

Bartlett, Will; Prica, Ivana

**Working Paper**

## Interdependence between Core and Peripheries of the European Economy: Secular Stagnation and Growth in the Western Balkans

LEQS Paper, No. 104

**Provided in Cooperation with:**

London School of Economics and Political Science (LSE), European Institute

*Suggested Citation:* Bartlett, Will; Prica, Ivana (2016) : Interdependence between Core and Peripheries of the European Economy: Secular Stagnation and Growth in the Western Balkans, LEQS Paper, No. 104, London School of Economics and Political Science (LSE), European Institute, London

This Version is available at:

<https://hdl.handle.net/10419/303387>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



THE LONDON SCHOOL  
OF ECONOMICS AND  
POLITICAL SCIENCE ■



LSE 'Europe in Question' Discussion Paper Series

# Interdependence between Core and Peripheries of the European Economy: Secular Stagnation and Growth in the Western Balkans

Will Bartlett and Ivana Prica

LEQS Paper No. 104/2016

February 2016





## Editorial Board

Dr Abel Bojar

Dr Vassilis Monastiriotis

Dr Jonathan White

Dr Katjana Gattermann

Dr Sonja Avlijas

All views expressed in this paper are those of the author(s) and do not necessarily represent the views of the editors or the LSE.

© Will Bartlett and Ivana Prica

# Interdependence between Core and Peripheries of the European Economy: Secular Stagnation and Growth in the Western Balkans

Will Bartlett\* and Ivana Prica\*\*

## Abstract

European countries are economically dependent upon each other. This paper therefore embeds the analysis of the Western Balkan countries within a wider perspective of the European economy as a whole. It combines a simple Core-Periphery model with an under-consumption model to provide a convincing explanation of the emergence of secular stagnation, the dependency relationships between the European economies, and the spillover effects of Eurozone crisis to the Western Balkans. Due to tendencies to under-consumption, the Core countries have been vulnerable to secular stagnation and in order to overcome this tendency within the Eurozone they are dependent on export revenues from the peripheries to sustain their economic growth. This has led to high trade and current account deficits during the boom and placed the peripheries in a highly vulnerable position during the recession period. Financialisation of the European economy has emerged as a response to the tendency towards secular stagnation, as the provision of consumer credit has stimulated demand and temporarily overcome under-consumption tendencies. The paper argues that continuing austerity as a method to create internal devaluation is unlikely to succeed as a means to extricate the periphery countries from the crisis. Given the dependencies of the European economies upon one another, a possibly better way out of the current period of low growth and stagnation would be a coordinated fiscal expansion to stimulate domestic and Europe-wide demand.

---

\* **European Institute, London School of Economics and Political Science**

Houghton Street, London WC2A 2AE

Email: [w.bartlett@lse.ac.uk](mailto:w.bartlett@lse.ac.uk)

\*\* **Faculty of Economics, University of Belgrade**

Kamenicka 6, Belgrade, Serbia

Email: [ivanapopov.prica@gmail.com](mailto:ivanapopov.prica@gmail.com)

## Table of Contents

1. Introduction.....	1
2. Under-Consumption in the Capitalist Core.....	2
3. Secular Stagnation in the Eurozone.....	4
4. Financialisation of the Super Periphery.....	7
5. Eurozone Crisis and the Peripheries of Europe.....	9
6. Growth Dependency between Core and Periphery.....	11
7. Austerity policies.....	19
8. Conclusions.....	21
References.....	24

# Interdependence between Core and Peripheries of the European Economy: Secular Stagnation and Growth in the Western Balkans

## 1. Introduction

The Eurozone crisis can be understood as the outcome of a structural imbalance between “Core” and “Periphery” countries (Lapavitsas et al., 2010). Germany is at the centre of “Core” group of countries in the Eurozone, while Greece, Italy, Portugal and Spain are conventionally seen as forming the “Periphery”. Yet other EU member states outside the Eurozone also belong to the European Periphery. Countries of the “Outer Periphery” such as Bulgaria and Romania are just as much affected by the Eurozone crisis as the “Inner Periphery” countries, even though they have not adopted the Euro. The fortunes of their economies are affected by developments in the Eurozone, not just through flows of trade, investment and people, but also because the financial sectors are highly integrated.

Outside the EU, there is a further layer of countries that are neither Eurozone members nor EU members but which are similarly influenced by developments in the EU and the Eurozone. Following Martin Sokol, these countries can be referred to as the “Super Periphery” of the EU (Martin Sokol, 2001). They comprise the countries of the Western Balkans and of the European Eastern Neighbourhood.

## Interdependence between Core and Peripheries of the European Economy

A feature of these countries, especially in the Western Balkans, has been widespread euroisation both among households and companies. This has meant the Western Balkan countries have not been able to use devaluation as a means to improve the competitiveness of their economies. A high proportion of loans and savings are denominated in Euros, which inhibits the use of devaluation or depreciation of the currency as an instrument of macro-economic policy to improve the external competitiveness of their economies. At the same time, EU bailouts are unavailable to these countries. Therefore, the only option is internal devaluation, which requires decreased levels of prices and unit labour costs to bring about improved external competitiveness.

In this paper we identify the extent to which these peripheral countries are connected to and influenced by the evolution of the EU economy as a whole, and how they have been consequently affected by the crisis in the Eurozone.

## 2. Under-Consumption in the Capitalist Core

The Classical economists were preoccupied with the question whether there would be enough aggregate demand to buy all the goods and services produced by business enterprises. The theme was taken up by Keynes who argued that market economies were prone to a lack of effective demand and to the possibility of unemployment equilibrium (Keynes, 1936). The under-consumption theorists further more proposed that market economies were also prone to “secular stagnation” (Hansen, 1955; Summers, 2013). Radical economists took this further, most notably in the work of Paul Baran and Paul Sweezy who argued that under “monopoly capitalism”, employers strive to increase profits by pushing down wages, which reduces aggregate

consumption (Baran and Sweezy, 1966). In a further development of the theory, they argued that the financial sector dominance has emerged as a means to maintain aggregate consumption. However, this has the unfortunate side effect of increasing instability in the economy (Minsky, 1986). The financialisation thesis suggests that financialisation generates instability and is a prime factor in economic stagnation, and would lead to debt-deflation and prolonged recession (Palley, 2007). Others have argued that stagnation is more deep-seated phenomenon and that it is the tendency towards stagnation that generates financialisation rather than the other way round, and with the failure of financialisation the underlying tendency towards stagnation reappears (Bellamy Foster and Magdoff, 2009). Moreover, financialisation has also generated gross inequality (Picketty, 2014), which further reduces consumption demand and reinforces the under-consumption problem.

