Was it worth it?[*]

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1. Introduction

Much of Niels Thygesen's professional life was devoted to the analysis of how to design and implement EMU. Now we have it, and it works well. But was it worth it? Of course, it is too early to tell. Even with time we will never know the true answer, since we cannot observe the counterfactual (what Europe would have been like without the Euro). Nevertheless, we can still compare Europe before and after the Euro and ask whether some of the expected benefits of EMU have materialized. This is what I do in this paper.

EMU was widely expected to bring about significant economic improvements for Europe. This is how Niels Thygesen viewed the prospect of a single currency in 1994: "Only a common currency can assure that all the benefits expected from goods market integration will be attained. It is not easy to put a figure to these benefits, but it would appear that some of the very substantial expected gains from creating the Internal Market estimated in the late 1990s could only materialize within a common currency area" – Thygesen (2004). This optimism stemmed from the premise that lower transaction costs and reduced exchange rate uncertainty would lead to a complete integration of product and financial markets in Europe. A fully integrated product market would have several benefits: gains from trade could be more fully exploited; increased price transparency would strengthen competition; reduced exchange rate uncertainty would increase cross border investment. Other benefits were expected to stem from the integration of European financial markets: deeper and more liquid market would entail a lower cost of capital and more risk sharing opportunities; the new European currency could acquire an international role, perhaps reaping some seignorage

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revenues, giving a further boost to liquidity and improving Europe's resilience in the face of economic shocks.[1]

In contrast with those optimistic expectations, macroeconomic performance in the Euro area has been disappointing since the launch of the new currency, both in comparison to earlier years and to other industrial countries. The disappointment is particularly stark when we look at the growth of labor productivity – the ultimate measure of economic efficiency. Not only it failed to improve, it actually slowed down! As shown in Table 1, output per hour worked fell in all the large countries of the Euro area with the exception of France, while it rose in the US and it remained about constant in the three European countries that did not adopt the Euro.

Table 1: GDP per hour worked (average yearly growth rate)

	France	Germany	Italy	Nether-lands	Spain	Denmark	Sweden	U.K.	U.S.A
1994-98	1,16	2,47	1,91	1,69	0,57	1,73	2,31	1,91	1,31
1999-03	2,75	1,95	0,57	0,02	-0,31	2,19	2,21	2,09	1,93

Source: OECD, Groningen Growth and Development Center

Why this disappointing performance? Can it be blamed on the Euro? In particular, have the expected benefits of the new currency failed to materialize? Almost six years after the launch of the Euro, a few empirical papers have started to assess its effects, looking at a variety of indicators. In the next sections I review the main results. Section 2 focuses on the single market for goods and services, while section 3 looks at financial markets and banking. Section 4 reviews the role of the Euro as an international currency. Section 5 discusses the effect of the Euro on labor market reforms. Section 6 asks whether the launch of the Euro had any discernible political effects. Section 7 summarizes and concludes.

[1] According to the European Commission (2004), an important expected benefit of EMU concerned the improvement in the framework for conducting macroeconomic policy, and the resulting enhanced macroeconomic stability. While there is no doubt that this was an important improvement for many Euro area countries, it is not really a consequence of the Single Currency itself: nothing prevented these traditionally unstable countries from reforming their domestic institutions so as to gain stability and credibility in their monetary and fiscal affairs, without adopting the Euro.

2. Product markets after the Euro

2.1 Trade Volume

The Euro gave a significant boost to trade volumes within the Euro area, and perhaps also to trade between Euro and Non-Euro countries (i.e, the effect has been trade creation, not trade diversion). This is the conclusion reached by a number of recent empirical studies that exploited data on bilateral trade flows up to 2002, with a difference-in-difference methodology (i.e they compared the time path of trade flows in the countries that joined the Euro with that of similar countries over the same period). The estimated effect ranges from 5% to 30% of pre-EMU trade, with the most reliable estimates in the range of 5% - 15% - see Table 2. The effect seems to be rising over time, so a further boost should be expected in the years ahead. These numbers are lower than some of the most optimistic estimates circulated before the launch of the Euro, but are economically very relevant.[2] A large empirical literature suggests that international trade is one of the main forces behind economic development. In the long run, a boost to trade due to lower transaction costs could entail a significant acceleration in economic growth.[3] Judged from this perspective, EMU has not been disappointing.

