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THE STABILITY OF THE INFLATION RATE IN THE EURO AREA: THE ROLE OF GLOBALIZATION AND LABOUR MARKET

Antonio Forte¹

Abstract

In this paper I present a statistical analysis of some macroeconomic data that can shed more light on the causes of the low inflation rate that we registered in the Euro area during the last years. I focus on both the globalization and the labour market for their importance, as external and internal factor respectively, in influencing the domestic inflation. The main finding of this study, in which I also present an international comparison, is that the firms' behaviour can help explain the stable trend of the inflation rate in the Euro area. This result can be interpreted as a signal of the redistribution, in favour of the firms, of the positive features of the globalization process.

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1 Introduction

We have observed a very meaningful economic situation all around the world during the last decades: first, the level of inflation, after the turbulences of the Seventies, began to lower very noticeably second, the variance of the inflation rate has become smaller and more stable during the eighties and nineties and, third, output has showed a very stable growth with shorter - in time - and milder - in amplitude – cyclical downturns. These three phenomena have taken together the name of “Great Moderation”.

The *strange* combination of these three economic phenomena (I say strange because it is a totally new economic mixture) has fed the growth of a wide strand of economic literature that has tried, and still tries, to explain the fundamental causes of this particularly excellent economic conjunction. Three works can be useful to deeply analyse the essence of this reasoning: Bernanke (2004), Melick and Galati (2006) and Rogoff (2003).

In this global context, in this paper I focus on the Euro area inflation rate in order to study its course, find its key features and search for its most plausible causes, especially during the Euro era.

I think that it is useful to start with an image. Figure 1.1 shows the path of the thirteen Euro area members inflation rates from 1980 to 2008. In all the countries there has been a reduction of the level of inflation. Moreover, the lines seem to be more stable in the last years of the sample. Even this visual and simple study highlights the *great moderation* of the Euro area inflation rates. But, it is useful to present statistical elaborations to complete the analysis of this economic situation.

First of all, it is useful to calculate the mean of inflation among these thirteen countries (the countries are twelve from 1980 to 1992, from 1992 I have included Slovenia). The mean showed in table 1.3 is unweighted. Besides, the same table shows the unweighted mean for four selected countries: Belgium, Germany, Luxembourg and Netherlands. It is possible to consider these nations as an homogeneous area with a *unique* currency, the Mark, because these economies have historically been highly integrated. In this way, it is possible to assess whether the Euro is creating a wider integrated area. It is straightforward to notice the declining trend of these means. As for the Euro area data, this mean was slightly below 12 per cent at the beginning of the eighties. In contrast, it has been around 2.5 per cent during the last decade: a very profound change in the trend of inflation. In more details, watching the national data in tables 1.1a, 1.1b and 1.1c one can also notice that there were 12 inflation rates above the 4 per cent threshold in 1980 and 6 inflation rates above 8 per cent. Then, in 1985 we can record 9 values above 4 per cent

and 4 above 8 per cent. Ten years later, in 1995, there were 6 inflation rates above 2 per cent, 4 above 4 per cent and 2 above 8 per cent. These values have continued to reduce until today. Indeed, in 2008 we have no values above 4 per cent and only 7 inflation rates above the 2 per cent ceiling. These data are very impressive. At the same time it is straightforward observing the growing convergence of the Euro area mean towards the Belgium-Germany-Luxembourg-Netherlands inflation rate mean. The Euro has contributed to enlarge the homogeneity of the inflation process to all the Euro area members.

But we can make another type of comparison. Even if we observed this great improvement in the inflation rate level, the Euro area inflation rate mean started to stabilize at a higher level than the mean of the other nations during the second half of my sample. This difference has begun to be constant since 1997. Before 1997, the Euro area inflation mean was quite constantly below the *global* mean, but since that year the situation has been turned over (compare table 1.3 with tables 1.1a, 1.1b, 1.1c). This is an interesting result for it is linked with some considerations that I will draw at the end of the paper.

Watching table 1.2 one can easily catch the increasing stability of the Euro area members' inflation rate. The 5-years variance of the inflation rate has reduced in all Euro area members. Moreover, these values have been very low during the last eight years (below 1 in almost all the cases).

Given these outcomes, it is wise to assert that we have probably lived a structural change in the inflation rate dynamics during the examined sample.

Furthermore, tables 1.4 and 1.5 show the yearly variance and the yearly coefficient of variation across the twelve (or thirteen) Euro area members and across Belgium, Germany, Luxembourg and Netherlands. In the same tables I show the yearly data for the thirty most advanced economies (G30), according to the IMF classification, and for a group composed by these thirty nations minus the Euro area members. The variance of the inflation rate across the Euro area members is always lower than the variance of the G30. During the 29 years of my sample, the Euro area inflation variance has been lower than the G30 variance in 26 cases (if we consider the variance of the Euro area members without Slovenia). This datum is really important and, in fact, it shows that the inflation rates in the Euro area have a closer path in comparison with those of the other industrialized economies. This probably stems from the historical interrelations among the European economies. Furthermore, one can also notice the increased correspondence between the Euro area variance and the variance across Belgium, Germany, Luxembourg and Netherlands. This trend can be the result of the growing interrelation across the Euro

area members. The Euro area shows a declining trend of the variance that makes this large area similar to the historical interrelated area composed by Belgium, Germany, Luxembourg and Netherlands. The data of table 1.5 are in line with what I have just highlighted. The coefficient of variation shows that the Euro area members inflation rates are more interrelated than the inflation rates of the other G30. The coefficient of variation of this area is below the value I calculated for the G30 in 26 cases over 29 observations (if we consider the Euro area members without Slovenia). These data highlight the higher degree of convergence of the Euro Area members inflation rates in comparison with the other developed economies.

In addition, I have computed the correlation coefficient between the Euro area inflation rate and the inflation rates of the thirteen Euro area members in order to further analyse this issue. In this way, one can observe the existence and strength of the linear correlation. So, in order to perform this test, I used the time series of the monthly inflation rate of the Euro area and of Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Portugal, Slovenia and Spain published by Eurostat. The sample starts in January 1997 and ends in February 2008. The results are shown in table 1.6. The correlation coefficient has a very large value. Austria, Belgium, France, Germany, Italy, Luxembourg and Spain have a correlation coefficient above 0.70.