Governments of advanced countries have several options for escaping from the under-consumption trap (Baran and Sweezy, 1966). First they can increase government spending in various forms. Social spending (pensions, social security) can be increased but the limits of this appear when social spending begins to undermine work incentives. The public services such as education and health can be expanded through public expenditure, but the limits of this are reached under continuous pressure to introduce private provision of services. A strong contender for generating additional demand is through military expenditure (in 2013 the US military budget was \$640 billion). However, this also reaches its limits for countries that wish to pursue a peaceful non-aggressive foreign policy. Another way to generate increased demand in economies that suffer from under-consumption is to increase consumption through advertising and marketing expenditure. However, this also has its limits due to the finite needs of the population, although constant efforts are made to stimulate artificial desires.



## Interdependence between Core and Peripheries of the European Economy

A further important mechanism to stimulate demand is to rely upon demand from other countries and to promote exports through measures that build a country's competitive advantage. This form of export led growth is usually accompanied by central control over wage costs, combined with labour market reforms to reduce wage costs and promote the flexibility of the labour force. Many other measures are available to promote exports. Some countries are more successful than others. However, the limit of this approach is that all countries cannot do this at the same time. Some must be net importers if others are to be net exporters. This has been a central feature of the Eurozone arrangement. The Core countries, especially Germany, have become net exporters and rely upon demand from the Periphery counties to compensate for under-consumption on the domestic market.

Finally, additional demand can be generated through the development of consumer credit. If the workers do not have enough buying power from their wages, then they can be encouraged to take out consumer credit to fill the gap. This has led to the development of a very sophisticated market in consumer finance and to the general 'financialisation' of the advanced economies that generates additional consumption through growth of consumer credit. But financialisation generates asset bubbles and financial crises and so also has its eventual limits.

### 3. Secular Stagnation in the Eurozone

The Euro was established in January 2002 as a monetary union without a fiscal union. Under this arrangement, the nominal interest rate set by the ECB is the same across all the member states. Since this common interest rate that is too

high in some countries and too low in others, immense structural imbalances have grown over time. In particular, as Germany is a strong exporter, she has run structural current account surpluses, while the peripheral countries such as Greece, Spain, and Italy have run structural current account deficits. These deficits have led to a build up of debt in the peripheral countries that has contributed to the economic crisis that has beset the Eurozone since 2009.

In addition, the adoption of the Euro induced investors to believe that the debts contracted by the peripheral countries were just as credit-worthy as the debts incurred by the Core countries such as Germany or the Netherlands. This led to a great inflow of foreign capital into the Periphery countries and enabled them to sustain either an unjustified high level of wages and consumer spending as in the case of Greece, or a high level of asset price appreciation and housing boom as in the case of Spain.

In autumn 2009, following the election of the Pasok government, it was revealed that the Greek state had a far higher level of debt than had previously been thought. Investors suddenly realised that the Periphery countries could not necessarily pay back their debts, and that more importantly, there was no guarantee that the Core countries would bail out their debts within the single currency system (Pisani-Ferry, 2014). Panic ensued. The value of the government bonds in the Periphery countries fell, and yields rose to unsustainable levels. Since then, the Eurozone has been involved in a vivid fire fighting exercise to restore calm. The Periphery countries have been reluctantly bailed out through individual rescue schemes, culminating in the creation of the European Stability Mechanism, and the creation of a system of New Economic Governance, which has brought the fiscal policies of the individual Eurozone member states under the supervision, if not outright control, of the central authorities at the European Commission and the ECB. In addition, intra-

## Interdependence between Core and Peripheries of the European Economy

eurozone imbalances have been financed by the TARGET inter-bank settlement system adopted between the Eurozone central banks (Werner-Sinn, 2014).

Since the debts that governments issued were largely held by their own banks in the Periphery countries, the banks also got into difficulties. As the value of the government bonds that they held fell, and they ran into danger of bankruptcy, and the banks had to be bailed out by their own governments leading to a further increase in government deficits. This negative spiral of debt and collapse between the states and the banks became a bottleneck, preventing the resumption of economic growth (Pisany-Ferry, 2014).

The essence of the problem was that the Eurozone lacked an EU-wide “bank resolution” mechanism. When banks get into difficulties in normal countries, their own central banks have the ability to step in and bail them out (or recapitalise them) if needed, and can subject such banks to reorganisations and other regulatory procedures, or close them down. In the Eurozone there was no single authority that had the power to step in and close down a bank in difficulty, or bail them out, relieving the bank’s own state of the responsibility. Eventually, policy makers realised the need for a banking union to accompany the monetary union that would create a single authority to carry out these responsibilities. These institutions have now been established, as the European Banking Authority based in London and the increased power to the ECB to act as a banking supervisor with powers to “resolve” local banks in trouble in Eurozone member states.

The policies that have been adopted to restore balance in the Eurozone have been generalised austerity and cut backs in state spending, combined with increases in taxation. A stability treaty was signed to restrict the government

deficits of the Eurozone member states to 3% of their GDP. In order to achieve these targets public expenditure has been cut, further deepening recession and stagnation in the Eurozone. In order to restore the competitiveness of the economies of the Periphery, internal devaluations have been imposed in an effort to reduce real wages and prices of exported goods.

