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Deciding to enter a monetary union: The role of trade and financial linkages

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ABSTRACT

This paper evaluates the role of trade and financial linkages in the decision to enter a monetary union. We estimate a two-country DSGE model for the U.K. economy and the euro area with financial intermediaries as in Gertler and Karadi (2011). We use the model to compute the welfare trade-offs from joining the euro. We compare the gains from trade that would occur after the adoption of the euro against the costs of relinquishing monetary policy, both conventional and unconventional. We also study the effects of the changes in the corporate risk premium observed during the recent crisis. We find that in tranquil times, when the risk premium volatility is low, the net welfare gain of joining the monetary union is 2.4 percent of life-time consumption. During financial crises, when there is a sharp increase in the volatility of the risk premium, joining a monetary union would lead to a net welfare loss of 2.2 percent of life-time consumption. The welfare analysis underscores the importance of financial stability to sustain a monetary union over time.

1. Introduction

The effects of global financial crisis in Europe have revived the debate on the benefits and costs of belonging to the European Monetary Union (EMU). The recent crisis has been particularly long lasting in some southern European countries, leaving a large public and private debt overhang. This situation is making it difficult to provide additional fiscal stimulus and is forcing deleveraging in the banking sector. In addition, exchange rate policy cannot be used as a tool to correct competitiveness problems and increase growth through net exports. As a result, some economists and market commentators have suggested that the costs of belonging to the EMU (i.e., the euro area) might outweigh its benefits for some of its members.[1] The costs of belonging to the EMU are mostly related to the loss of monetary and exchange rate policy as an instrument for macroeconomic stabilization. These costs may be amplified by the lack of fiscal and labor market integration that are needed in an optimal currency area (Mundell, 1961). However, all the costs of a monetary union have to be assessed relative to the benefits brought about by lower transaction costs associated to having a common currency.

While this debate is taking place, the EMU has actually expanded since the beginning of the crisis: Malta and Cyprus joined in 2008, Slovakia in 2009, Estonia in 2011, and Latvia in 2014. In fact, all country members of the European Union (EU) are expected to participate in the EMU once the convergence criteria are fulfilled. Yet, some countries have made it clear that

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[1] See Feldstein (2010) and Roubini (2011).

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they are not interested in joining the EMU. Denmark and the United Kingdom (UK) were granted opt-out clauses in 1993 and 1997, respectively. Both countries consider that the decision of entering the EMU should be approved by a referendum. Sweden never fulfilled the conditions to adopt the euro, by not entering the European Exchange Rate Mechanism (ERM II), which requires keeping the country's exchange rate in a narrow band with the euro for two years.

In the UK, the government of prime minister Tony Blair set five economic tests to evaluate whether or not the country will benefit from adopting the euro in 1997.[2] The five economic tests were:

1. Are business cycles and economic structures compatible so that we and others could live comfortably with the euro interest rates on a permanent basis?
2. If problems emerge is there sufficient flexibility to deal with them?
3. Would joining EMU create better conditions for firms making long-term decisions to invest in Britain?
4. What impact would entry into EMU have on the competitive position of the UK's financial services industry, particularly the City's wholesale markets?
5. In summary, will joining EMU promote higher growth, stability and a lasting increase in jobs?

The 1997 report determined that the UK did not satisfy the five economic tests. A follow-up 2003 report mentioned that, even though EMU membership could increase UK GDP between 5 and 9 percent, there was not a clear and unambiguous case for adopting the euro.[3] The current administration has pledged not to join the EMU over the course of the Parliament.[4]

In order to quantify the effects of joining the EMU, we focus on three main factors. The first one is the loss of monetary policy autonomy. Fig. 1 illustrates the potential constraints that the UK economy would have faced if it had joined the EMU. Fig. 1 plots the times series of the reference monetary policy rates set by the Bank of England (BoE) and the European Central Bank (ECB). In the recent period of financial turbulence (since 2007), the difference between the short-term interest has been less than one percentage point due to the synchronized effects of the Great Recession. The two reference rates have differed by more than 100 basis points quite often. For instance, between 2001 and 2005 the interest rate differential increased from 100 to 300 basis points. These differences are quite large and can have important macroeconomic effects on output and inflation.[5] If the British economy had followed the nominal interest rate to the level set by the ECB, it would have been more difficult to stabilize domestic inflation and output over that period.[6] But joining a monetary union does not only imply losing the capability of conducting monetary policy with a Taylor-type interest rate rule. Since 2009, the UK has also been using Quantitative Easing (QE) policies to stimulate the economy. We also address this issue in the paper.

The second element is the trade expansion that typically occurs after joining in a monetary union, due to lower transaction costs and disappearance of nominal exchange rate uncertainty.[7] Fig. 2 shows the expansion of trade in the euro area, measured as trade with the euro area (imports and exports) as percent of GDP. From 1990 until 2002, the share of intraregional trade of the largest economies of the euro area (Germany, France, Italy and Spain) increased from 16 to 23 percent of GDP. This trade expansion vis-a-vis main EMU partners did not occur in the UK. We consider this expansion of trade as part of the benefits of joining a monetary union.[8]

The third key element of our analysis is the role of financial factors, as reflected in corporate risk premia. Fig. 3 plots the CDS spreads of non-financial corporations in the UK, in the euro area core (Finland, France, Germany, and Netherlands) and in the euro area periphery (Italy, Portugal, and Spain) countries. In the first years of the global financial crisis, the CDS spreads of corporations in the core and periphery of the euro area were fairly similar and, more importantly, exhibited low volatility. Since 2010, a decoupling of the risk premium between the core and periphery of the EMU occurred, while the UK risk premium was closely aligned with the core. The volatility of the risk premium in the periphery increased dramatically after 2011. The question thus becomes: would the UK risk premium behave as the core or as the periphery of the euro area? In this paper, we also evaluate the implications of changes in risk premia volatility in the decision of adopting the euro.

The objective of this paper is to contribute to the debate on the desirability to join the EMU, with a novel focus on financial factors. Our approach is to conduct this evaluation in an estimated dynamic stochastic general equilibrium (DSGE) model. The advantage of a fully fledged DSGE model is that it can measure the impact of a change of policies (in this case, to join the euro area) on households' and firms' decisions, and hence it should be Lucas-critique free. The starting point of the analysis is a two-country version of the Smets and Wouters (2007) general equilibrium model with nominal and real

[2] See HM Treasury (1997).

[3] See HM Treasury (2003).

[4] On October 5, 2011, Prime Minister David Cameron stated in a speech at the annual conservative party conference the following: "*So let me say this: as long as I'm prime minister, this country will never join the euro*". Speech available at http://www.telegraph.co.uk/news/politics/david-cameron/8809209/David-Camerons-speech-to-Conservative-Party-Conference.html.

[5] For empirical evidence on the transmission mechanism of monetary shocks in the U.K. see DiCecio and Nelson (2007).

[6] Entering the EMU may increase the synchronization of business cycles between the new member and the monetary union, reducing the costs of losing the ability to conduct monetary policy (Rose, 2008). However, the existing inflation differentials across EMU members indicate there is no full synchronization of business cycles. Rabanal (2009) provides with a DSGE-model-based evaluation of inflation differentials in the EMU.

[7] See Anderson and van Wincoop (2004) and Rose (2008).

[8] We also calculated the ratio of the sum of imports and exports with the euro area, relative to the sum of total imports and exports, obtaining the same qualitative results in terms of trade expansion. Santos Silva and Tenreyro (2010) provide a literature review on all the costs and benefits discussed in the literature of optimal currency areas.