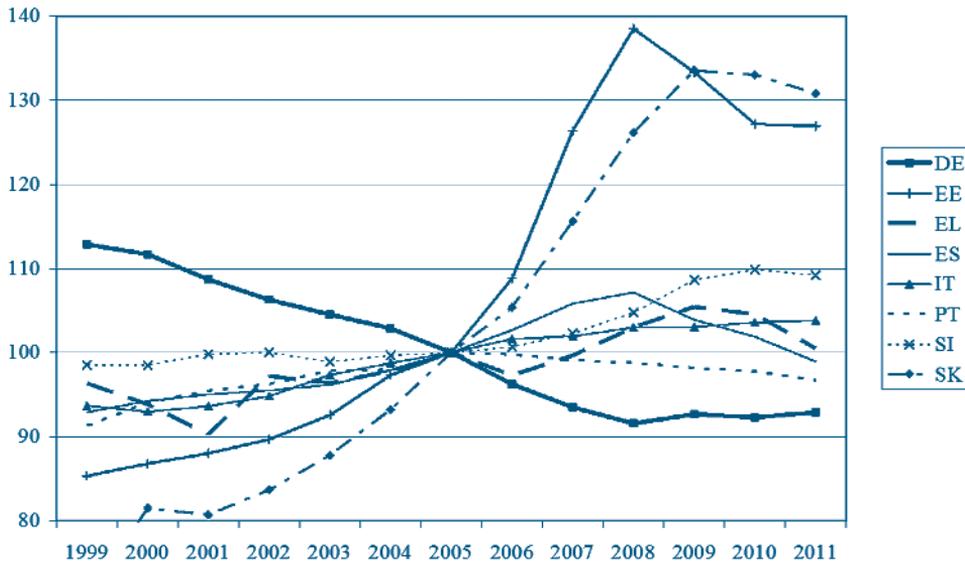
The external imbalance problem was understood on the periphery economies of the euro zone market. The problem was represented by time series of current account, terms of trade and inflation. The explanation of euro zone imbalance was based on NEER, REER and ULC data analysis.

The conclusion from ULC data series is that if the fiscal policy wants to help the export competitiveness, instead of demand for non-tradable goods and services, it should cut the taxes on wage cost, stimulate the private saving, secure the solvency of domestic banks and maintain the flexibility of wages and prices.



Source: DG-ECFIN Price and Cost Competitiveness, 2012 October

**Figure 2 Annual Real Effective Exchange Rates vs. rest of euro zone, HICP deflator (2005 = 100)**



Source: DG-ECFIN Price and Cost Competitiveness, 2012 October

Figure 3 Nominal Unit Labour Cost (2005 = 100)

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