The Core countries have suffered from secular stagnation as their economies have matured and the autonomous part of their growth has diminished. Their economic growth has been propelled by exports to the rest of the EU leading to structural imbalances within the Eurozone with a trade surplus in Germany and the Core countries, as the countries in the Periphery and super-Periphery are consumers of Core country exports. This process generates trade deficits in the Periphery that have been financed by borrowing from the banking sector in the Core countries largely through government bonds. This is an unsustainable equilibrium as debts in Periphery grow ever higher and eventually cannot be financed. The Periphery cannot export its way out of debt through devaluation, due to the euro monetary system. The only alternatives are (a) bailouts or (b) internal devaluation (cutting unit labour costs and government expenditure (i.e. austerity programmes). But austerity leads to a further drop in aggregate domestic demand and prolongation of the recession.

#### 4. Financialisation of the Super Periphery

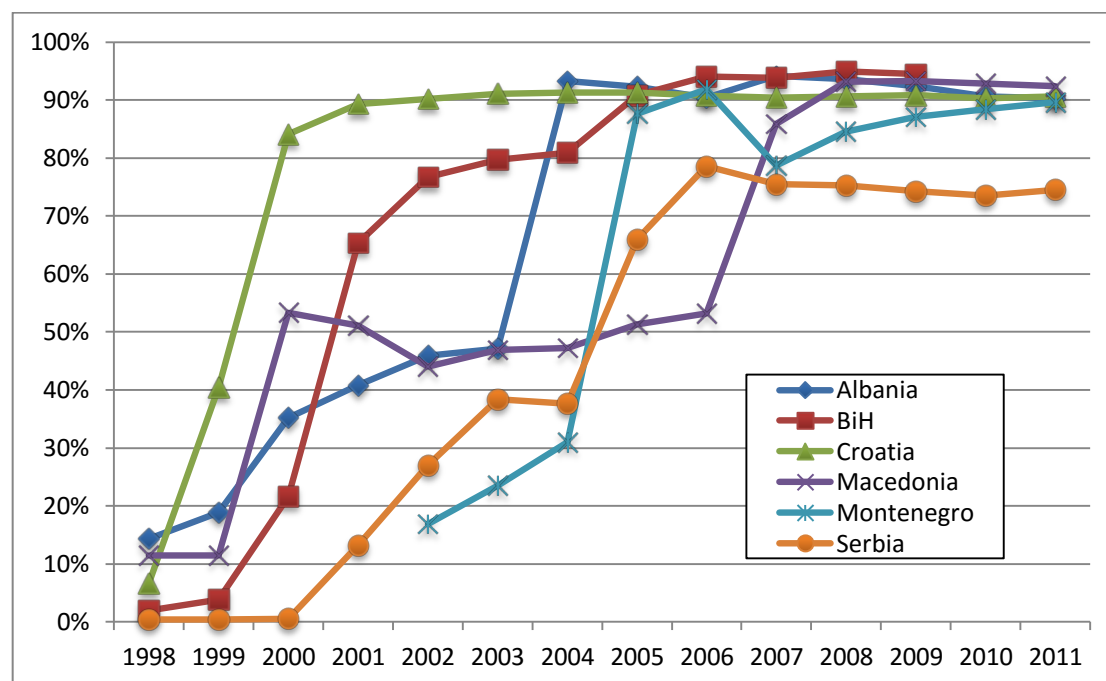
The Super Periphery countries experienced a period of strong economic growth in the 2000s. The period between the 'democratic turn' in Croatia and Serbia in 2000 and the start of the economic crisis in the region in 2009 was one of expansion. A credit boom supported rapid growth as foreign banks poured

## Interdependence between Core and Peripheries of the European Economy

new funds into the region. This led to a huge increase in imports mainly of consumer durables such as motor cars, much needed to replace the antiquated stock of vehicles, but also other consumer goods, and to a lesser extent machine tools and other equipment to upgrade the industrial production sector. The Western Balkan countries ran large trade and current account deficits. By 2008, the trade deficit in the Western Balkans was running at an average rate of 35% of GDP. This also led to an increase of international debt, although this was not excessive and during this period was rather stable at around 50% GDP (between 2003-2008).

A rapid takeover of domestic banking system by foreign (mainly EU) banks took place between 2000 and 2005, heralding a rapid financialisation of the region.

**Figure 1: Bank assets under foreign ownership, Western Balkans, 1998-2011 (%)**



Source: EBRD Banking Survey online data.

The strong inflow of foreign capital led to falling interest rates and rapid credit growth. Since the onset of the crisis, Eurozone banks have tried to build up their domestic capital and are “deleveraging” from the Western Balkans. Through the Vienna Agreement, the IFIs provide €24.5bn loans to 17 parent banks of banks in Central and South East Europe. Later, the “Vienna Plus” agreement aimed to encourage substitution of foreign borrowing by local currency borrowing and more efficient absorption of EU structural funds.

## 5. Eurozone Crisis and the Peripheries of Europe

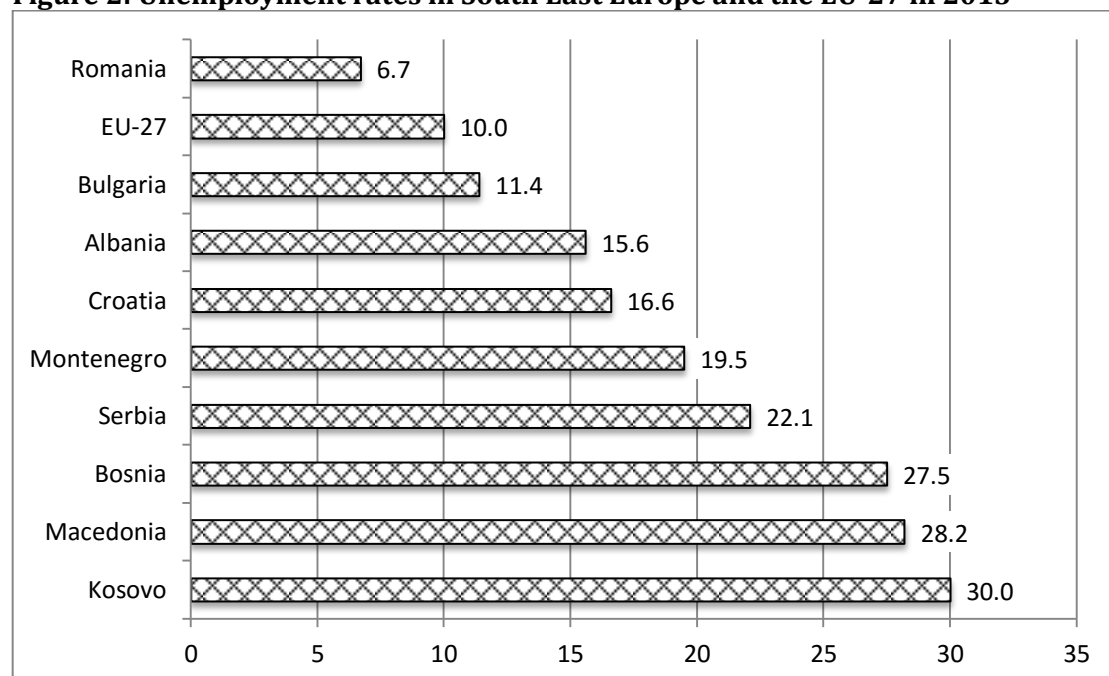
The Inner Periphery of the Eurozone has experienced a dramatic economic recession that has been widely commented and analysed (Cristodoulakis et al. 2011). The Outer Periphery has also suffered from the spillover effects of the Eurozone crisis (Beleva, 2011).