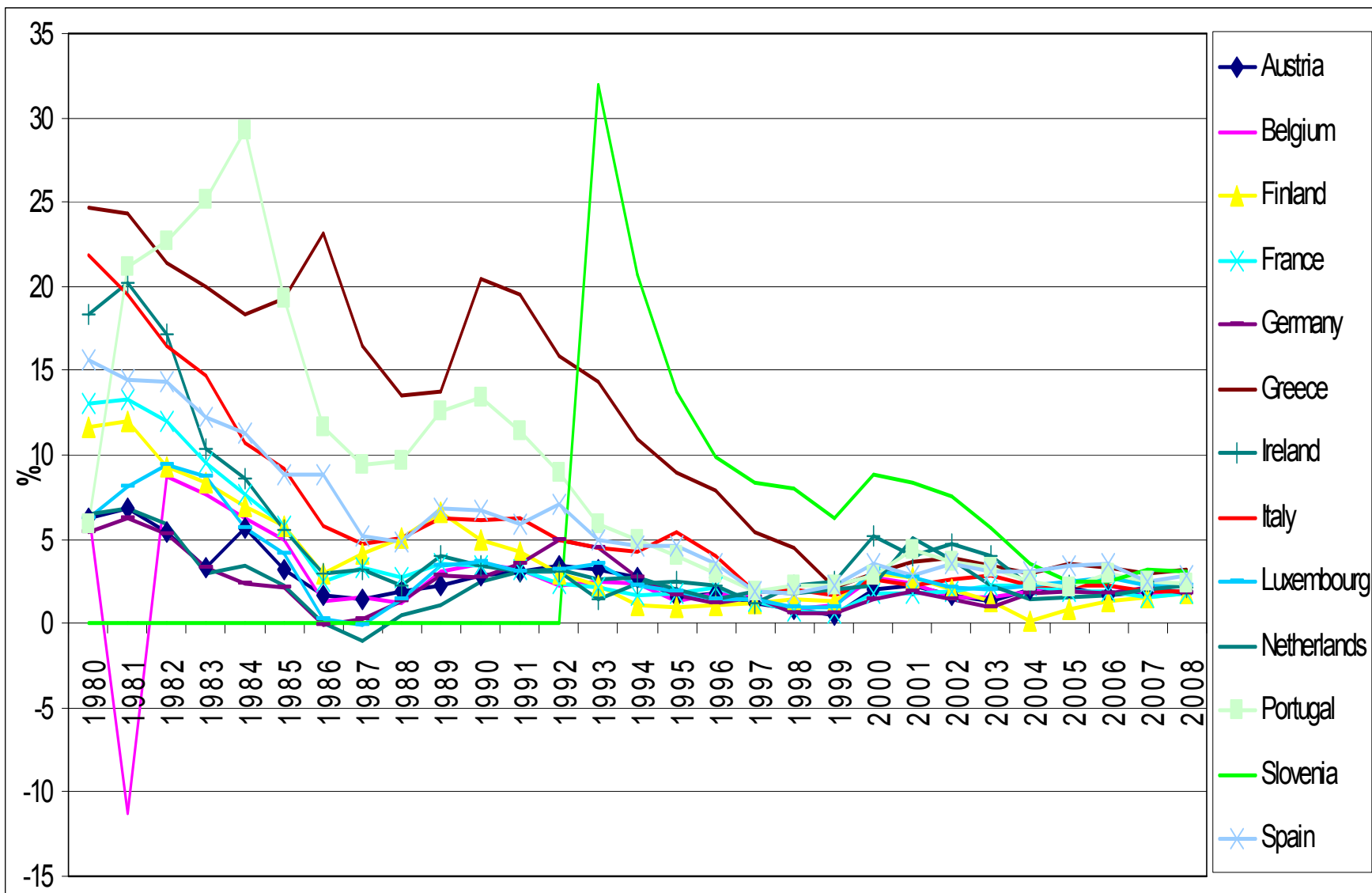
From these results one can draw an important conclusion: the common monetary policy can be very effective in guiding the national inflation rates. This study gives an unambiguous signal to monetary policy makers: it is possible to *guide* the inflation rates with the unique monetary policy of the ECB. Paraphrasing Ottmar Issing's words (2001), I can say that the *common monetary policy can fit all*.

The last section of this paragraph is dedicated to a simple study of the persistence of the inflation rate among the Euro area members. Table 1.7 shows the data of this test. I calculated, year after year, the difference between the national inflation rates and the unweighted mean of the Euro area inflation rates (in this case I consider twelve countries). These simple data show how many times the inflation rate of a nation has been above or below the mean. So, if we observe that a nation has had an inflation permanently above or below the mean, then we will consider the inflation of that nation highly persistent. The results are very plain. There is a wide and high degree of persistence. The sample covers 29 years (from 1980 to 2008). On the one hand, the nations with a domestic inflation rate persistently below the mean are: Austria (whose domestic inflation rate is 29 times below the Euro area mean), Belgium (inflation rate 28 times below the mean), Germany (inflation

rate 28 times below the mean), France (inflation rate 26 times below the mean), Finland (inflation rate 24 times below the mean), Luxembourg (inflation rate 23 times below the mean) and the Netherlands (inflation rate 23 times below the mean). On the other hand, the nations with an inflation rate persistently above the mean are: Greece (whose domestic inflation rate is 29 times above the Euro area mean), Spain (inflation rate 28 times above the mean) and Portugal (inflation rate 27 times above the mean). There are only two mixed cases: Italy has had twenty times the domestic inflation rate above the mean and Ireland has had the domestic inflation above the Euro area mean for twelve times. This last study highlights an important fact: even if the variance and coefficient of variation of the inflation rates have strongly diminished during the last decades the national inflation rates have maintained the domestic features in almost all the cases. That is, the variance (or the coefficient of variation) has diminished but the inflation rates that were above the mean have remained above it, and the inflation rates that were below the mean have remained below it.

