

## VALUE ADDED - FINANCIAL AND REAL SECTOR DEPENDENCY

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### Abstract

The dependence between real and financial sector provide a very heterogeneous discussion. The Gross value added is used as an indicator of the economic development. The higher GVA in particular economy the higher level of standard of living in this economy. This article is just data analysis. It describes the evolution of the percentage deal of GVA in three important chosen economy branches; the financial services, the construction and the industry.

Main economies blocks are the EUROZONE and the NON- EUROZONE EU countries. The first block is assumed to be more developed than the second one. The data analysis is made for the time horizon from the 2003 to 2013. The whole period is divided into closer time horizons in order to highline main behaviour of indicator during the pre – crisis period, after crisis period and when the economy seems to recover from its trouble.

**Key words:** Gross value added, financial sector, economic growth

**JEL Code:** E30, E60, E61

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### Introduction

The interdependence between the real and financial sector in particular economy is a very stressed topic to be solved. Problems like these are seriously taken into account late only when the economy is in problems. When there are financial crisis, sovereign debt problems and liberalized financial sector needs a remedy from governors. In this contribution we describe the evolution of indicator gross value added (GVA) in last ten years in three representative branches in every economy. These are the GVA in the industry, the GVA in the construction and the GVA in financial services among the European countries. We show the differences between EU member countries, the Eurozone and the non EU countries.

## 1 Value added

The value added is used as criterion of the economic level because it implicitly represents the involvement of the technical advances in particular economy. Which is both deducted theoretically from the Sollow model of economic growth and empirically from the Sollow residuals analysis in the developed economy for the last 50 years. Moreover governors usually pronounce that it is important to increase the production level added (GVA) in their economy in order to provide a strength and sound economic growth and therefore higher standard of living. This article points on the structure of GVA in the European countries economies.

The gross value added is through the Eurostat statistical office defined as *“the value of all newly generated goods and services less the value of all goods and services consumed as intermediate consumption. The depreciation of fixed assets is not taken into account”*.

## 2 GVA in the financial services

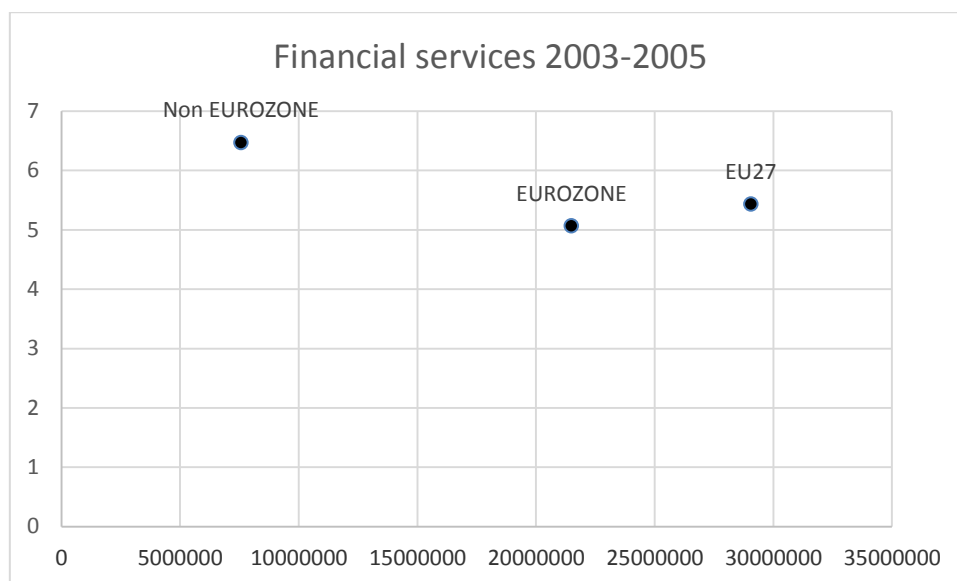
The following Tab. 1 shows the evolution of GVA in the financial services during the period from 2003 to 2005. There are three columns which represents the value of indicator in EU27, in the Eurozone and in the EU-NON Eurozone countries. The first row (GVA) represents cumulative sum of GVA among the analyzed economies (millions of EURO summed up through the exchange rate). In the second row there is a percentage deal (as a geometric average of the period years percentages) which belongs to the financial services. The graphical representation of data is visible on the following Fig. 1.