The Western Balkan countries were severely hit by the global financial crisis and subsequently by the Eurozone crisis after 2008 experiencing a double-dip recession and virtual stagnation (Bartlett and Prica, 2013). Initially there was a very strong reduction in export demand, though this picked up in 2013. There was also a remarkable collapse in credit growth, a reduction in FDI inflows and a fall in remittance inflows. The fall in demand for the output of companies due to the recession, and to governments’ tactics of delaying payments in order to meet budget deficit targets, has caused companies difficulties paying back the loans they took out during the boom period. This in turn has led to a huge increase in non-performing loans. Furthermore, foreign banks have pulled funds out of region through a process of deleveraging. The outcome of these spillovers from the Eurozone crisis has

## Interdependence between Core and Peripheries of the European Economy

been a double dip recession in 2009 and 2012. The average rate of growth in the Western Balkan countries has fallen from a pre-crisis average of around 5% p.a. in 2003-07, to an average of around 1% p.a. in 2009-12. At the same time unemployment has risen to dramatically high levels – in some countries such as Bosnia and Herzegovina to levels exceeding those in Greece. Bulgaria and Romania – countries in the Outer Periphery – have not suffered such dire consequences as unemployment levels have remained nearer to the EU average of 10% (see Figure 2).

**Figure 2: Unemployment rates in South East Europe and the EU-27 in 2013**



Source: Eurostat online data on unemployment rate for 15-74 year olds, data codes [lfsq\_organ] and [cpc\_siemp]

Prior to the crisis, the international debt had been relatively modest, but since the onset of the crisis, international debt has increased in the Western Balkans from an average of 47% of GDP in 2008 to 63% of GDP in 2012.

## 6. Growth Dependency between Core and Periphery

The Core-Periphery model, combined with the theory of Under-Consumption, suggests that the growth in the Core is dependent on the growth in the Periphery, and vice versa. Without the demand for exports from the Periphery, the Core would be subjected to secular stagnation. Without financial transfers from the Core, the Periphery would be subject to unsustainable balance of payments crises.

This section develops a modelling approach to identify the relationship between the Core and the Periphery and to investigate the extent to which the Core, Periphery and Super Periphery are dependent on each other.

The model is set out as follows. The growth of country  $i$  at time  $t$  depends on an autonomous component  $\beta_0$ , and also depends on the growth of the EU as a whole  $\text{Growth}_{\text{EU}27t}$  at time  $t$ . The extent of the dependency is represented by coefficient  $\beta_1$ . There is a dummy variable that captures the effect of the Eurozone crisis of country  $i$  at time  $t$ , which takes the value 1 for the years 2009-2013, and 0 otherwise, with coefficient  $\beta_2$ . The model is set out in equation 1:

$$G_{it} = \beta_0 + \beta_1 * \text{Growth}_{\text{EU}t} + \beta_2 * \text{Crisis}_{it} + u_{it} \quad (1)$$

Where

- $\beta_0$  represents autonomous growth capacity
- $\beta_1$  represents dependency on EU growth
- $\beta_2$  represents the effect of the crisis on autonomous growth



## Interdependence between Core and Peripheries of the European Economy

The data used to analyse the model is taken from EUROSTAT. Available data on annual real GDP growth rates for the EU countries and the enlargement countries span the years from 1996-2014 (N=19). While this is a small sample, it is nevertheless a consistent dataset. We divide countries into five groups:

Country group	Countries
Core countries within the Eurozone and the EU ( <i>Inner Core</i> )	Austria, Belgium, Finland, France, Germany, Netherlands
Core countries outside the Eurozone, within the EU ( <i>Outer Core</i> )	Czech Republic, Denmark, Estonia, Latvia, Lithuania, Poland, Slovakia, Sweden, United Kingdom
Periphery countries within the Eurozone and the EU ( <i>Inner Periphery</i> )	Cyprus, Greece, Ireland, Italy, Portugal, Spain
Periphery countries outside the Eurozone, within the EU ( <i>Outer Periphery</i> )	Bulgaria, Hungary, Romania
Periphery countries, outside the Eurozone and the EU but with currencies tied to the Euro ( <i>Super Periphery</i> )	Albania, Croatia, FYR Macedonia, Serbia

Table 1 shows the estimates for a set of European countries including those in the Core, Periphery and super Periphery of the Eurozone. The dependent variable is the real GDP growth rate of the country in question. The independent variables are the growth rate of the EU27 calculated without the country in question based on chain linked volume indices of GDP obtained from Eurostat (hence “EU27-1”), and a crisis dummy where D=0 for all years prior to 2009 and D=1 thereafter.