So, at the end, the findings of this preliminary statistical inspection are various: first, the Euro area shows a more stable course of the inflation rate than in the other industrialized countries; second, the inflation rates of the Euro area members show a high degree of correlation; third, the Euro area inflation rate shows a slightly higher degree of persistence in comparison with the other economies, that is, this inflation rate is stable around a certain threshold and it does not decrease from that value in a remarkable way. It remained stable around 2 per cent while in other countries it went under this value; fourth, the Euro area seems to growingly resemble, year after year, the area composed by Germany-Belgium-Luxembourg and the Netherlands. The monetary union is creating a more uniform area; fifth, the persistence of the domestic inflation rates of the Euro area members does not change after the monetary unification.

Figure 1.1: Inflation rate – Euro area - annual mean, percentage change on preceding year.



Source: Personal elaboration using IMF, WEO, Oct. 2007 data.

In the light of these facts, my purpose is to focus on the possible causes of the inflation trend during the Euro age. As a consequence, my analysis starts in January 1999. To achieve this end I analyse through many data and a statistical approach, the linkages between inflation and labour market on the one hand, and between inflation and the external factors on the other hand. In this way one can observe whether the reduction in the level of inflation is linked to the trend of labour cost or with the course of other external economic variables. My approach is multinational. Indeed, I present the data of four areas (the Euro Area, the USA, the UK and Japan, and detailed data for the Euro area members) in order to catch the particularities of the Euro Area. The structure of the paper is as follows: in paragraph 2 I analyse the relationship between exchange rates, trade flows, import prices and inflation rate; in paragraph 3 I study the trend of labour productivity and labour cost; in section 4 global conclusions end the paper.

2 Trade and inflation

I examine the trade-inflation linkage from different perspectives. First, I study the path of the European currency, the Euro, in order to see what the possible impact of its course on the domestic inflation could be. This analysis has been completed with a study on the fluctuations of the commodity prices. Then I deeply analyze the evolution of the import flows of the Euro area in order to catch the switch from high cost to low cost partners. This could be another possible help in reducing the level of the inflation rate. At the end I will focus on the final result of these macroeconomic phenomena: the price deflator of imports. I will examine whether the strength of the Euro, commodity prices and imports from low cost nations have had a sizeable impact on import prices and, as a consequence, on the Euro area inflation rate.