**Tab. 1: GVA in the financial services 2003-2005**

2003-2005	EU27	EUROZONE	EU-NON EUROZONE
GVA	29048673	21484676	7563997
GVA_FS	5,431909832	5,066446397	6,469967287

Source: own calculations of the Eurostat data

**Fig. 1: GVA in the financial services 2003-2005**



Source: own calculations of the Eurostat data

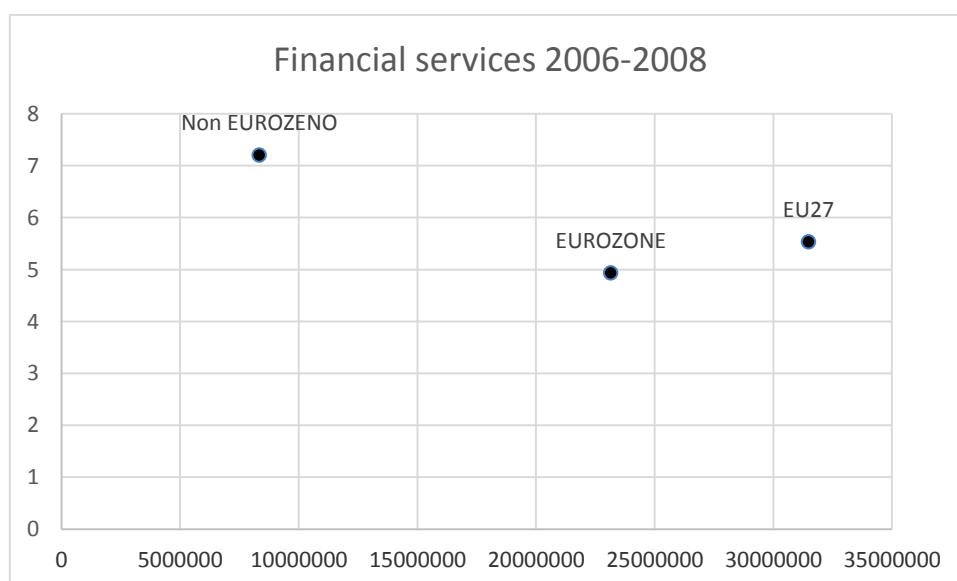
We conclude that the highest percentage deal of GVA financial services to the total GVA is visible in non - Eurozone countries in the period before 2008 economic crisis.

**Tab. 2: GVA in the financial services 2006-2008**

2006-2008	EU27	EUROZONE	EU-NON EUROZONE
GVA	31476849	23142948	8333901
GVA_FS	5,532524	4,930368	7,204687874

Source: own calculations of the Eurostat data

**Fig. 2: GVA in the financial services 2006-2008**



Source: own calculations of the Eurostat data

We observe similarities even in very close pre crisis horizon. In the most developed countries (Eurozone) the percentage deal of GVA to financial services is lower than in other European countries.

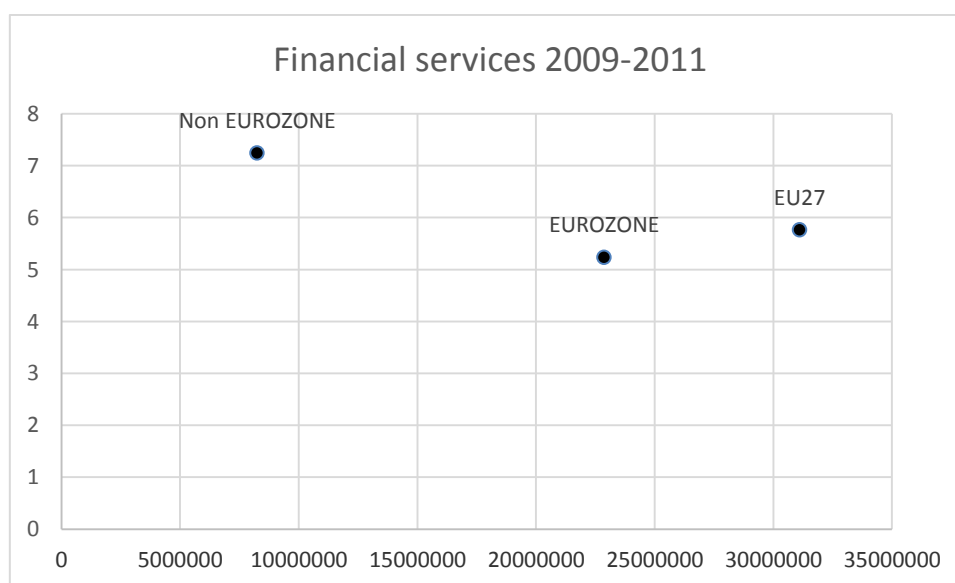
**Tab. 3: GVA in the financial services 2009-2011**

2009-2011	EU27	EUROZONE	EU-NON EUROZONE
GVA	31101986	22868229	8233757
GVA_FS	5,76531	5,233122	7,243396432

Source: own calculations of the Eurostat data

In the after crisis period we see that the deal of GVA to financial services to total GVA is lower in the EUROZONE countries than in the other countries in Europe. Moreover we see that the crisis provide higher deal of GVA in financial services to total GVA both in the European developed countries and in other non EUROZONE countries.