Table 2. The impact of EMU on international trade

Study	Estimated effect
Micco, Stein and Ordonez (2003)	5-15%
Faruqee (2004)	10%
Barr, Breeden and Miles (2003)	30%
Bun and Klaassen (2002)	10%

2.2 Price dispersion

In contrast with the optimistic expectations, so far the Euro has not significantly reduced price dispersion. The most careful study to date, by Engel and Rogers (2004), compares the prices of about 100 narrowly defined traded consumer goods from 18 European cities in the Eurozone over the period 1990-2003 (the source of the data are surveys conducted by the Economist

[2] Rose and Van Wincoop (2001) estimated the potential impact of EMU on trade to be 50%.
[3] See the references quoted in Helpman (2004).

Intelligence Unit). Prices did converge during the implementation of the Single market program, in the early 1990s. But there is no evidence of further price convergence from 1997 onwards. Similar negative conclusions have been reached by other studies using aggregated price data (the European Commission 2004, Rogers 2002), or data for a smaller set of goods (Lutz 2002). Thus, the idea that the single currency would increase price transparency and through this channel strengthen competition in product markets has not been supported by the data so far.

2.3 Cross-border investment

Lower transaction costs and reduced exchange rate volatility were widely expected to increase the attractiveness of the Euro area countries as a destination for foreign direct investment (FDI). The evidence to date suggests that this is what happened. Comparing the periods 1996-1998 vs 1999-2001 (or 1999-2002), the European Commission (2003, 2004) finds that the share of FDI into the EU going to Euro countries increased significantly, at the expenses of non-Euro countries: the share of inward FDI going to non-Euro countries fell from 37% in 1998 to 20% in 2001, with a corresponding increase in the Euro area. The increase of inward FDI towards the Euro area is more pronounced for FDI originating from other EU countries, but it is visible also for FDI originating from outside of the EU. This evidence is only suggestive, however. Given the volatility of investment data, the time period is too short. Moreover, several other factors could have influenced investment flows over the last few years: increased globalization and the asset market bubble meant that FDI flows rose everywhere in the late 1990s and in 2000; the large exchange rate fluctuations could have influenced the location or timing decisions; deregulations, privatizations, the wave of M&A, are all confounding factors. Thus, although the Euro countries seem to have become more attractive to foreign investors, it is too early to draw firm conclusions.

3. Financial markets after the Euro

Not surprisingly, the launch of the single currency has had a huge impact on financial market integration within the Euro area. Part of this effect is due to the removal of exchange rate risk, but an important component also reflects the removal of regulatory barriers and the creation of unified trading platforms. To a large degree, these institutional changes too can be attributed to the single currency itself, however: without the Euro, the impetus towards harmonizing financial regulation would have been much weaker.

In this section I briefly review recent changes in the money market, the bond market, the equity market and banking. I then conclude by discussing the implications for effect of the Euro on the cost of capital.[4]

3.1 The money market

The interbank and money market is now fully integrated in the Euro area, with the main exception of the secured segment where integration has proceeded more slowly.[5] Cross border lending in the interbank market now accounts for almost half of total interbank lending in the Euro area. And interest rates prevailing in the different countries have converged almost immediately after the launch of the Euro.