2.1 The exchange rates

It is well known that the Euro was born on January 1999 while the circulation of the European currency started three years later, on January 2002. In this section I study the performance of the European currency from January 1999 until to the first months of 2008. I will study the appreciations or depreciations of the Euro against the currencies of the most important Euro area trade partners and against a large part of the World currencies exploiting the ECB's NEER and REER. Figure 1.2, divided in eight sections, shows the exchange rate of the Euro against the currencies of the seven most important import-partners of the Euro area (the UK, China, the USA, Russia, Switzerland, Japan, Sweden. They represent the 50,3% of the total extra Euro area imports). The last part of the Figure

shows the nominal and real effective exchange rates (NEER and REER) of the Euro against the first 44 trading partners of the Euro area. If we look at the NEER and REER we can observe the *global* course of the Euro. All the data are taken from Eurostat's website (the sample starts in January 1999 for Pound Sterling, Us Dollar, Swedish Krona, Japanese Yen, Swiss Franc, Russian Ruble, NEER, REER and in January 2000 for Chinese Yuan Renminbi).

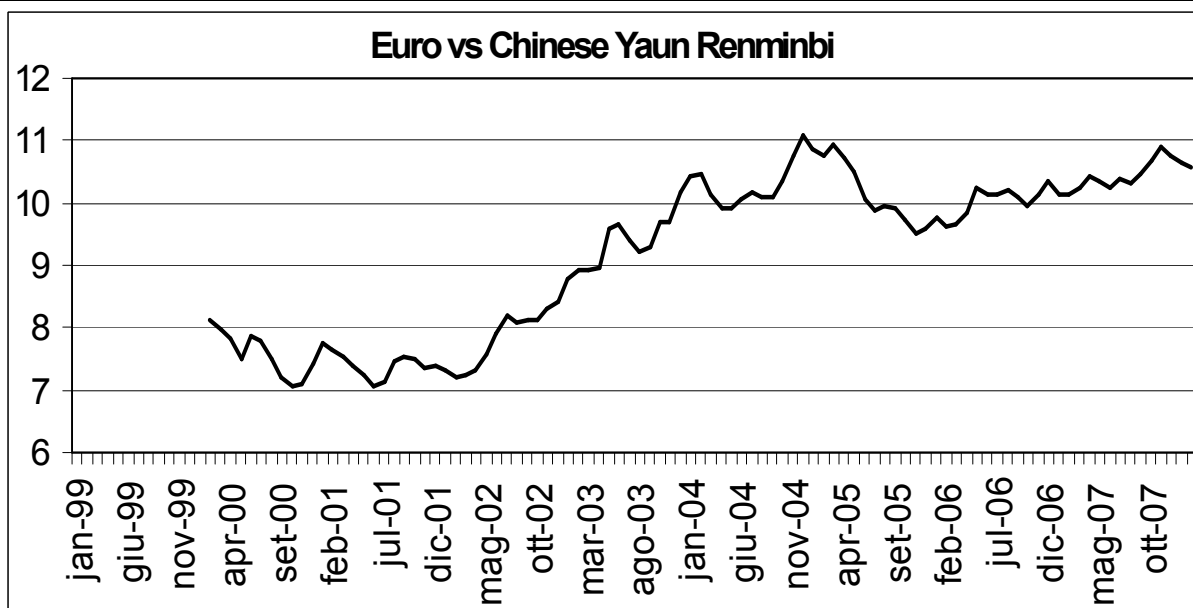
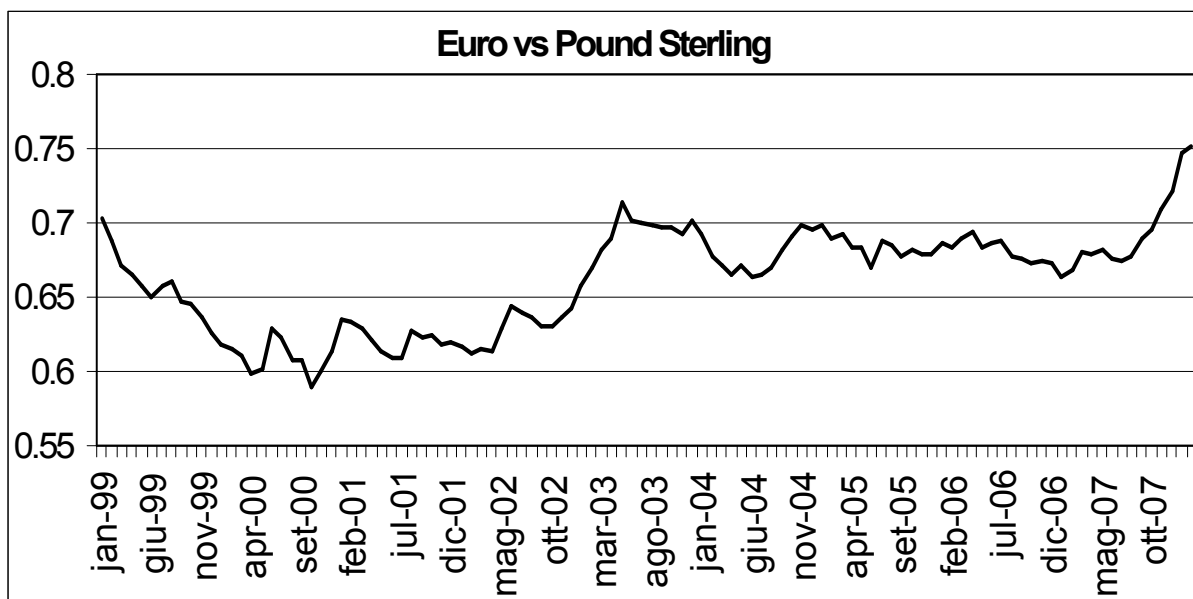
The first detail that emerges from the analysis of these time series is that the Euro shows a certain degree of weakness during the years of the virtual circulation: it is a common characteristic of almost all the exchange rates depicted in Figure 1.2. If one looks at the nominal and real exchange rates path it is possible to understand that this trait was a global feature. That is, the Euro was devaluating against a large number of currencies in that period. Indeed, it is possible to consider the NEER and the REER as the nominal or real *sum* of the bilateral Euro exchange rates. So, they show that from the first quarter of 1999 to the fourth quarter of 2000 the Euro was globally devaluating. Then, for almost two years, the Euro NEER and REER were stable and, at the beginning of 2002, they started to appreciate in concomitance with the onset of its effective circulation. These fluctuations have not been mild. Some data can be useful to grab this situation.