**Fig. 3: GVA in the financial services 2009-2011**



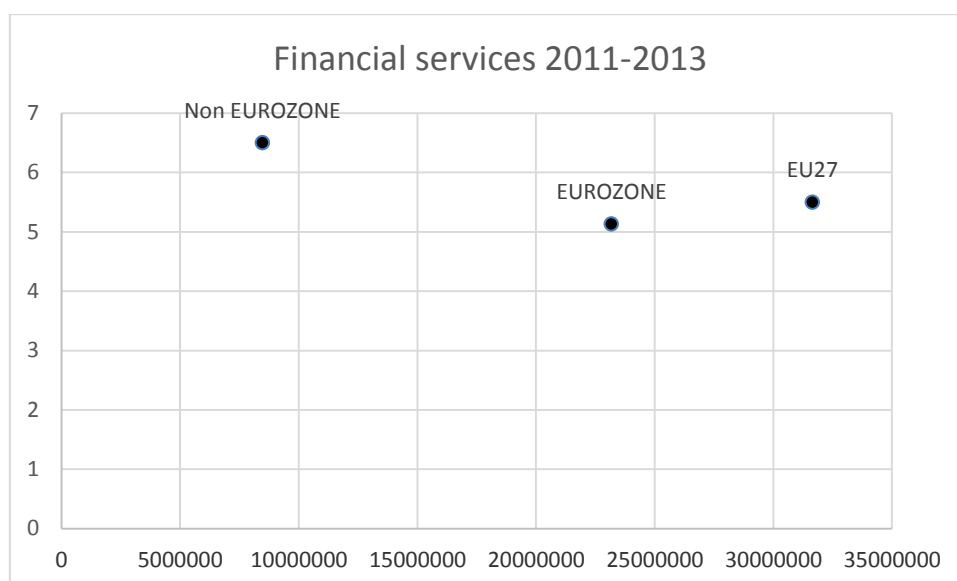
Source: own calculations of the Eurostat data

**Tab. 4: GVA in the financial services 2011-2013**

2011-2013	EU27	EUROZONE	EU-NON EUROZONE
GVA	31642435	23174825	8467610
GVA_FS	5,499394	5,133117811	6,501847177

Source: own calculations of the Eurostat data

**Fig. 4: GVA in the financial services 2011-2013**



Source: own calculations of the Eurostat data

In the last time horizon we see that even after recovery of crisis the deal of GVA in financial services is lower in the EUROZONE countries in the Europe. We observe that as economies recover the GVA\_FS both decreases both in EUROROZONE countries and in the other countries.

### 3 GVA in the construction and the industry branch

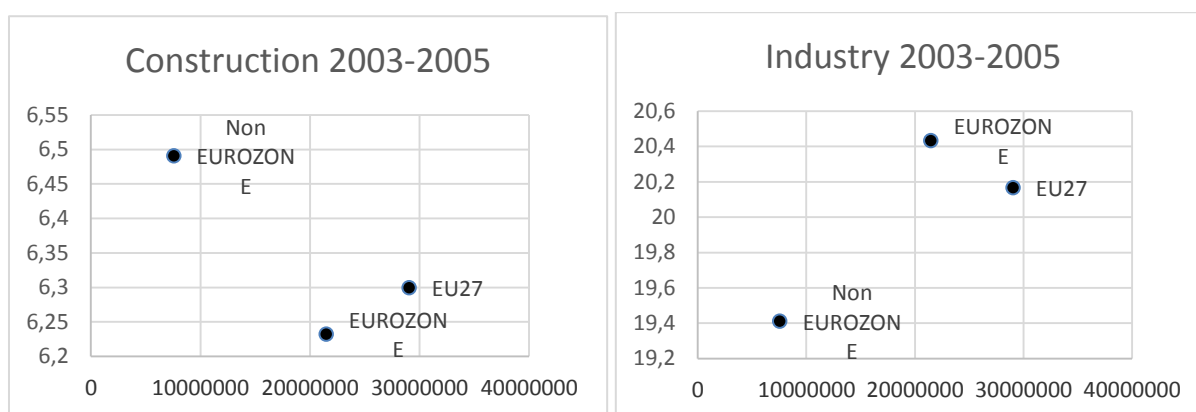
In this chapter we provide the similar analysis for the real economy branches, for the industry and the construction branch.