**Table 1: Core countries dependency on EU27-1**

Country	$\beta_0$	$\beta_1$	$\beta_2$	Breusch-Pagan (sig.)	Adjusted R-squared
Finland	-0.23	1.68***	-0.60	0.20	0.944
Germany	-2.08***	1.40***	3.15***	0.05	0.771
Austria	0.35	0.90***	0.16	0.82	0.858
Netherlands	0.73	0.88***	-1.01	0.26	0.775
France	0.21	0.80***	0.26	0.60	0.871
Belgium	0.48	0.77***	0.08	0.18	0.816
Mean	-0.09	1.07	0.34		

Note: \*\*\* indicates 1% significance level; \*\* indicates 5% significance level; \* indicates 10% significance level. The Breusch-Pagan test for heteroscedasticity with  $H_0$ =constant variance.

The results reported in Table 1 reveal that the Inner Core countries are subject to a tendency towards under-consumption as the coefficients on the constant term, which represents autonomous growth, are negative or insignificantly different from zero. In contrast, the coefficients on the variable  $\beta_1$ , which represents the dependency on EU growth, are positive and highly significant. For Finland and Germany the coefficients are greater than 1, which indicates that for each percentage point increase in the EU growth rate, their growth rate increases by more than a percentage point. Therefore, their gain from EU growth through exports, and in other ways, has offset the tendency towards secular stagnation to which their economies are prone. The Core is indeed dependent on the Periphery.

The coefficients on the crisis dummy are on the whole positive although only statistically significant for Germany, which shows that the Core countries have not been significantly affected by the crisis, or have even benefitted from it (for example through domestic stimulus measures).

Only one of the regressions (Germany) shows signs of autocorrelation (the Breusch-Pagan test is significant at the 10% level), which could introduce difficulties in interpreting the t-statistics.

Table 2 shows the results for the Inner Periphery group of countries. Here, autonomous growth potential is mainly positive with the exception of Italy as indicated by the positive values of the constant term, most of which are highly significant (with the exception of Ireland and Portugal).

Growth dependency, indicated by coefficient  $\beta_1$  is also positive, except in the case of Greece, and in several countries greater than 1 (Ireland, Italy and Slovenia). Unlike the Core countries, the negative coefficients on  $\beta_1$ , the crisis

## Interdependence between Core and Peripheries of the European Economy

dummy, are uniformly negative, and not surprisingly extremely high in the case of Greece.

**Table 2: Inner Periphery dependency on EU27-1**

Country	$\beta_0$	$\beta_1$	$\beta_2$	Breusch-Pagan (sig.)	Adjusted R-squared
Greece	3.41***	0.08	-8.15***	0.21	0.722
Italy	-1.37***	1.07***	-0.09	0.68	0.919
Portugal	0.45	0.76***	-1.68	0.80	0.594
Slovenia	1.25**	1.27***	-2.33***	0.74	0.863
Spain	2.06***	0.67***	-3.09***	0.14	0.910
Ireland	2.42*	1.62***	-2.35	0.68	0.641
Cyprus	2.61***	0.54**	-4.30***	0.04	0.787
Mean	1.55	0.86	-3.14		

Note: \*\*\* indicates 1% significance level; \*\* indicates 5% significance level; \* indicates 10% significance level. The Breusch-Pagan test for heteroscedasticity with  $H_0$ =constant variance. Results are sorted by column  $\beta_1$

Autocorrelation appears as a problem in the regressions for Cyprus (Breusch-Pagan test significant at 5% level) suggesting that the standard errors for these may be over-estimated.

**Table 3: Outer Core: dependency on EU27-1**

Country	$\beta_0$	$\beta_1$	$\beta_2$	Breusch-Pagan (sig.)	Adjusted R-squared
Estonia	-0.55	2.92***	1.49	0.90	0.609
Latvia	1.45	2.17***	-1.40	0.63	0.492
Lithuania	1.54	2.04***	-0.89	0.77	0.478
Sweden	-0.61	1.53***	1.87***	0.34	0.880
Denmark	-0.59	1.08***	0.27	0.21	0.836
Slovakia	3.04**	0.91*	-1.69	0.19	0.367
Czech	1.25	0.90***	-1.20	0.16	0.452
UK	1.05**	0.74***	-1.13*	0.11	0.734
Poland	3.61***	-0.41*	-0.54	0.51	0.227
Mean	1.13	1.32	-0.36		

Note: \*\*\* indicates 1% significance level; \*\* indicates 5% significance level; \* indicates 10% significance level. The Breusch-Pagan test for heteroscedasticity with  $H_0$ =constant variance. Results are sorted by column  $b(1)$

Table 3 shows the results for the countries of the Outer Core, i.e. the countries not in the eurozone but within the EU core group. Two regressions for this

group indicate very strong autonomous growth potentials: Poland and Slovakia. The dependency of Outer Core countries on the EU growth is positive, and very strong in the cases of Estonia, Latvia, Lithuania and Sweden. The coefficient even exceeds a value of 2 for the Baltic countries.

**Table 4: Outer Periphery: dependency on EU**

Country	$\beta_0$	$\beta_1$	$\beta_2$	Breusch-Pagan (sig.)	Adjusted R-squared
Hungary	0.64	1.08***	-0.60	0.94	0.588
Bulgaria	2.38	0.61	-2.19	0.21	0.190
Romania	3.05	0.38	-3.02	0.55	0.103
<i>Mean</i>	<i>2.02</i>	<i>0.69</i>	<i>-1.94</i>		

*Note: \*\*\* indicates 1% significance level; \*\* indicates 5% significance level; \* indicates 10% significance level. The Breusch-Pagan test for heteroscedasticity with  $H_0$ =constant variance. Results are sorted by column  $\beta_1$*

Among the outer periphery group, the two SEE countries, Bulgaria and Romania, show strong autonomous growth potential (high coefficients on  $\beta_0$ ) whereas in relation to growth dependency the values of the  $\beta_1$  coefficient are less than 1, suggesting a weak dependency and a lesser gain from EU economic relations than for the other countries in the group. Both countries have experienced a severe adverse impact of the eurozone crisis.