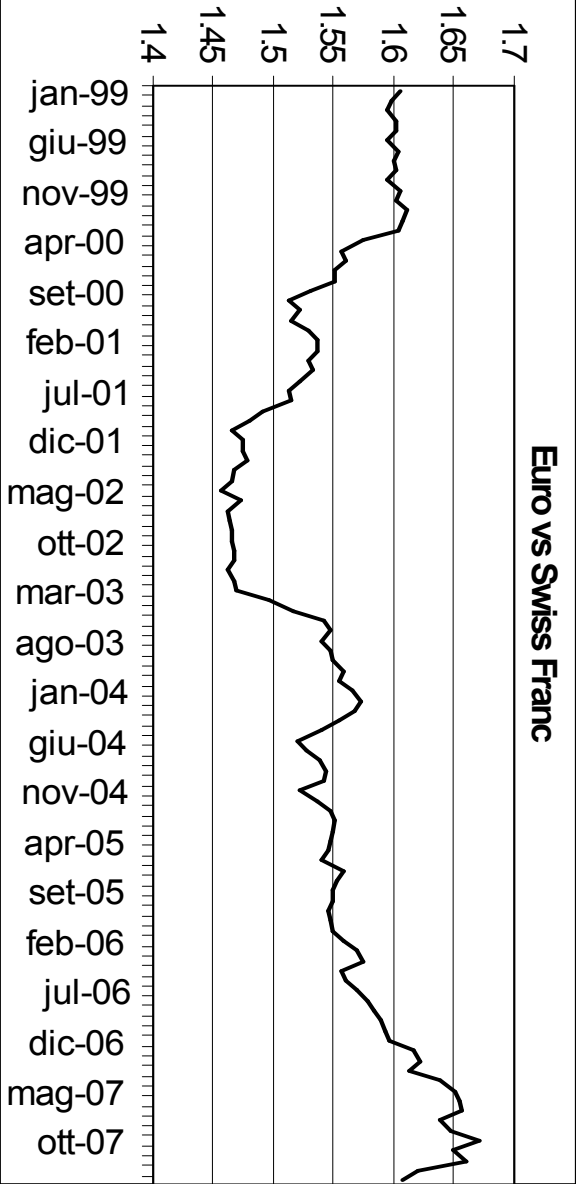
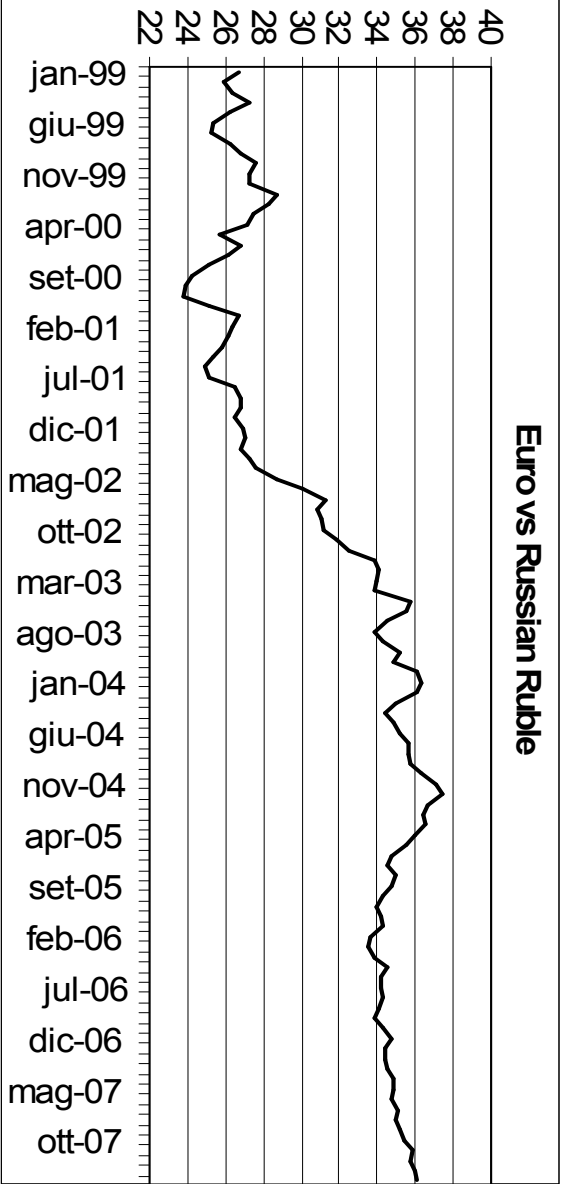
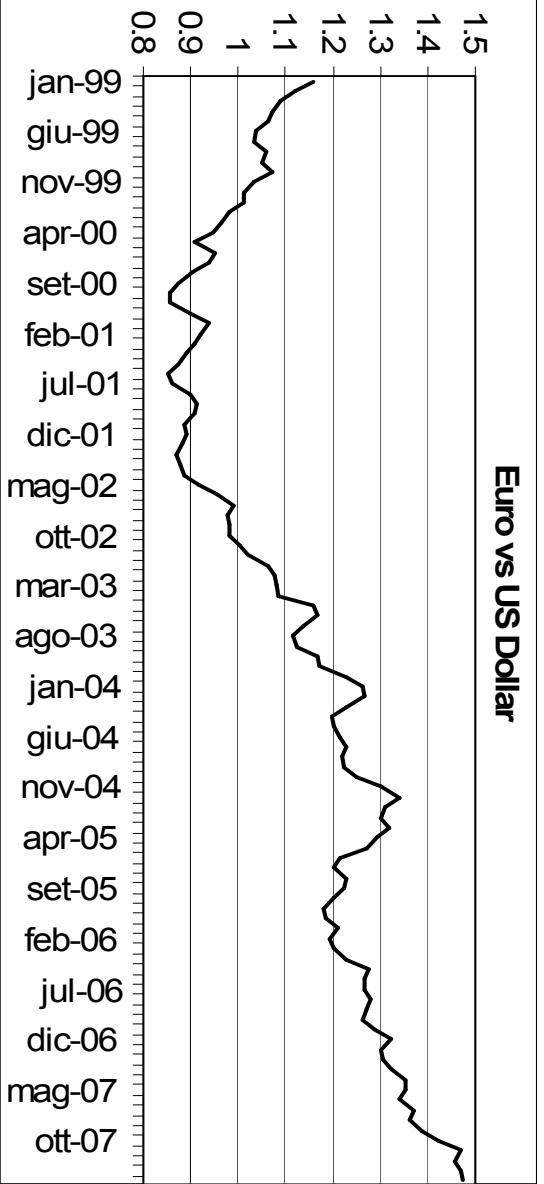
The Euro hit its lowest level against the US Dollar (monthly mean) in June 2001 (0.8532): a depreciation of 26% from its date of birth. Then we have observed a very strong appreciation: +72% from its lowest level in June 2001 to its peak in February 2008. We can identify a comparable path for the other bilateral exchange rates mentioned above. The Euro's maximum depreciation from its onset against the other currencies examined is: -16% against the Pound Sterling (lowest level: Oct. 2000); -9% against the Swedish Krona (l.l.: May 2000); -29% against the Yen (l.l.: Oct. 2000); -10% against the Russian Ruble (l.l.: Nov. 2000); -9% against the Swiss Franc (l.l.: May 2002); -14,5% NEER (l.l.: q4 2000); -16,9% REER (l.l.: q4 2000). (I do not report the value for Chinese Yuan Renminbi because its sample starts in January 2000 and so the value is not so useful).

