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# Macroeconomic imbalances and structural change in the EMU

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ABSTRACT

Macroeconomic imbalances in the EMU are at the heart of the current crisis. One explanation for the high current account deficits in the Southern European countries is that they lack a large, competitive and export-oriented industrial sector. The paper tests the hypothesis that parts of the structural change which happened in the EU before 2008 were supported by the divergent unit labour cost developments in the EMU. We look into patterns of structural change and sectoral competitiveness in all EU member countries and assess their linkages by means of a descriptive analysis as well as through econometric estimations. Our results broadly support the hypothesis. Industrial policy, which aims at fostering new competitive export-oriented industries in Southern Europe in order to reduce macroeconomic imbalances in the EMU, should thus be combined with adjustments in relative labour costs.



## 1. Introduction

Macroeconomic imbalances are at the heart of the crisis in the European Monetary Union (EMU). Before 2007/2008, EMU member states embarked on different growth paths: Germany and other countries in the 'North' featured strong exports and weak domestic demand, and consequently accumulated large current account surpluses. Some economies in the 'South' on the contrary were characterized by a weaker export performance and a boom in domestic demand, and built up high external deficits. These developments were not sustainable and made the latter countries highly vulnerable to a sudden stop of capital inflows during the financial and economic crisis. They are also a major cause for the subsequent sluggish and uneven recovery in the EMU, as well as for the crisis of public finances and the financial sector in many Southern European economies.

At the root of these developments were large inflation differentials across member states, which accumulated to substantial shifts in relative competitiveness due to the loss of the capacity to adjust exchange rates in the EMU.[1] In Northern Europe, and particularly in Germany, inflation was constantly below the ECB's target, whereas in the South it continuously exceeded it. The large price divergences did not only lead to shifts in relative competitiveness between the member states, but also relative to countries outside the EMU. For the low-inflation countries in the North, the Euro exchange rate was weaker than it would have been in the case of country-specific currencies, and vice versa for the South. This stimulated exports in the North and held them back in the South. Since the ECB sets interest rates in accordance with the overall inflation rate in the Euro area, its monetary policy further reinforced these differentials. In Northern Europe, real interest rates were too high and weakened domestic demand. In Southern Europe (and in Ireland) real interest rates were low and led to a debt-driven consumption and investment boom. Whereas the single monetary policy supported the emergence of macroeconomic imbalances, no European insti-

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[1] Throughout the paper, we use the term 'competitiveness' for 'price competitiveness'. For a broader definition of competitiveness see Aiginger et al. (2013).

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tution was in the position to bring countries' inflation rates back to the common target.[2]

There has emerged a broad and intensive debate about the causes and cures of macroeconomic imbalances. Some authors stressed that sectoral booms led to an unsustainable composition of output which can be followed by abrupt and sharp busts with major welfare consequences (see for instance Fund, 2011; Eichengreen, 2007; Atoyan et al., 2013; Turunen et al., 2011). Related to this argument is the view that low interest rates and the abundance of liquidity led to high risk appetite and over-indebtedness of the private and the public sector. A number of empirical studies (e.g. Aizenman and Jinjarak, 2009; Ferrero, 2011; Ferrero and of New York, 2012) have analyzed the link between large capital inflows and asset prices. Macroeconomic imbalances may be also driven by fiscal policy ('twin deficits hypothesis'), as it might be the case for Greece.

Another explanation for the high current account deficits in the Southern European countries is that they lack a large, competitive and export-oriented industrial sector. According to this view, the reduction of the imbalances would only be possible if these countries started to develop such industries.[3] Nevertheless, the lack of an industrial sector is possibly the consequence of the aforementioned price divergences in the EMU. The continuous loss in competitiveness in Southern Europe discouraged investment in innovative technologies and the establishment of new firms. Furthermore, existing firms could not keep up with their competitors in other EMU countries and outside the monetary union, and closed down. The aim of this paper is to assess this hypothesis by looking into patterns of structural change and sectoral competitiveness in the EU and their linkages.