**Table 5: Super-Periphery countries dependency on EU27-1**

Country	$\beta_0$	$\beta_1$	$\beta_2$	Breusch-Pagan (sig.)	Adjusted R-squared
Croatia	2.38**	0.67*	-4.48***	0.53	0.681
Macedonia	1.56	0.61	-0.27	0.31	0.122
Serbia	3.74	0.20	-3.96	0.13	0.088
Albania	5.73**	0.00	-3.62	0.13	0.022
<i>Mean</i>	<i>3.36</i>	<i>0.37</i>	<i>-3.08</i>		

*Note: \*\*\* indicates 1% significance level; \*\* indicates 5% significance level; \* indicates 10% significance level. Critical lower bound of Durbin-Watson statistic (DWL) = 0.95. Results are sorted by column  $b(1)$*

Table 5 shows results for the Super Periphery group of countries. Most regressions for this group indicate very strong autonomous growth potentials

## Interdependence between Core and Peripheries of the European Economy

with the coefficients of the constant term having a high level of statistical significance in the cases of Albania and Croatia. This implies that even in the absence of EU membership the countries could achieve a high rate of economic growth under the rights conditions. There is clearly a large potential for catch-up growth in this group.

The dependency of Super Periphery countries on the EU growth is weak, with only no countries having a coefficient on  $\beta_1$  greater than unity. Only Croatia has a statistically significant positive coefficient. The low coefficients on  $\beta_1$  suggest that the Super Periphery is not dependent on the Core. Hence, catch-up growth in the Super Periphery could be “autonomous” and could feasibly be generated by internal demand and exports to other countries within the region and elsewhere in the world.

The crisis effects in the super-periphery are uniformly negative and large with the exception of Macedonia, as shown by the coefficients on  $\beta_2$ . Interestingly, Macedonia is the only country in the region where unemployment rates have fallen during the crisis, in part due to successful macroeconomic policies and to a successful attempt to attract foreign investors into low-tax industrial and technology zones. The DW statistic is above the lower bound for all countries in this group.

**Table 5: Use of robust standard errors to resolve autocorrelation**

	$\beta_0$	$\beta_1$	$\beta_2$	<b>F(2,16)</b>
Cyprus	2.61***	0.54*	-4.30***	19.59
Germany	-2.08**	1.40***	3.15***	21.97

*Note: \*\*\* indicates 1% significance level; \*\* indicates 5% significance level; \* indicates 10% significance level.*

To deal with the problem of possible autocorrelation in Cyprus and Germany, the relevant regressions were re-estimated using the robust standard errors

procedure within STATA. The results are presented in Table 5. Here, as above,  $\beta_1$  is the coefficient on current growth rate in the EU,  $\beta_2$  is the coefficient on the crisis dummy variable. While the values of the coefficients remain the same the significance level of the estimates is improved. However, this has made little difference in practice, with only a reduction in the significance level for  $\beta_1$  for Cyprus from 5% to 10% level.

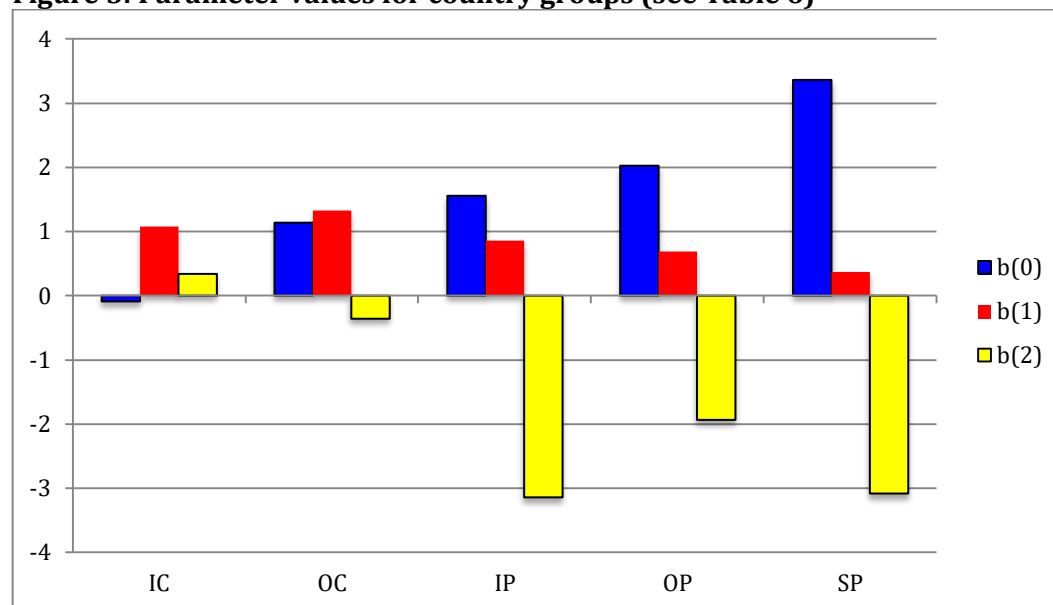
**Table 6: Mean values of coefficients by country group**

Country Group	Mean $\beta_0$	Mean $\beta_1$	Mean $\beta_2$	Mean $\beta_0 + \text{Mean } \beta_2$
Inner Core	-0.09	1.07	0.34	0.25
Outer Core	1.13	1.32	-0.36	0.77
Inner Periphery	1.26	0.89	-2.80	-1.54
Outer Periphery	2.02	0.69	-1.94	0.08
Super Periphery	3.36	0.37	-3.08	0.27

Source: Table 2-5 above

Table 6 summarises the results of the analysis by country group, which shows average values of the estimated coefficients for each group of countries. It can be seen that the autonomous growth coefficient  $\beta_0$  differs by country group, being negative for the Inner Core countries. This indicates that the Inner Core countries may be suffering from secular stagnation and under-consumption that is relieved by the export demand coming from the Inner, Outer and Super Peripheries. The mean value of this coefficient is progressively higher for the Inner Periphery, followed by the Outer Periphery and then the Super Periphery where it reaches a value of 3.3. This indicates that the more peripheral a country is to the Eurozone, the greater is the autonomous growth component, and the greater potential for catching up. The data is presented in Figure 3, showing clearly the differences between the country groups.