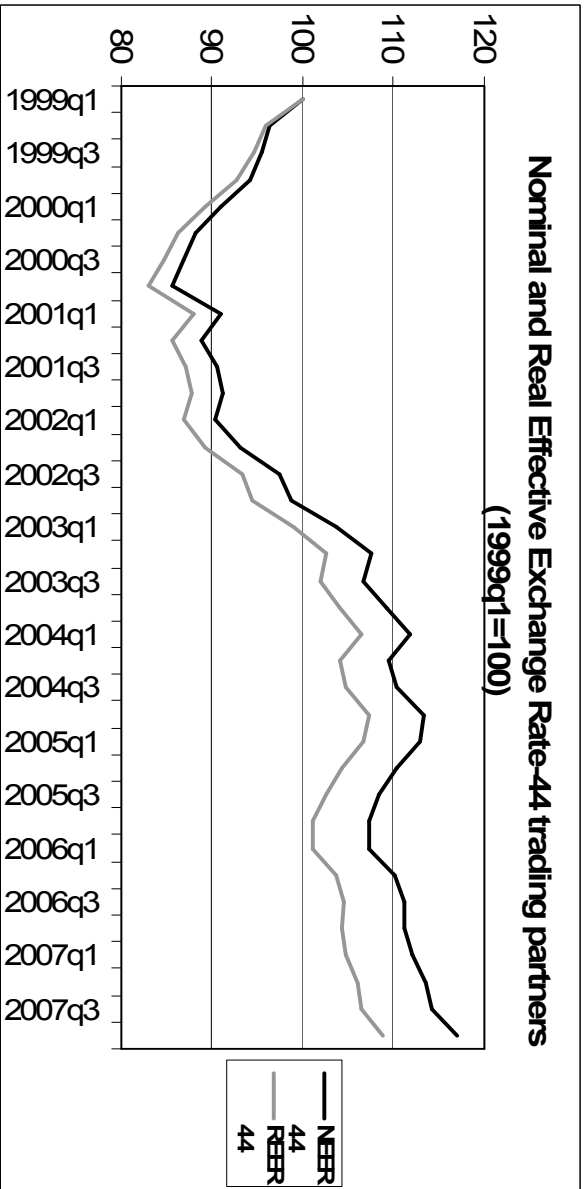
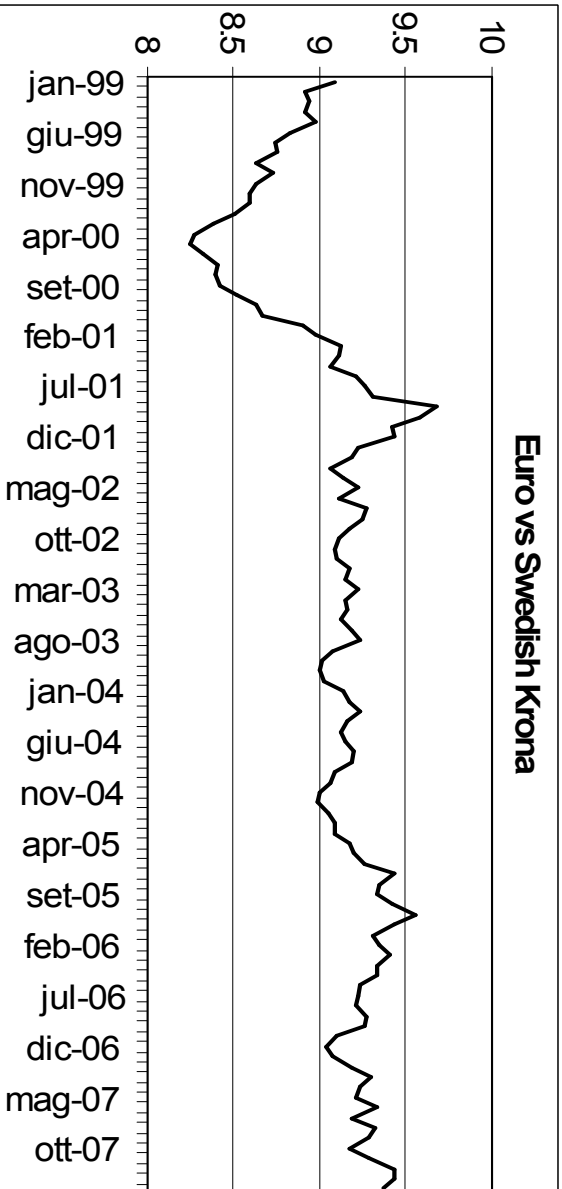
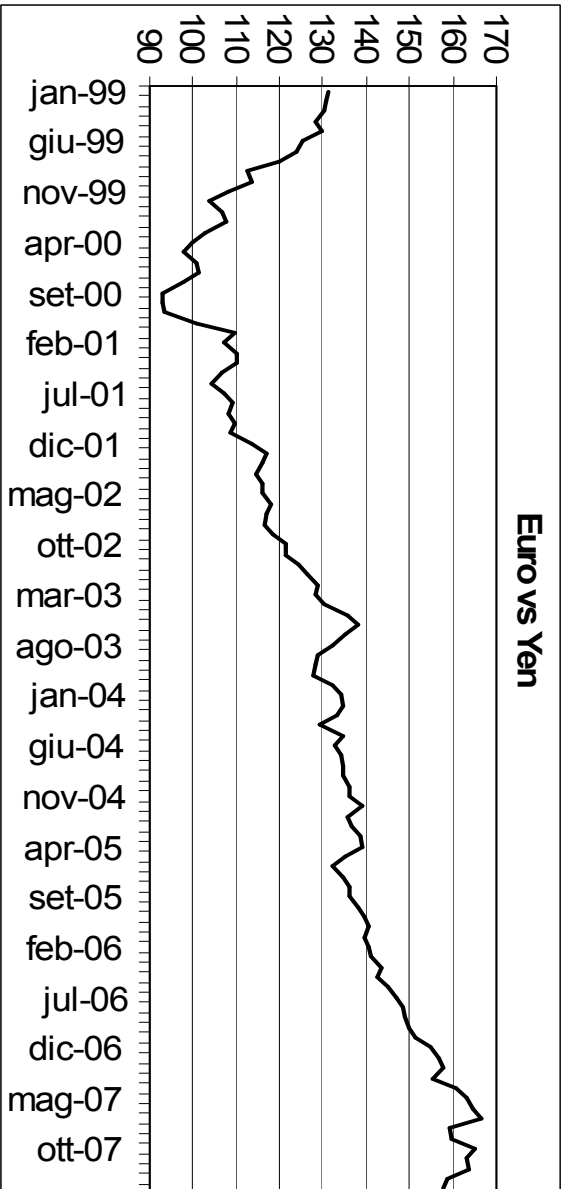
At the same time, we can calculate the highest appreciation, with respect to the lowest values pointed out before, for each of the currencies examined: +27% against the Pound Sterling (highest level: Feb. 2008); +17% against the Swedish Krona (h.l.: Sep. 2001); +80% against the Yen (h.l.: Jul. 2007); +57% against the Russian Ruble (h.l.: Dec. 2004); +57% against the Chinese Yuan (lowest level: Jun. 2001, h.l.: Dec. 2004); +15% against the Swiss Franc (h.l.: Oct. 2007); +36% NEER (h.l.: q4 2007); +31% REER (h.l.: q4 2007) and +72% against the US Dollar, as I have mentioned before.