**Tab. 5: GVA in the real economy branches 2003-2005**

2003-2005	EU27	EUROZONE	EU-NON EUROZONE
GVA	29048673	21484676	7563997
GVA_CONST	6,299470855	6,232091669	6,490853795
GVA_IND	20,16628038	20,43262433	19,40976056

Source: own calculations of the Eurostat data

**Fig. 5: GVA in the real economy branches 2003-2005**



Source: own calculations of the Eurostat data

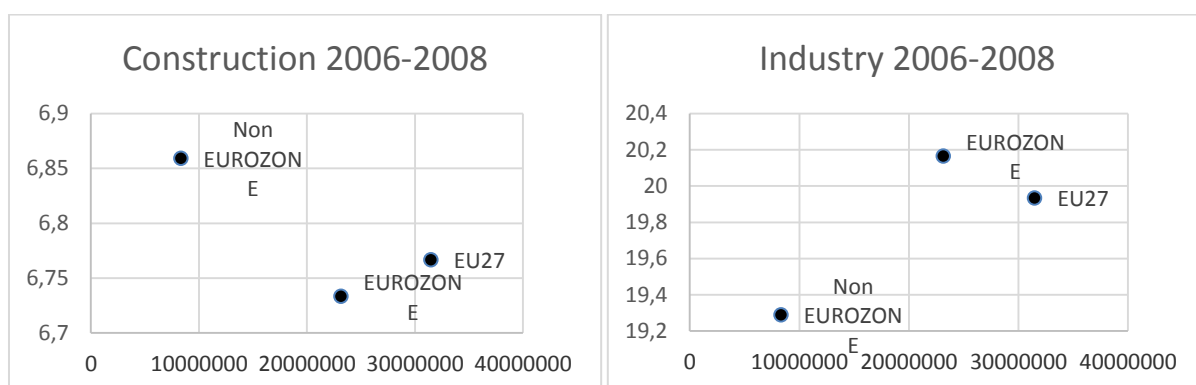
From the previous charts and tables we see that during the pre-crisis period the largest deal of GVA was in the EUROZONE countries in the industry branch. In contrary with this the construction branch has the higher percentage deal in the NON – EUROZONE countries. Needless to say that the deals are comparable through branches.

**Tab. 6: GVA in the real economy branches 2006-2008**

2006-2008	EU27	EUROZONE	EU-NON EUROZONE
GVA	31476849	23142948	8333901
GVA_CONST	6,766502	6,733169	6,859066654
GVA_IND	19,93261	20,16495	19,28739908

Source: own calculations of the Eurostat data

**Fig. 6: GVA in the real economy branches 2006-2008**



Source: own calculations of the Eurostat data

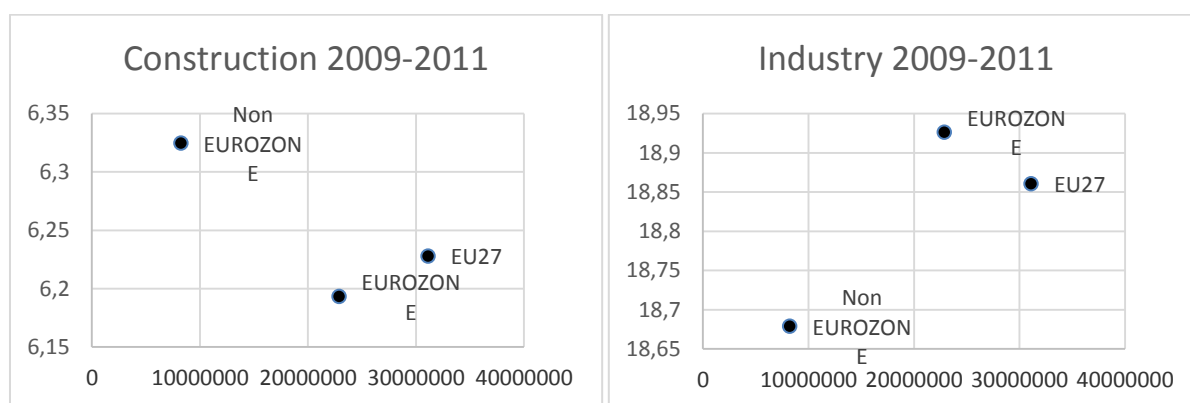
Particular conclusion gained from the Fig. 6 is similar to evolution of GVA in previous period.