**Figure 3: Parameter values for country groups (see Table 6)**



The average of the coefficient  $\beta_1$ , which reflects the degree to which individual country growth rates are dependent upon the growth rate of the EU, also differs between groups of countries. The Core countries (both Inner and Outer) have a mean value of this coefficient that is greater than unity. This implies that for each 1 percentage point increase in EU growth, the Core countries experience a more than 1 percentage point increase in their own growth rate (on average). The implication is that the Core countries benefit more than proportionately from EU growth, and this offsets to some extent at least their propensity to negative or low autonomous growth. The Inner, Outer and Super Peripheries have relatively low coefficients of dependency on the EU. The mean value of this coefficient is less than 1 for each group, and becomes progressively lower as one moves from the inner Periphery to the Super Periphery. This implies that each 1% growth of the EU has a less than 1% impact on growth in countries within the Periphery.

Turning to the crisis effects, the greatest effect is seen in the Inner Periphery and the Super Periphery, with the greatest impact in the latter countries. The

Outer Periphery has been affected by the crisis but to a slightly lesser extent. The Core group of countries have actually gained from the crisis in terms of growth effects, compared to the non-crisis years. This may be due to the fact that they have not had to endure austerity policies, and to the stimulus policies that were applied initially in the Core group.

The final column in Table 6 presents the net effect of the crisis, combining both autonomous growth and the crisis impact together. This shows that the crisis had the perverse effect in the Inner Core countries of offsetting the negative autonomous growth and producing a small positive growth effect. The two effects balanced each other out almost completely in the Outer Periphery. The greatest net effect was in the Inner Periphery, while in the Super Periphery the net effect was negative but at a lower level

## 7. Austerity policies

In the Inner, Outer and Super Periphery countries, austerity programmes accompanied by structural reforms have involved a variety of measures. These have included cuts to public expenditure (education, health services, pensions, public employment) and labour market reforms to drive down unit labour costs. By 2014, only the UK and France had lower levels of severance pay in case of redundancy than the Western Balkan countries. In the Super Periphery, substantial labour market reforms and cuts to pensions have recently been implemented in Serbia. Two countries seek to reform pensions through reductions in entitlements (BiH, Serbia). Most countries have tried to meet ambitious targets for public sector deficits (BiH and Macedonia down to 2% of GDP). Cuts have been introduced in public sector employment and public



## Interdependence between Core and Peripheries of the European Economy

sector wages. Tax reforms have been introduced in the form of flat taxes that are now in place in several countries in the Super Periphery (Macedonia, Albania).

While the countries of the Inner Periphery within the Eurozone have been supported by EU bailout funds, the IMF has supported the countries of the Outer Periphery and the Super Periphery through stand-by arrangements and other measures. In 2009 the IMF agreed Stand-By Arrangements with Romania (€3.5bn Romania), Bosnia and Herzegovina (€1.1bn), and with Serbia (€402.5m). The IMF arrangements have involved strict conditionality in relation to fiscal consolidation and economic reform measures. For example, Bosnia and Herzegovina has been under a US\$405m stand-by arrangement with IMF since 2012 that has mandated a tight austerity package designed to reduce the budget deficit, which was cut to 4.5% of GDP in 2010, 2.5% in 2012 and 2% in 2013. This was achieved through cuts to rights-based pensions, public sector wages. Serbia agreed an IMF stand by arrangement 2009 \$1.5bn, which lasted until 2011. It mandated nominal freeze in public pay and pensions. Subsequently the deficit increased 7% in 2013. Emergency measures to reduce the deficit in 2014 have involved a 10% cut to public sector pay and employment and elimination of subsidies to 153 state owned firms employing 60,000. The Former Yugoslav Republic of Macedonia was the recipient of a precautionary programme from the IMF. She has maintained a low budget deficit at 2.5% of GDP in 2010 and 2011 achieved through a two-year public sector pay freeze. The deficit increased again to 4.1% of GDP in 2013 and more in 2014.

However, fiscal consolidation associated with these austerity policies is likely to reduce domestic demand and undermine growth, offsetting many of the benefits of increased competitiveness.

Despite the rhetoric of austerity and structural reform, the Core countries have practiced the opposite. Germany comes 28th out of 34 countries ranked by OECD for reform progress since onset of crisis. In early stage of crisis, an anti-crisis measure to subsidise new car purchases was adopted. More recently Germany has introduced policies that have cut the pension age to 63, or even 61 in certain cases, increased minimum wages to relatively high levels, and introduced industrial subsidies for green energy producers through the *Energiewende* (Energy change) programme that provides massive subsidies to renewable energy producers.

## 8. Conclusions

This paper considers the dependency of economic growth in individual European countries on the growth performance of the EU. In this way it embeds the analysis of the Western Balkan countries within a wider perspective of the European economy as a whole. The analysis is based upon a simple Core-Periphery model of the European economy. The paper identifies three distinct Peripheries of the EU. An *Inner Periphery* consists of those countries that are in the Eurozone but have suffered a deep recession as a result of the Eurozone crisis. An *Outer Periphery* consists of those countries that are within the EU but outside the Eurozone. They have also been drawn into the Eurozone crisis as a consequence of spillovers from the crisis. However, they have benefited from being within the EU to the extent that their economies are supported by large inflows of structural funds. The third is a *Super Periphery* that consists of countries that are outside both the Eurozone and the EU, but which are nevertheless tied to the Eurozone through a high level of euroisation of their economies. They are consequently unable to use

## Interdependence between Core and Peripheries of the European Economy

depreciation of their currencies as a means to gain competitive advantage without causing large scale bankruptcies by businesses and personal defaults by mortgage holders who typically have borrowed either in Euros or in Euro-indexed local currency loans.

The theory of under-consumption shows how the Core countries are vulnerable to secular stagnation and how, in order to overcome this tendency within the Eurozone, they are dependent on export revenues achieved by trading with the less competitive Periphery countries to sustain their economic growth. The import bill that this implies for the Periphery countries (at each level) has led to continuous trade and current account deficits and a steady build up of debt.

In the 2000s, the process of financialisation stimulated and supported an artificial economic boom in the Periphery. Indeed, financialisation was also a product of the tendency towards secular stagnation, as the provision of consumer credit was an important way in which the Core countries were able to stimulate demand and overcome under-consumption tendencies. The phenomenon of financialisation has also spread to the peripheries, making them vulnerable to the additional financial effects of crisis.