These strong fluctuations can obviously influence the price of imports. And so, if we only look at the exchange rate it is possible to say that, *ceteris paribus*, the Euro has had a relatively high impact on import prices (I will present a more complex and deeper reasoning on this feature in the following pages). But, watching the data given just above, it is clear that the possible influence of the exchange rate on import prices and on the Euro area inflation has not always been *positive*, that is, the Euro helped the stabilization and the dampening of inflation in some years only.

Figure 1.2 : the Ecu-Euro exchange rates







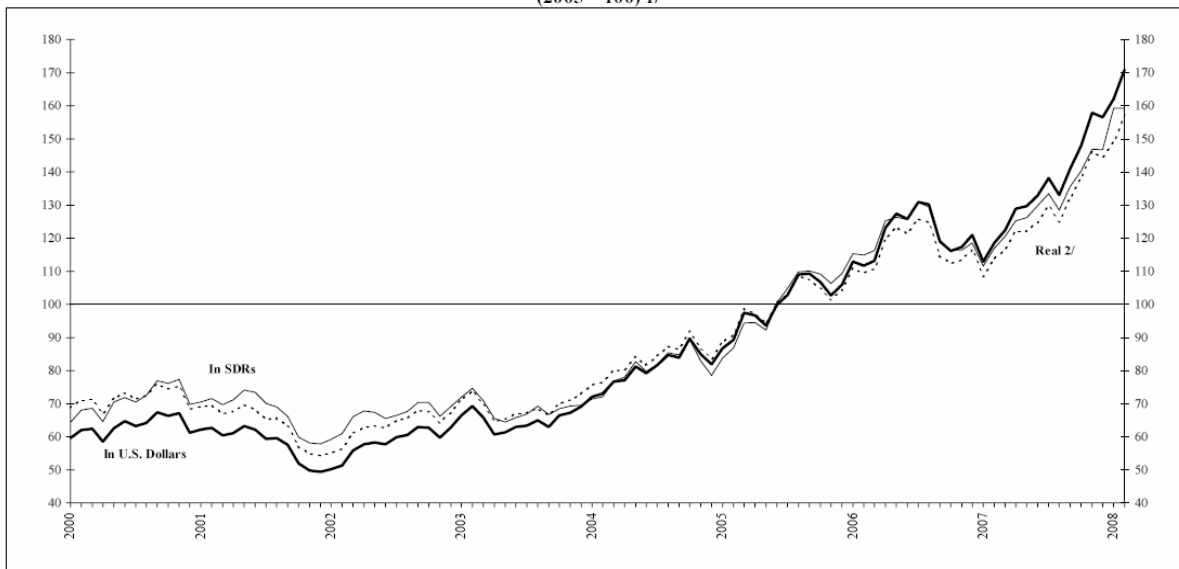
Source: ECB's web site, personal elaboration

The initial depreciation should have had a very negative impact on domestic inflation. Nevertheless, if we observe the last picture depicted in Figure 1.2, it is right to say that the common currency has protected the Euro area against foreign negative price effects in a crucial period. The appreciation of NEER and REER (that is, the appreciation of the Euro against 44 currencies in nominal and real terms) could have helped to stabilize the level of the domestic inflation counterbalancing the global increase of the commodity prices during the last years.

By the light of these facts, it is also important to underline the role of the Euro-US Dollar bilateral exchange rate. It is well known that a large part of the commodity prices are in US Dollar terms. So, the appreciation of the Euro against the US Dollar has protected the Euro area against the commodity prices shock of the last years.

The following two images (Chart 1 and Chart 2 by IMF, IMF's web site) show the dramatic increase of all commodity prices during the last five years. The bold black lines are referred to commodity prices in US Dollars.

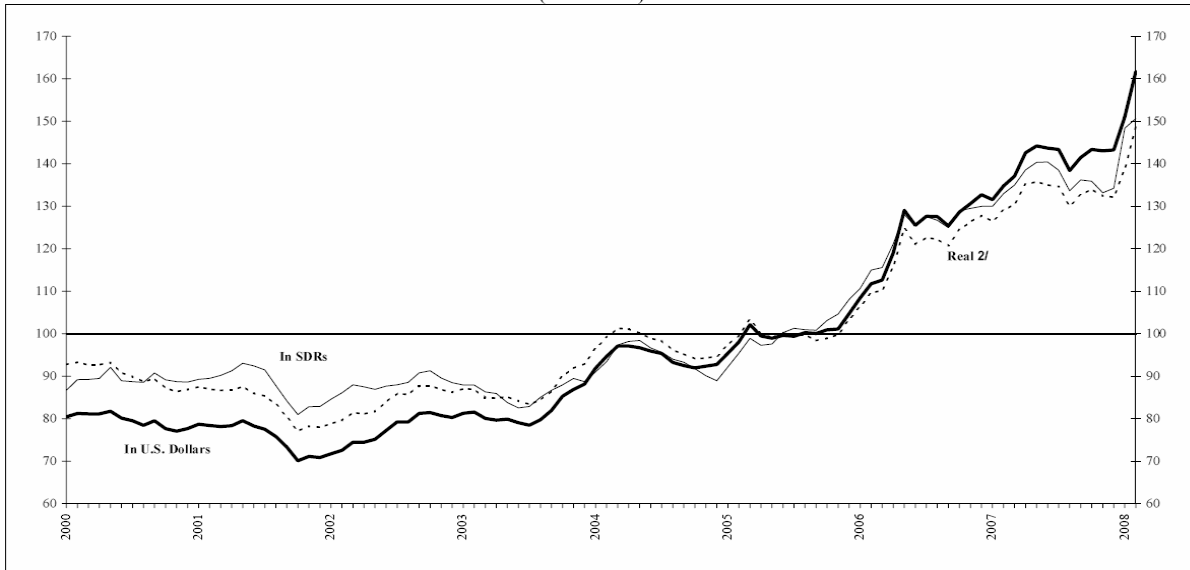
CHART 1
INDICES OF PRIMARY COMMODITY PRICES
(2005 = 100) 1/



1/ Combines indices of non-fuel primary commodity prices and petroleum prices.
2/ Deflated by US CPI.

5-Mar-08

CHART 2
INDICES OF NON-FUEL PRIMARY COMMODITY PRICES
 (2005 = 100) 1/



1/ Indices comprise 60 price series for 44 non-fuel primary commodities. Weights are based on the 1995-97 average of world export earnings.
 2/ Deflated by US CPI.

5-Mar-08

So, the appreciation of the European common currency against the US Dollar has mitigated the effect of the *negative* course of the commodity prices on the Euro area inflation. It is important to point out that “Chart 2” plots the course of the indices of non fuel primary commodity prices. This highlights the general increase in commodity prices. There has not only been an increase in fuel commodity prices, and this is an aspect that is often forgotten. In sum, the Euro has protected the Euro area not only against the oil shock but also against the growth of other commodity prices.