3.2 The bond markets

The market for government bonds has also become highly integrated since the launch of the Euro. On the demand side, the home bias has shrunk and bond portfolios have become more diversified across countries. At the same time, issue size has increased and the market has become more liquid. Of course, yield differentials have not disappeared, but according to Codogno et al (2003) they mainly reflect underlying sovereign risk, not liquidity. An important question is whether these developments have led to a reduction of the risk-free

[4] A large recent literature has studied the recent evolution of European financial markets. In this section I draw in particular on The European Commission (2004), Baele et al (2004), HM Treasury (2003), Adjaoutè and Danthine (2002), Dermine (2002), Cabral et al. (2002), Goodhart et al (2002), Detken and Hartmann (2002).

[5] Secured lending, such as repos, commercial paper or certificates of deposits, involves the exchange of liquidity for collateral.

component of the cost of capital. The answer is probably negative. While the nominal returns on the high yield government bonds of countries like Italy or Spain have dropped dramatically, one cannot detect a significant reduction in the return of, say, German bonds relative to those of other reliable sovereign borrowers. Thus, here the removal of exchange rate risk has benefited some countries only. As noted in footnote 1 above, this improvement cannot be attributed to the Euro per se: it could have been achieved with appropriate domestic institutional reforms in the countries with unstable macroeconomic regimes.

The Euro also spurred important changes in the market for corporate bonds. Between 1998 and 2003, corporate bonds outstanding in the Euro area increased almost by a factor of three (Baele et al. 2004). According to HM Treasury (2003), however, the increase concerned mainly bonds rated from A to BBB, and not the higher yield segment. Not all of this change can be attributed to the single currency: over this period the gross volume of corporate bonds increased rapidly also in the US; and Europe was bound to move in this direction anyway, given its almost exclusive reliance on bank credit until recently. Nevertheless, the single currency certainly played an important role. This is suggested by the fact that home bias in the portfolio of bond funds has shrunk, but only for the Euro area, by the increase in net corporate debt issues in the Euro area relative to other countries, and by the finding that traditional country risk factors only play a marginal role in explaining corporate bond yield spreads in the Euro area (Baele et al 2004, European Commission 2004).

3.3 The equity market

Currency movements are traditionally regarded as only a secondary component of equity returns. Yet, like other financial markets, equity markets too have become more integrated since 1999, though again part of the change also reflects a trend common to all countries and cannot be entirely attributed to the single currency. Market capitalization increased in the Euro area (from 25% of GDP in the mid 1990s to about 50% of GDP in 2003), by more than in other industrial countries over the same period. The home bias in the portfolios of households and other institutional investors significantly decreased since the launch of the Euro, again by more than for non-EMU countries. Table 3 displays data on the portfolios of equity mutual funds operating in the Euro area. Between 1997 and 2002, the proportion of assets invested at home decreased significantly, mainly to the benefit of the assets invested in other European countries.

Table 3. Allocation of assets of equity mutual funds operating the in the Euro area

% of assets invested					
Domestically		**In other EU countries**		**In non-EU countries**	
1997	*2002*	*1997*	*2002*	*1997*	*2002*
49	28	10	26	41	46

Source: European Commission (2004)

Note that the reduction in home bias and the increased proportion invested in equity of other European countries has taken place despite the fact that the underlying convergence of the Euro area economies has reduced the diversification opportunities offered by cross-border equity holdings: as documented by many empirical studies, equity returns in the Euro area are now mainly explained by sectoral risk factors, while country risk factors seem to play a secondary role. In other words, the reduction in the home bias was taking place at the same time that international diversification was becoming less beneficial to investors. This is another symptom that the reduction in home bias was caused by the reduction in transaction costs and exchange rate risk brought about by the single currency.

Finally, and despite all these improvements, there is no credible evidence to date that the Euro also had an impact on cross-border listings (European Commission 2004).

