Sieps
Swedish Institute for European Policy Studies

SUMMARY

The full report is available at www.sieps.se

Summary of the report

Aggregate and Regional Business Cycly Synchronisation in the Nordic Countries

Anna Larsson, Nevena Gaco och Henrik Sikström

This essay studies aggregate and regional business cycle asymmetries in the Nordic countries Denmark, Finland, Norway and Sweden. In light of the Euro-political decisions and monetary regime shifts that have divided the Nordic region in the last fifteen years, we also study tendencies towards synchronisation over time. Throughout the paper we relate regional and aggregate business cycles to each country aggregate, other Nordic countries, a Nordic aggregate, the EU-4 (France, Germany, Italy and Spain) and the eurozone. Finally, we relate our findings to key aspects of economic integration, primarily labour mobility.

A key criterion for a monetary union to be successful is a high degree of business cycle synchronisation between the member countries. A high degree of synchronisation indicates that the member countries are affected similarly by shocks, i.e. that the majority of disturbances to the area are symmetric. Conversely, if the area is prone to asymmetric shocks, it is poorly suited to a common currency since this entails a unified monetary framework where countries have relinquished the monetary weapon in offsetting booms and busts.

Prior to the launch of the European Economic and Monetary Union (EMU) on 1 January 1999, there was a vivid debate about whether Europe constituted an optimal currency area (OCA). Most economists agreed that, despite high capital mobility and a fair amount of trade within the eurozone, low labour mobility in particular made the area unsuitable for a unified monetary framework. However, the argument that the member countries might become more integrated over time and that their business cycles therefore would become more synchronised after the adoption of the common currency gained great support.

Even if aggregate business cycles are synchronised, economic disturbances may cause domestic asymmetries if regions within a country are heterogeneous. While this issue has gained increasing interest among researchers as well as policy makers in recent years, the area is largely unexplored and the empirical evidence fairly scarce.

The potential importance of regional asymmetries is of interest to any country, including those maintaining an independent monetary policy outside the EMU. Regardless of the monetary regime, it is valuable to understand how different regions respond to domestic monetary policy measures. The argument is the same as in a monetary union. If the central bank pursues, say, a contractionary policy to counteract inflationary pressure in booming areas, this is likely to amplify regional recessions that may be taking place in other parts of the country. In other words, the one-size-fits-all principle that governs domestic monetary policy measures by construction may exacerbate regional asymmetries when the objective of the central bank is to stabilise the economy-wide aggregate.

Given that countries are heterogeneous and respond differently to shocks, there may be factors that smooth regional asymmetries. A key issue is how border regions are affected by being adjacent to countries that have adopted the euro. It has been suggested that the Swedish region Skåne is experiencing a brain drain, in particular since the launch of the Öresund Bridge in 2001. The argument is that workers from Skåne are fleeing towards more prosperous Danish regions where the peg to the euro, the favourable evolution of Danish wages and lower taxes on labour have made employment in Denmark more attractive.

The Nordic region is unique in several respects and constitutes an interesting object of study. First, the common history of the countries implies great similarities in economic institutions. Second, the similarities in languages and the geographical proximity promote labour mobility across borders. Third, there are large trade flows within the area.

Despite all their similarities, the Nordic countries are characterised by being at very different stages of European integration. Norway, at the lowest stage of European integration, is a member of neither the European Union (EU) nor the EMU. Sweden is a member of the EU but has chosen to remain outside the EMU and is maintaining a floating exchange rate. Denmark chose to opt out of the EMU in the referendum in 2000, but the Danish krone is pegged to the euro through the ERM system. Of the Nordic countries, Finland is the only one to have joined the eurozone and became a full member of the EMU at the launch of the euro in 1999. If it is the case that a common currency leads to more integration, we would then expect Finland, and possibly also Denmark, to be increasingly synchronous with the eurozone while there is little reason to expect such a pattern for Norway.

