THE EUROPEAN BUSINESS CYCLE

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The construction of European Monetary Union has raised several questions about the existence of a common business cycle, a European one. The lack of cyclical synchronization would complicate the monetary and fiscal policies in the Union, being a negative factor as regards the fulfilling of the necessary conditions for the existence of an optimal currency area. Like so many other economic issues, there is not a unanimously agreed verdict on this matter either. Thus, some authors sustain the asymmetry and heterogeneity of European business cycles and the existence of national cycle "clusters", while others identify a number of similarities that determined them to promote the idea of a single European cycle.

Introduction

One of the major concerns of the European monetary policy decision makers is the economic differences between the euro area member countries. This is because a common monetary policy cannot be effective for countries being in different phases of the business cycle. So, we can identify at European level a "one size does not fit all" problem, which could threat the support for the European Monetary Union. The country being in recession will prefer an expansionary monetary policy, while the country experiencing a boom would prefer some more restrictive measures. This problem would disappear if we could speak about the existence of a common business cycle, a European one, with a high degree of different cyclical stages synchronization between countries. Accelerating the integration process was sometimes motivated by the need to eliminate the disparities between European countries, resulting in a closer economic correlation. However, a more pessimistic vision believes that integration will mean a stronger trend toward industrial specialization and regional concentration of similar industries as a result of pursuing the economies of scale. Thus, the industrial shocks will turn into regional shocks and the business cycles of the European countries will become even more divergent. In this context, our aims are to identify some characteristics of the European business cycle, the correlations between different European countries' cyclical movement and the factors responsible for their synchronization or non synchronization.

Chronology of the European business cycles

The tradition of a national forum responsible for dating the business cycles in the United States resulted in creating a similar institution within the European Union. Thus, in 2003, The Center for Economic Policy Research (CEPR) has established a committee whose mission has become to complete a chronology of expansions and recessions in the euro area since 1970. To achieve this chronology CEPR used the principles established by NBER (National Bureau of Economic Research), but different primary data used and the quarterly, not monthly analysis made the

results not be the same as those of Americans. According to CEPR[206], cyclical episodes in the euro area between 70-'90, were:

Table 1. Chronology of euro area business cycles

TROUGH	PEAK
1974 3rd quarter	1975 1st quarter
1980 1st quarter	1982 3rd quarter
1992 1st quarter	1993 3rd quarter

Thus, the Committee identified three recessions in the euro area for the period examined, from the third quarter of the year 1974 to the first quarter of 1975, from the first quarter of 1980 to the third quarter of 1982 and from the first quarter of 1992 to the third quarter of 1993. According to CEPR, the recessions of 70s and 90s were more pronounced and also synchronized between countries. In both periods, employment, investment and industrial output fell along with the Gross Domestic Product. In the 80s, the recession is moderate, but longer. Gross Domestic Product does not have a pronounced decline, but rather a stagnation, but employment and investment decline to a greater extent. Starting with the first quarter of 2001, GDP of the euro area experienced a contraction, for the beginning of 2002 to see a slight resurgence. Employment has increased somewhat, but industrial production has given weak signs of recovery. However, this period is considered rather a prolonged pause in the growth of economic activity, rather than a full-fledged recession. CEPR announced on 31 March 2009 that economic activity in the euro area reached its peak in the first quarter of 2008. The peak marked the end of an expansion that began in the third quarter of 1993 and lasted 57 quarters.

Even if these data are based on the overall evolution of aggregate GDP in the euro area and the evolution of industrial production, the periods of peak and trough are not common for all the European countries. The issue of synchronizing the business cycles of the euro countries calls into question the very idea of an optimal currency area through the inefficiency of applying a common monetary policy. Different responses to external shocks or the existence of different internal shocks seriously put into question the existence of a border line effect regarding the European cyclical correlation.

Business Cycle correlation
Various studies on the correlation of business cycles in European countries have reached different results. Thus, Artis and Zhang[207] argue in 1999 the existence of a better European cycle synchronization, while in 2001 Inklaar and De Haan[208] reach the conclusion that the periods of cyclical convergence are alternated with those of divergence, this being a defining feature of the euro area.. These results contrast with the vision that the deepening of European integration will mean a better synchronization of business cycles.

To support a theory or another, Massmann and Mitchell conducted in 2004 a study based on European industrial production for the past 40 years using several methods of mathematical modeling and performing correlation between the first 12 countries of the euro area. The

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206 Business Cycle Dating Committee of the Centre for Economic Policy Research; http://www.cepr.org/press/dating.pdf .
207 Michael Artis; Wenda Zhang; "Further Evidence on The International Business Cycle and the ERM: Is There a European Business Cycle?"; Oxford Economic Papers; no.51; 1999.
208 Robert Inklaar; Jakob de Haan; " Is There Really a European Business Cycle?" Oxford Economic Papers no. 53; 2001.

conclusion reached by these authors is the coexistence of convergence and divergence periods. On average, the correlation coefficient between the European business cycles is positive and high, but its dominant feature is a strong volatility. Thus, in the second half of the 70s the cycle correlation coefficient amounted to 0.8, for the second half of the 80s to fall close to 0.