3.4 Banking

As already noted, one of the effects of the single currency has been to achieve full integration of the interbank market. Capital-market related activities (such as underwriting and corporate bond issues) have also become very closely integrated within the Euro area. The wave of deregulations throughout the 1990s, together with the launch of the Euro, have enhanced competitive pressures and have set in motion structural changes in the banking market. The number of credit institutions in the Euro area has declined by 15% between 1997 and 2002 (European Commission 2004). The bulk of mergers and acquisitions has taken place within national borders, however, and cross-border branching did not increase. As a result, the market share of foreign branches and subsidiaries in the Euro area is rather low. This is important, because it implies that retail banking remains a segmented market. Interest rates on bank deposits and on lending to households or small firms have converged within the Euro area. But this is the result of macroeconomic convergence, more than of a fully integrated retail banking market. Cabral et al (2002) note that bank margins have converged much less than nominal interest rates, and cross-border lending to non-banks within the Euro area remains very low.

3.5 The cost of capital

The main benefit of more efficient financial markets is to reduce the cost of capital, and through this channel to increase investment and growth. In turn, the cost of capital can be decomposed into the risk free interest rate, and a market risk premium (against liquidity risk and credit risk). As argued above, the Euro does not seem to have reduced the risk free rate: the real interest rate on government debt in Germany does not seem to be any lower (compared to other non-Euro countries) than it was before the launch of the Euro – see also HM- Treasury (2003). Thus, if the Euro has reduced the cost of capital, it is mainly through a reduction in the market risk premium. The progress described in the previous subsections certainly has had an impact: lower transaction costs, more competitive intermediaries, more diversification opportunities, are bound to have reduced both the liquidity risk premium and the credit risk premium. According to some studies, the reduction in the cost of capital is as large as 1/2 a percent - the European Commission (2004). But quantifying this reduction is very difficult and any attempt is bound to result in imprecise estimates. Moreover, the effect has been different on different debt instruments, and large corporate borrowers (who are less dependent on retail banking) have benefited more than the rest.

4. The Euro as an international currency.

One of the alleged benefits of the single currency was to provide Europe with a truly international currency, that could perhaps one day challenge the supremacy of the US $. This outcome would be important, because it would provide additional seignorage revenues, facilitate international borrowing in domestic currency, lead to invoicing of goods denominated in Euros and thus reduce exposure to shocks. According to Portes and Rey (1998), transactions costs in foreign exchange and securities markets are the key determinant of the extent and speed of internationalization of the Euro.

What has happened so far? We have already discussed how, thanks to the new currency, the Euro area now has achieved a fully integrated bond and money market. From this perspective, the Euro has clearly matched optimistic expectations. The foreign exchange market has been more disappointing, however. According to Hau et al. (2002), Goodhart et al. (2002) and Detken et al. (2002), transactions costs on foreign exchange trades have increased, not shrunk. The reason for this surprising outcome might have to do with quoting conventions and the choice of currency units (the so called “granularity hypothesis” advanced by Goodhart et al. 2002). In terms of turnover, the spot foreign exchange market seems unaffected, while the swap market is smaller than that of the previous Euro area currencies. It is too early to tell how much more important will the Euro be as an international currency, relative to its predecessors. But at least so far, the supremacy of the US $ remains unchallenged.