In this report we revisit the issue of asymmetric shocks by studying the behaviour of aggregate and regional business cycles in the Nordic countries using recent, and some previously unavailable, data. In addition to reporting cross-sectional correlations, we study tendencies towards synchronisation over time, i.e. changes in asymmetry between countries, regions and key European areas. We begin by studying correlations and synchronisation at the aggregate country level. The different monetary regimes in the Nordic countries enable us to address the issue of whether having a common currency is conducive to synchronisation. Following the country analysis, we study within-country asymmetries at the regional level and identify which regions have become more synchronised with their respective countries, neighbouring countries and the euro area. While our study of synchronisation at the country level provides some insight into whether a common currency may help promote synchronisation, other factors are also likely to matter. In the final part of the analysis, we therefore address other aspects of economic integration, mainly labour mobility.

Our main findings are as follows. The results from the simple correlation analysis suggest that Denmark is the only Nordic country to display a positive correlation with the eurozone over the 1993–2007 period. Finland, Norway and Sweden are negatively correlated with this area over this sample period. Danish regions Hovedstaden and Jylland display the highest levels of positive correlation with the eurozone aggregate.

Turning to changes in asymmetry over time, the results suggest that, when we focus on the stricter test of statistically significant trends in our measure of synchronisation, Denmark has become significantly more synchronised relative to the EU-4 over the sample period 1970–2008. Consistent with previous literature, we do see tendencies that Sweden has become increasingly synchronised relative to the euro area, but the trends are not statistically significant.

We also address a potential effect of the Maastricht Treaty by studying changes in the asymmetry indices of the four countries over the period 1992–2009. We find that Denmark and Finland have become significantly more synchronous relative to the EU-4 as well as the euro area over this period. Norway, having remained outside the EU as well as the EMU, has become more asymmetric relative to the European reference groups from 1992 onwards. The trends for Sweden, a member of the EU but not the EMU, are not statistically different from zero, suggesting no change in synchronisation relative to the EU-4 or the eurozone after the enactment of the Maastricht Treaty. Taken together, these results suggest that a common currency may promote synchronisation.

At the regional level, Stockholm is the only region that has become significantly more synchronised with the euro area over the 1993–2007 period. Interestingly, Skåne has become more asymmetric relative to the Swedish aggregate but displays tendencies towards more synchronisation, albeit statistically insignificant, relative to Denmark.

At the regional level, we find a positive correlation between the business cycle and net migration inflow for 50 per cent of the regions. Turning to commuting, the most interesting region is perhaps the Öresund area, where the launch of the Öresund Bridge coincided with a dramatic increase in commuting from Skåne to Hovedstaden. Interestingly, commuting between these two regions is indeed one-way: there are almost 40 times as many people commuting from Skåne to Hovedstaden as in the opposite direction. We find it plausible that these worker flows may be an important reason why Skåne displays increasing asymmetry relative to Sweden but increasing symmetry relative to Denmark. It is likely that the Danish system of Flexicurity has made hiring easier for Danish firms and therefore led to an inflow of commuters from Sweden.

Focusing on Sweden, where the prospect of future EMU membership is still subject to debate, our results suggest that Stockholm is the only region to have become more symmetric relative to the euro area. Skåne shows clear signs of being increasingly dependent on Denmark.

Since Skåne is so closely integrated with Denmark and shows significant signs of increased asymmetry relative to the rest of Sweden, it is likely that the region would benefit from adopting the euro. The result that the Stockholm region has become increasingly symmetric relative to the euro area suggests that the Stockholm region would also be well off in a monetary union.

Our most interesting finding is unquestionably the result that Denmark and Finland have become significantly more synchronous relative to the EU-4 and the eurozone since 1992 while we see no such significant trend for Sweden. Over the same period, Norway shows significant tendencies to become increasingly asymmetric relative to these areas. This set of results supports the view that a common currency is conducive to business cycle synchronisation.

There is a widespread consensus among economists that the most import-ant cost of monetary unification is the lost ability to pursue independent monetary policy to stabilise the economy. However, our finding that a common currency may promote synchronisation suggests that this cost is likely to diminish over time.

The full report is available at www.sieps.se

Swedish Institute for European Policy Studies **www.sieps.se**

Fleminggatan 20 | SE-112 26 Stockholm | Tel: +46-(0)8-454 47 00 | Fax: +46-(0)8-454 47 06 | info@sieps.se