A similar analysis on pairs of countries is made by Uwe Bower and Catherine Guillemineau[209]. According to their study, the highest coefficient of business cycle correlation, of 0.85, was obtained by the pair of states Belgium-Italy. Fairly high correlations were observed for the pairs Spain-Portugal, Belgium-France, Germany-Austria or Germany-Holland. The weakest correlations were obtained between states situated at large geographical distances, although this is not always true. For example, a negative correlation existed between Germany and Finland, affected asymmetrically by the same external shock, the collapse of communism in Europe. The unified Germany was experiencing a boom of the business cycle when Finland was already in recession following the collapse of the Soviet Union, one of its main trading partners. Overall, the lowest correlation was obtained in the period 1981-1988, with a coefficient of 0.18 and the highest during the years 1993-2000, with a coefficient of 0.73. The year 1997 seems to be an important benchmark as regards the better business cycles correlation of the EMU countries, then being signed the Stability and Growth Pact and fixed the implementation timetable of the common European monetary policy.

M. Camacho, G. Perez-Quiros and L. Saiz[210] talk about the existence of clusters formed by states that have experienced cyclical fluctuations closed as time and amplitude. They extend the study to all EU states, even if they are not yet part of EMU. A first cluster includes countries such as Cyprus, Estonia, Latvia, Lithuania, Romania and Turkey. The main characteristics of this group are short duration of expansions (with the exception of Turkey are below the European average) and large amplitude of the recessions. The length of expansions seems to be equal to the length of recessions and thus the gains of first are canceled by the latter.

The second group includes the Nordic countries, the Czech Republic and Slovakia, whose cycles are characterized by brief and mild recessions and convex expansions. On average, the expansions amount 33 months and the recessions 13 months. In absolute terms, the amplitude of expansions is two times higher than the amplitude of recessions.

The third cluster containing the majority of EU-15 countries is composed of economies with lower amplitudes of both expansions and recessions. The average duration of expansions is 28 months and of recession is 18 months. The amplitude of expansions is slightly higher than of recessions, both being generally moderate.

The last group includes Ireland, Hungary and Poland, whose business cycles generally have atypical features. Their expansions are very long (the average is 44 months) and recessions are very short (9 months). The amplitude of expansions is 3 times higher than that of recessions, which made them very convex. Thus, these countries have achieved very good economic results during the recent years' expansions.

Very different cyclical movements in European countries have made even Michael Artis, a supporter of the existence of a common European business cycle, to become somewhat more skeptical. Thus, in 2003, he says that "the European business cycle is a more elusive phenomenon than we might have expected, whilst some European countries seem 'to stick together', there are many which do not." [211]

209 Uwe Bower, Catherine Guillemineau; "Determinants of Business Cycle Synchronisation across Euro Area Countries"; European Central Bank; Working Paper Series no. 587; February 2006.
210 Maximo Camacho; Gabriel Perez-Quiros; Lorenna Saiz; „Do European Business Cycles look like one?"; Journal of Economic Dynamics and Control; vol. 32, nr. 7, 2008.
211 Michael Artis; " Is there a European Business Cycle?", CESifo Working Paper no. 1053; 2003; pag. 4.

Even if overall cyclical correlation in the European Union is relatively low and volatile, Massmann and Mitchell believes that the business cycles of the euro area can be compatible even if they are not converging[212]. This would imply a closer cyclical movement, decreasing the cyclical disparities. Any reduction of these disparities means actually an increase in correlation between European business cycles. In this context, it is interesting to analyze the factors that determine this reduction of disparities and a better cyclical synchronization.

The determinants of cyclical synchronization
The intensity of foreign trade appears to be the most important determinant of the synchronization of business cycles in the euro area. A stronger synchronization of national business cycles is determined only by the intra-industry trade, by the existence of similarities in industrial structures of EU countries. Basically, similar industrial specialization means a development of intra-industry trade and a stronger cyclical correlation cyclical, with similar responses to similar shocks. The problem occurs when integration leads to a regional industrial specialization. In this situation, especially the neighboring countries could achieve a better cyclical synchronization and a more effective common monetary policy.
Another determinant of the business cycle synchronization is monetary integration. This may lead to a better synchronization by reducing the monetary policy asymmetries. However, monetary integration has a major impact on trade through exchange rate stability. But monetary integration can sometimes cause a weaker synchronization of economic cycles. The existence of a single currency and the lack of an exchange rates mechanism in the hands of national monetary authorities determine only real sector adjustments in case of an external shock. The exchange rate mechanism often works as an extremely important instrument of adjustment in the event of exogenous shocks.
Financial integration may lead to a stronger synchronization of business cycles by affecting the demand in different countries. The decline of a capital market means a decline of demand in the countries whose investors are affected by the fluctuations in that falling market. Contagion effect of fluctuations in financial markets is reflected in the cyclical fluctuations of the financial integrated countries. But financial integration may as well stimulate specialization of production through reallocation of capital, which will lead to a different exposure to industrial shocks and a weaker synchronization of business cycles.

Conclusions
Even if it has argued that the steps taken by the European Union toward monetary integration has meant a stronger correlation of the business cycles in European countries, the reality shows that we can not yet speak of a "monotonous" trend toward a European business cycle. For most of its history, the cyclical movement in European Union meant a succession of convergence and divergence periods. Some European countries seem to have more similar business cycles, but there still persists high differences between different groups of states. A common monetary policy would be more effective if national business cycles should be closely correlated. Being in distinct cyclical phases, various European countries will not benefit from the same monetary recipes. Closer commercial ties, the integration of financial markets, the convergence towards monetary integration are just some necessary conditions for a better correlation of macroeconomic structures. But the business cycle remains the most complex economic phenomenon, closely related to most intimate economic foundations. To speak of a genuine European business cycle we should speak first of a deep, complete integration of all the

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212Michael Massmann; James Mitchell; "Reconsidering the evidence: are Eurozone business cycles converging?"; National Institute of Economic and Social Research Discussion Paper no. 210; 2003.

economic, institutional, political, commercial, industrial etc. structures in the European Union member states.

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