5. The Euro and labor market reforms

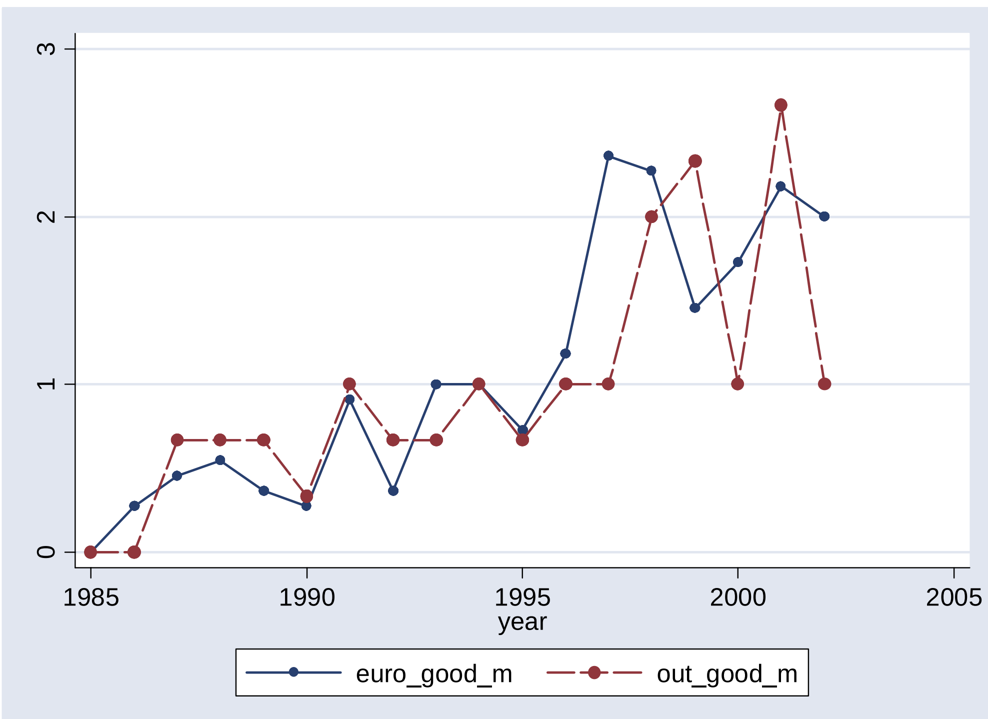
EMU did not take place in a vacuum. The countries that joined it were bogged down by large supply side distortions, in particular by inefficient labor market institutions and high distorting taxes on labor. These pre-existing distortions were due to national policy decisions, not to European integration. Nevertheless, national supply side distortions interact with EMU and influence its overall effects.

Specifically, it is quite possible that the Euro has amplified the effect of these pre-existing distortions. As suggested by Bertola and Boeri (2003), for instance, increased product market integration is likely to have increased the elasticity of labor demand within each country. This in turn could amplify the unemployment effects of high taxes on labor in countries with monopolistic unions (Daveri and Tabellini 2000). Similarly, more mobile investment flows are likely to favor the more efficient Euro area countries and hurt the laggards. Over time, and if labor market distortions remain unchanged, the single currency could lead to worse economic performance in the more distorted economies (typically the large countries of continental Europe), to the benefit of the more efficient Euro area countries. It is too early to tell whether this divergence has taken place, but the relatively worse performance of Germany and Italy compared to the rest of EMU suggests that this might be happening already.

But policy induced distortions are endogenous too, and monetary unification could also influence the policymakers' incentives to reform. A priori, the effect could go either way. On the one hand, stronger competitive pressures should force governments to adopt efficiency enhancing reforms. On the other hand, the demand for protection could increase, because the inefficient sectors feel more threatened. More importantly, governments have lost the exchange rate as a signal of policy success or failure, and this could lead to further procrastination of unpopular but needed reforms.

Can the evidence to date shed any light on these opposite effects on the incentives to reform? If anything, Euro area countries seem to have intensified their effort to remove labor market distortions, compared to the rest of Europe. But this effect is visible only for marginal reforms, not for the more radical and far-reaching reforms. Specifically, using the data base collected by Boeri (2002) (http://www.frdb.org/), we can compare reform effort in the European countries that joined EMU and in those that didn't, over the period 1985 and 2002. These data cover three dimensions of welfare state reforms: pension systems, firing costs and unemployment benefits. They also distinguish between marginal and radical reforms, and between reforms that enhance economic efficiency or hurt it. Reform effort intensified throughout Europe in the late 1990s, both inside and outside of EMU. As shown in Figure 1, Euro area countries increased the number of marginal reforms (going in the right direction) compared to non-Euro countries, and the effect of EMU is statistically significant when estimated with a difference in difference regression. This is mainly due to reforms that have increased labor market flexibility (generally by creating dual structures that increase flexibility at the margin). But significant reforms are much more rare and there is no difference between the "ins" and the "outs".

