

One Money, One Market:
Estimating the Effect of Common Currencies on Trade
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Abstract

A gravity model is used to assess the separate effects of exchange rate volatility and currency unions on international trade. The panel data set used includes bilateral observations for five years spanning 1970 through 1990 for 186 countries. In this data set, there are over one hundred pairings and three hundred observations, in which both countries use the same currency. I find a large positive effect of a currency union on international trade, and a small negative effect of exchange rate volatility, even after controlling for a host of features, including the endogenous nature of the exchange rate regime. These effects are statistically significant and imply that two countries that share the same currency trade three times as much as they would with different currencies. Currency unions like EMU may thus lead to a large increase in international trade, with all that entails.

Keywords : empirical; panel; union; country; exchange rate; volatility; gravity; model; data.

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Non-Technical Summary

Question: What is the effect of a common currency on international trade? Answer:

Large.

To summarise more technically, I use a large cross-country panel data set to show that two countries with the same currency trade more than comparable countries with their own currencies. Much more; perhaps over three times as much. The effect is statistically significant as well as being economically large. While reducing exchange rate volatility also increases trade, the effect of a common currency appears to be an order of magnitude larger than that of eliminating exchange rate volatility but retaining separate currencies. The effect takes into account a variety of other factors, and is extremely robust.

The effect of a common currency on trade is an important issue. The increase in trade stemming from a common currency is one of the few undisputed gains from European Monetary Union (EMU). Even EMU-sceptics agree that substituting a single currency for several national currencies reduces the transactions costs of trade within that group of countries. That effect has not been quantified until now. Instead, economists have used the much smaller effect on trade of eliminating exchange rate volatility. As a result, the current consensus is that currency unions have hardly any effect on trade. The case for a common currency is weaker accordingly. This paper contends that such scepticism is unwarranted, so that a potent argument in favour of currency unions has been under-stated in the literature.

Clearly it is cheaper to trade between two countries that use the same currency than between countries with their own monies. The question is: How much? Sceptics – and most economists – believe that intra-EU trade may only rise a little because of the Euro. This seems reasonable: exchange rate volatility was low before EMU, and whatever volatility remained

could be inexpensively hedged through the use of forward contracts and other derivatives.

Europhiles, in contrast, thought that sharing a common currency would lead to an increase in the depth of trading relations, while precluding the “beggar thy neighbour” competitive devaluations that can destroy a common market. Indeed, a common currency could have a larger effect on trade than even a radical reduction in exchange rate volatility. The primary objective of this paper is to resolve the argument by estimating the separate effects of exchange rate volatility and common currencies on trade.

If a common currency does substantially increase trade, there will be important repercussions. First, there will be an increase in trade disputes and frictions simply because the volume of international trade rises. Second, if greater international competition leads to layoffs and associated labour market pressures, there could be an increase in pleas for continuation or enlargement of the social safety net. Third, higher levels of trade may lead to more synchronisation of business cycles across countries. More generally, closer economic integration is likely to lead to greater political integration. Fourth, other countries – like the UK, Sweden and Denmark in Europe, but also Argentina, Canada and others – may find it more worthwhile to join a common currency area, leading to a further increase in global integration. Fifth, and most importantly, a big increase in trade will lead to substantial extra gains from trade for consumers inside the currency union.

With such important and interesting issues at hand, it is no surprise that economists have worked hard to quantify the effects of reduced exchange rate volatility on trade. Sadly, there is almost no consensus in the area, save that the effect (if any) is difficult to estimate, even with high-tech time-series econometrics. In any case, having even a very stable exchange rate may not be the same as being a member of a common currency area. Sharing a common currency is a

much more serious and durable commitment than a fixed rate. This is manifest empirically in much more intense trade *inside* countries than *between* countries, a phenomenon known as “home bias” in international trade. McCallum (1995) quantifies the size of the intra-national bias at more than twenty to one. Part of this home bias effect may stem from the fact that a single currency is used inside a country.

One might imagine that trying to measure the effects of a common currency on trade is a purely academic (i.e., trivial) exercise. The only countries that have adopted a common currency of late are the EMU-11, for whom there are necessarily few data. True enough. But there is no reason to rely on before and after differences to estimate the effect of currency unions on trade, just as one need not use *time-series* variation to discern the effects of exchange rate volatility on trade. This paper exploits *cross-sectional* variation – using evidence across countries – to trace the effects of currency unions and exchange rate volatility on trade.

Is a cross-country approach to investigating currency unions doomed to failure since there are so few of them? Not at all. One need not go back to the nineteenth century precedents of the Latin and Scandinavian Monetary Unions to find examples of countries with common currencies. Above and beyond the eleven current members of euroland, ninety-one “countries” are currently in some sort of official common currency scheme (thirty-two of these areas are official dependencies or territories). My empirical work hinges on exploiting these linkages. This is done in the context of the “gravity” model of international trade, a framework with a long track record of success.

The estimates from the gravity model show that two countries with a common currency trade more. The effect is statistically significant and economically large. Two countries which use the same currency trade much more than comparable countries with their own currencies; my

point estimate is over three times as much. The impact of a common currency is an order of magnitude larger than the effect of reducing moderate exchange rate volatility to zero but retaining separate currencies. The effect takes into account a variety of other factors a parameterised by the gravity model of international trade, and seems robust.

The most important consequence of increased trade is increased gains from trade. As the deadweight loss of using different currencies vanish, competitive pressures increase and consumers gain static 'Harberger' triangles. There may also be dynamic gains if growth rates increase. And if EMU causes radically increased intra-European trade and its benefits, other countries may well take the plunge, spreading these gains even further.

A large increase in trade precipitated for whatever reason (including the introduction of a common currency) brings benefits but also tensions. Certainly there may be an increase in trade disputes. These will certainly occur inside Europe because of EMU, as competitive pressures lead special interests to cry for protectionism in the timeworn fashion. There may also be an increase in trade tensions between Europe and the rest of the world if the European market size increases dramatically. As a result, there may be pressures to retain (or even increase) the social safety net both inside and outside Europe.

An increase in trade also affects the very sustainability of the currency union. As trade increases, business cycles can in principle move either more asynchronously (as countries specialise to take advantage of comparative advantage) or more closely together (if most shocks are monetary or most trade is intra-industry trade). An increase in intra-European trade precipitated by EMU, could make EMU itself more sustainable by increasing the synchronisation of European business cycles.