**Tab. 7: GVA in the real economy branches 2009-2011**

2009-2011	EU27	EUROZONE	EU-NON EUROZONE
GVA	31101986	22868229	8233757
GVA_CONST	6,227901	6,193107	6,324535115
GVA_IND	18,86054	18,92597	18,67880356

Source: own calculations of the Eurostat data

**Fig. 7: GVA in the real economy branches 2009-2011**



Source: own calculations of the Eurostat data

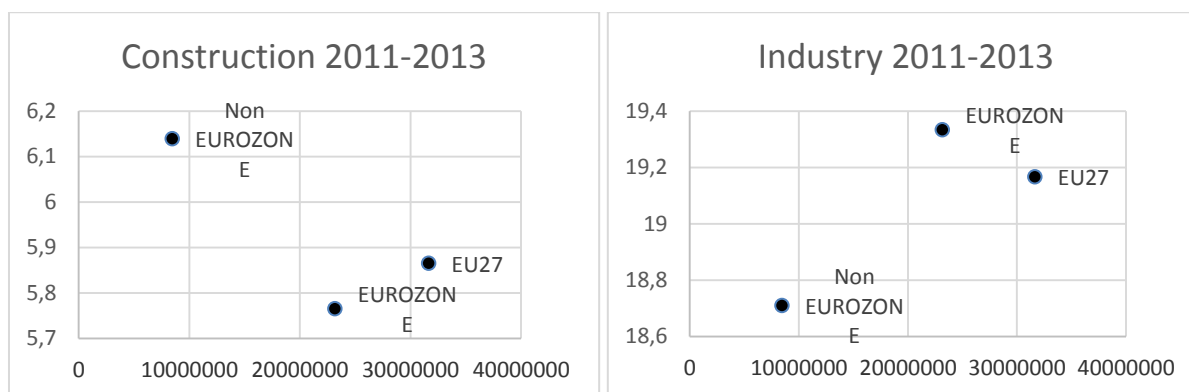
We see that after crisis in 2008 there is a significant decrease in deal of GVA in the industry in the EUROZONE. Similarly in the non EUROZONE countries there is a significant decrease in the deal of GVA in the construction branch.

**Tab. 8: GVA in the real economy branches 2011-2013**

2009-2011	EU27	EUROZONE	EU-NON EUROZONE
GVA	31642435	23174825	8467610
GVA_CONST	5,865333	5,765310175	6,139084996
GVA_IND	19,16644	19,33327593	18,70981273

Source: own calculations of the Eurostat data

**Fig. 8: GVA in the real economy branches 2011-2013**



Source: own calculations of the Eurostat data

Finally we see that in the last list of tables and charts there is a general trend. Which is about the highest percentage deal of GVA in the EUROZONE countries in the sector of industry. In contrary the higher percentage deal of GVA is in the NON- Eurozone countries observed in the construction branch than in the industry.

Moreover in the last analyzed period of analysis when the developed countries economies seem to recover we observe immediate increase in the GVA in the real economy branches. These are in the EUROZONE the industry branch and in the NON – EUROZONE the construction sector.



## Conclusion

In this article we conclude that the GVA structure evolution is really stable through the current European Union. The financial sector creates relatively higher deal of total GVA in the NON – EUROZONE countries. In the EUROZONE countries there is a higher deal of total GVA in the industry branch. In the NON – EUROZONE countries we see that there is higher relative percentage deal of GVA in construction branch. **Naturally in every stabilized economy absolutely the highest deal of GVA creates industry, then the construction and the last is services (included financial services). Previous comparisons were relative (for instance GVA financial services percentage deals in comparison of EU blocks).**

It is very interesting to observe the evolution of the GVA percentage deals of particular branches through the last turbulent year. After crisis the GVA percentage deal decreases both in construction and in the industry even in the NON-EUROZONE countries and even in the EUROZONE countries. In comparison with this evolution the GVA percentage deal belonged to financial services increases in the crisis. After few years when the crisis seems to be recovered, the GVA percentage deal of construction and industry slightly relatively increases as the GVA percentage deal of financial services relatively decreases.

It is brief that the financial sector even as the originator of the crisis in 2008 do not suffer worse losses. This sector has a unique role in the economy so that it is necessary to manage its consequences separately from other sectors. Further research would be made through the panel regression and panel co-integration methods in order to provide more sophisticated results.

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