The combination of a theory of Core-Periphery and a theory of under-consumption provides an explanation of the dependency relationships between the European economies and of the spillover effects of Eurozone crisis to the Western Balkans. Continuing austerity as a method to create internal devaluation in the Periphery is unlikely to succeed as a means to extricate these countries from crisis. Due to their lack of competitiveness, a process of export led growth is an unlikely outcome. Given the dependencies of the European economies upon one another, a possibly better way out of the

current period of low growth and stagnation would be a coordinated fiscal expansion to stimulate domestic and Europe-wide demand, led by a Europe-wide investment programme focused on renewing the infrastructure assets in the Periphery that could be funded by the European Investment Bank.

## References

- Bartlett, W. and Prica, I. (2013) "The deepening crisis in the European Super Periphery", *Journal of Balkan and Near Eastern Studies*, 15(4): 367-382
- Beleva, I. (2011) "Crisis and recovery in Bulgaria: labour market impact on men and women", *MPRA Paper No. 52663*, Munich
- Bellamy Foster, J. and Magdoff, F. (2009) *The Great Financial Crisis*, New York: Monthly Review Press
- Christodoulakis, N., Leventi, C., Matsaganis, M. and Monastiriotes, V. (2011) "The Greek crisis in focus: austerity, recession and paths to recovery," *LSE Research Online Documents on Economics 38380*.
- Hansen, A. (1955) "The stagnation thesis", in: *Readings in Fiscal Policy*, Homewood, Illinois: Richard D. Irwin, Inc.
- Keynes, M. (1936) *The General Theory of Employment, Interest and Money*, London: Macmillan
- Lapavistas, C., Kaltenbrunner, A., Lindo, D., Michell, J., Paineira, J.P., Pires, E., Powell, J., Stenfors, A. and Teles, N. (2010) "Eurozone crisis: beggar thyself and thy neighbour", *Journal of Balkan and Near Eastern Studies*, 12:4, 321-373
- Minsky, H. (1986) *Stabilizing an Unstable Economy*. McGraw-Hill Professional.
- Palley, T. (2007) "Financialization: what it is and why it matters", *Working Paper Series, no. 153*, Political Economy Research institute, University of Massachusetts
- Picketty, T. (2014) *Capital in the Twenty First Century*, Harvard: Harvard University Press.
- Pisany-Ferry, J. (2014) *The Euro Crisis and its Aftermath*, Oxford: Oxford University Press
- Sokol, M. (2001) 'Central and Eastern Europe a decade after the fall of state-socialism: regional dimensions of transition processes', *Regional Studies*, 35(7): 645-55.
- Summers, L. (2013) "Why stagnation might prove to be the new normal", *Financial Times*, 15 December 2013
- Werner-Sinn, H. (2014) *The Euro Trap: On Bursting Bubbles, Budgets and Beliefs*, Oxford: Oxford University Press

## Recent LEQS papers

- Bojar**, Abel. "The Electoral Advantage of the Left in Times of Fiscal Adjustment" Paper No. 103, January 2016
- Westlake**, Martin. "Chronicle of an Election Foretold: The Longer-Term Trends leading to the 'Spitzenkandidaten' procedure and the Election of Jean-Claude Juncker as European Commission President" Paper No. 102, January 2016
- Farina**, Francesco & **Tamborini**, Roberto. "Europe's Great Divide. A geo-economic-political map" Paper No. 101, December 2015
- De Santis**, Roberta & **Lasinio**, Cecilia Jona. "Environmental Policies, Innovation and Productivity in the EU" Paper No. 100, November 2015
- Durazzi**, Niccolo. "Inclusive unions in a dualised labour market? The challenge of organising labour market policy and social protection for labour market outsiders" Paper No. 99, October 2015
- Costa Font**, Joan & **Cowell**, Frank. "European Identity and Redistributive Preferences" Paper No. 98, September 2015
- Ascani**, Andrea, **Crescenzi**, Riccardo & **Iammarino**, Simona. "Economic Institutions and the Location Strategies of European Multinationals in their Geographical Neighbourhood" Paper No. 97, August 2015
- Borrell-Porta**, Mireia. "Do family values shape the pace of return to work after childbirth?" Paper No. 96, July 2015
- Costa Font**, Joan & **Kossarova**, Lucia. "Anthropometric Dividends of Czechoslovakia's Break Up" Paper No. 95, June 2015
- Wrátil**, Christopher. "Democratic Responsiveness in the European Union: the Case of the Council" Paper No. 94, June 2015
- Crescenzi**, Riccardo, **Pietrobelli**, Carlo & **Rabellotti**, Roberta. "Location Strategies of Multinationals from Emerging Countries in the EU Regions" Paper No. 93, May 2015
- Burger**, Anna S. "Extreme working hours in Western Europe and North America: A new aspect of polarization" Paper No. 92, May 2015
- Bojar**, Abel. "Biting the Hand that Feeds: Reconsidering Partisanship in an Age of Permanent Austerity" Paper No. 91, April 2015
- Cesaroni**, Tatiana & **De Santis**, Roberta. "Current account "Core-periphery dualism" in the EMU" Paper No. 90, March 2015
- Glendinning**, Simon. "Varieties of Neoliberalism" LEQS Paper No. 89, March 2015
- Haverland**, Marcus, **De Ruiter**, Minou & **Van de Walle**, Stefan. "Producing salience or keeping silence? An exploration of topics and non-topics of Special Eurobarometers." LEQS Paper No. 88, February 2015
- Johnston**, Alison & **Regan**, Aidan. "Taming Global Finance in an Age of Capital? Wage-Setting Institutions' Mitigating Effects on Housing Bubbles" LEQS Paper No. 87, February 2015



THE LONDON SCHOOL  
OF ECONOMICS AND  
POLITICAL SCIENCE ■



LSE Europe in Question  
Discussion Paper Series

**LEQS**  
European Institute  
London School of Economics  
Houghton Street  
WC2A 2AE London  
Email: [euoinst.LEQS@lse.ac.uk](mailto:euoinst.LEQS@lse.ac.uk)

<http://www2.lse.ac.uk/europeanInstitute/LEQS/Home.aspx>