Figure 1: Average number of marginal welfare state reforms (per country)



Source: Boeri (2002). *Euro_good_m* denotes the average number of marginal reforms in the countries that have now joined the Euro area. *Out_good_m* denotes the average number of marginal reforms in the UK, Sweden and Denmark. Only changes in legislation that increase labor market flexibility, reduce the generosity of pension systems, or increase the rewards from labor market participations are coded as reforms. The distinction between marginal and radical reforms is explained in http://www.frdb.org/.

6. Political effects of the Euro

The calculus of economic costs and benefits behind EMU is only part of the story. It has always been thought that one of the effects of the single currency (whether good or bad) would be to promote further political integration in the EU. The single currency would become a new symbol of European unity, the Euro-area would now face similar policy challenges thus stimulating a Euro-wide debate, and policy coordination would have to expand into new domains. Has this happened? Again, it is too early to tell; but the data from the Eurobarometer surveys published in the Spring of 2004 provide some interesting evidence.

It is indeed true that the Euro has quickly become a symbol of European unity. When asked “what does the EU mean to you personally”, 50% of the EU 15 citizens answer the Euro; this is the second most common response (just behind the answer “the ability to travel, study and work anywhere in the EU”).

This symbol has not made the EU or the Euro area any more popular than it was, however. Support for EU membership remains to date where it was in the mid 1990s (and below the peak reached in 1990). And even support for the single currency has not increased further compared to 1997.

Probably, this lukewarm support reflects the grim economic performance of the Euro-area. It could also be due to the mistaken perception that the introduction of the single currency has caused a substantial drop in purchasing power: the gap between perceived and actual inflation rose dramatically after the launch of the Euro. Whatever the explanation, the single currency has not increased the demand for political integration by individual citizens, at least for the time being.

7. Concluding remarks

What do we make of these findings? Did the expected benefits of the single currency materialize? It is certainly too early to tell, but the data portray a mixed picture, and the glass can be seen as either half full or half empty. International trade and cross-border investment increased in the Euro area relative to similar countries. Particularly in the case of trade flows, the increase is quantitatively significant and can be attributed to the new currency. On the other hand, competitive pressures among Euro area producers do not seem stronger, at least judging from the lack of convergence in the prices of similar commodities produced in different countries. Money and bond markets are now fully integrated in the Euro-area, and this implies a relevant reduction in the cost of capital for large corporate borrowers. But retail banking remains segmented among national borders, meaning that households and smaller producers have not been much affected. The new currency is playing an important role throughout Europe, but it is a long distance away from challenging the supremacy of the $. And European political integration is not more likely today than it was 10 years ago.

The Euro was not expected to only have unambiguous positive economic effects. Some significant and lasting costs were also anticipated. In particular, the loss of the exchange rate as a policy tool reduces the flexibility to cope with idiosyncratic shocks. Moreover, according to some critics, the constraints imposed by the Maastricht framework went too far in the direction of imposing a rigid straightjacket on macroeconomic policy. It is too early to assess whether these costs turned out to be higher or lower than expected, but certainly they could play a role in explaining the disappointing macroeconomic performance of the Euro area.

The main reason why European growth is stalling has little to do with monetary unification, however. The problem lies with the supply side distortions (in particular the labor market distortions) induced by misguided national policies in the 1970s and 1980s. The Euro was a true revolution, and we cannot yet see all its effects. But it took place on shaky national economic foundations. The revolution only transformed the upper floors of the European economy: financial markets and the institutions that govern macroeconomic policy. It did not reach the shaky foundations. The countries that joined EMU had poor labor market institutions, bloated pension systems, inefficient service sectors in the late 1990s, and they still do now. The launch of the Euro did not change this fundamental deficiency, nor could it be expected to do so.

Overhauling these shaky foundations is the next key challenge for Europe – though this next revolution should mainly take place within each country rather than at the European level. One can only hope that it will be met with the same mix of ability, competence, and vision that went into the creation of the single currency.

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