For this purpose, we firstly identify different patterns of structural change in current-account surplus and deficit countries. Our results support the hypothesis that in Northern Europe, the export-oriented manufacturing industries increased in relative size and importance, whereas in Western and Southern Europe their share in total value added decreased. Secondly, we investigate differences in unit labour cost developments among country groups. In particular, we look into productivity and wage developments, and assess whether the differences in competitiveness are due to differences in productivity growth or in wage growth. Finally, we establish a link between changes in relative competitiveness and the patterns of structural change. This is done by means of a descriptive analysis as well as by an econometric analysis. Our results strongly confirm that the divergence of price competitiveness in the EMU, which emerged prior to the crisis of 2008/2009, contributed substantially to the observed patterns of structural change.

The rest of the paper is structured as follows: In the next section, we describe the database and the methodologies which are used. We explain the motivation and the criteria for classifying all EU countries into four groups, as well as splitting the manufacturing sector into export-oriented and domestic-oriented industries. Section 3 looks into the patterns of structural change which emerge in these groups. In Section 4 we investigate the competitiveness developments in the sectors and industries and country groups and its provenance from differences in productivity and wage growth. After that, we bring the analysis from the two previous sections together by establishing a link between competitiveness and structural change, both by means of a descriptive (Section 5) and an econometric analysis (Section 6). In the final section we summarize the results and derive some policy conclusions.

## 2. Data and methodology

### 2.1. Database

The data we used for both the descriptive and the econometric analysis were taken from the Socio-Economic Accounts (SEA) of the World Input-Output Database (WIOD).[4] The basis for the SEA are data from the EU Klems project.[5] It contains annual data (1995–2009) for value added, employment, labour compensation etc. for 35 industries and all EU member countries.

### 2.2. Definition of country groups

Most of the following analysis is based on a classification of EU member states into different country groups. This subsection briefly explains the motivation and the criteria for this classification.[6] Basically, we apply three different criteria:

1. **CA:** Current account (in percent of GDP, accumulated over the period 2000–2007)
2. **dCA:** Changes in the current account (difference between 2000 and 2007 in percent of GDP)
3. **GDPpC:** GDP per capita (2000, EU27 = 100%)

The first criterion can be interpreted as a variable which reflects the state of the current account. We accumulated it over the whole pre-crisis period so as to avoid that the classification into a particular group depends on a specific year. By doing so, we distinguish countries with a positive current account from those with a negative one. The second criterion reflects macroeconomic developments over the period from 2000 to 2007. This allows us to separate countries with an amelioration and a deterioration in their external balance. The third criterion – GDP per capita – has been introduced to capture the specific characteristics of 'catching-up countries'. Due to strong economic growth and high investment, these countries usually import more than they export, and finance their catching-up process through capital inflows. Their current account deficits could therefore be interpreted not as poor macroeconomic developments, but rather as a sign of a catching-up process.

For each criterion we defined a threshold which allows us to split the countries into groups. For the first criterion, the boundary is defined as having a positive or negative accumulated current account. For the second criterion, an increase in the current account balance of 2 percent of GDP has been chosen as threshold; by doing so we capture only countries which improved their current account balance substantially, and the classification into groups is less arbitrary. The threshold value for the third criterion is a GDP per capita of less than 80 percent of the EU27 average in the year 2000. The three criteria would theoretically allow eight different groups, but it turns out that only four country groups emerge[7]:

[2] See Ederer and Reschenhofer (2013) for a more elaborate discussion of these developments.

[3] Ederer and Reschenhofer (2014a) find that in Greece and Portugal, current account deficits have persisted for a long time and can therefore (at least partly) be considered as 'structural' in the sense that they would not have been corrected if domestic demand in the EMU had been more balanced across the member countries.

[4] http://www.wiod.org. For further information about the WIOD see Timmer (2012).

[5] http://www.euklems.net

[6] Although the problem of macroeconomic balances is related to the establishment of EMU and the absence of exchange rates, the phenomenon could also be observed in some non-EMU members like the Baltic states. We thus decided to include all EU countries into the analysis.

[7] The only country which does not fit into one of the four groups is Malta. According to our criteria, it would be in a separate group (CA <0, dCA >2%, GDPpC >80%). To avoid a group with only one member we decided to put Malta into Group three (see below).

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