But this twofold analysis has highlighted that the growth of the Euro exchange rate (against the US Dollar and against other important currencies) has probably been partially, or totally, offset by the contemporaneous increase in commodity prices from 2004 to nowadays. As a consequence it was wrong giving a relevant weight to the role of the exchange rate in dampening and stabilizing the Euro area inflation during the years of my sample. The exchange rate probably helps explain why the inflation rate has stayed stable notwithstanding the just mentioned shock in commodity prices in recent years. But it is hard to explain such a long period of low and stable inflation just observing the path of the European currency. Indeed, if the Euro area domestic prices had absorbed the whole appreciation of the exchange rate, we would have seen both periods with lower (that is, deflation) and with higher inflation rate than the level we have actually seen. So, this analysis does not find a relevant linkage between the exchange rate and the Euro area domestic inflation. The Euro can be useful in explaining a limited part of the features of the

Euro area inflation. It seems that, as other studies have pointed out (see Amato, Filardo, Galati, von Peter and Zhu (2005), Angeloni, Aucremanne and Ciccarelli (2006) and Melick and Galati (2006)), the pass-through effect has become softer than it was in the past. In the light of these facts, it is fundamental to deepen the analysis in order to find some other linkages and evidences on this phenomenon and so I will widen my breakdown in the next sections.

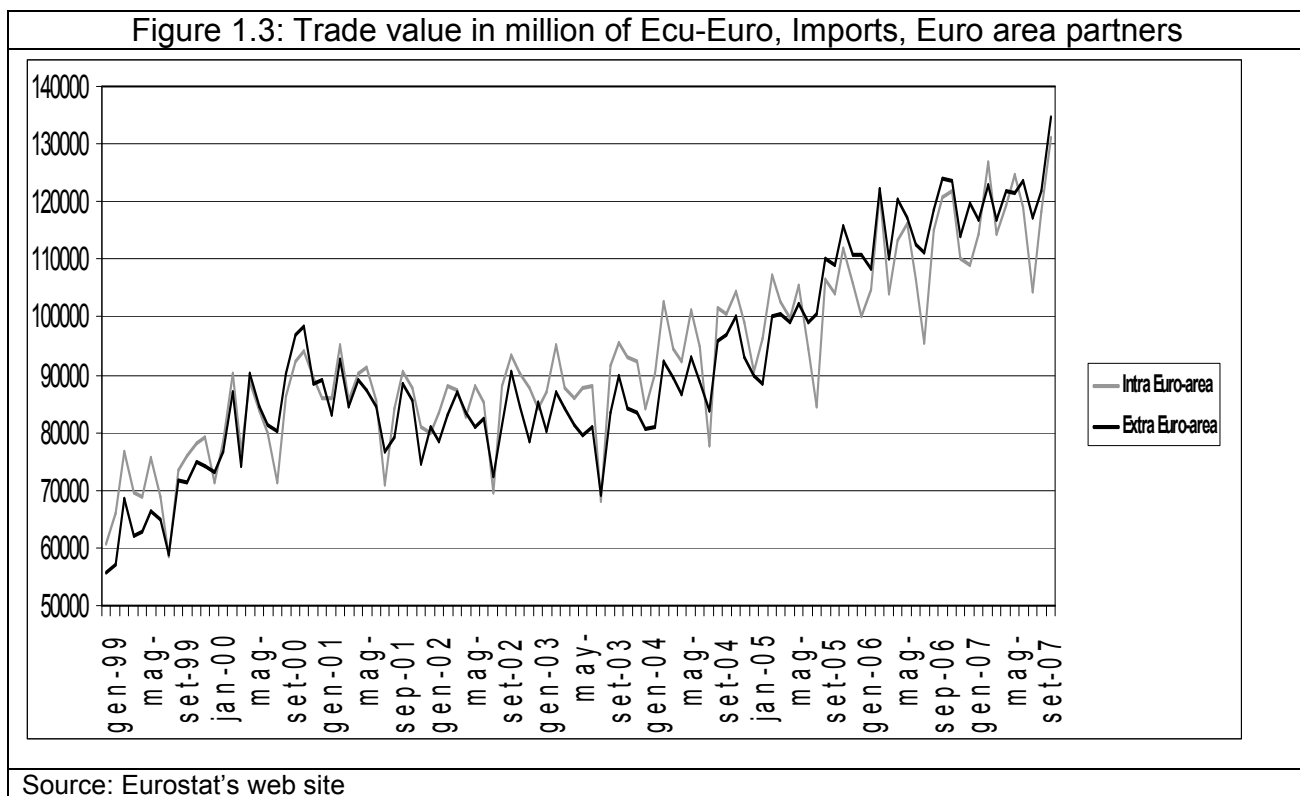
It is possible to study the *final* result of all the phenomena described above looking at the course of import prices. But, import prices are influenced by the *choice* of import partners too. So, before analysing import prices, the last ring of the chain, I will examine, in the next paragraph, the *economic weight* of the extra Euro area trade and the relative importance of the different import partners.

2.2 The trade partners

The role of Globalization in reducing world inflation is well known: the possibility to import goods from low cost nations can be a crucial factor in dampening the internal inflation rate of a country. But the question is not so simple. I built an analysis that tries to incorporate all the possible features of this type of study. In the following pages my job is divided as follow: first, I analyze the *weight* of the extra Euro area imports with respect to intra Euro-area trade. Second, I show the growing dependence of the national demand of the Euro area members from imports. Third, I focus on the evolving trend of the volume and share of the imports of the Euro area partners. In this way it is possible to catch all the possible aspects of this *external channel*.

The first feature that I study is the relative weight of intra and extra Euro area trade. Indeed, the impact of the import prices on the internal inflation crucially depends on the importance of the imports for the economy. If the extra Euro area imports are negligible, the linkage between the external channel and the domestic inflation becomes more loosened. There is another important feature that is fundamental to analyse when the core of a study is about the Euro area: the imports of a Euro area member are not totally influenced by the Euro exchange rate. Indeed, a part of the imports comes from other Euro area members and so we should consider them as *internal* trade: they are formally import goods, but we can consider them as a movement within the same nation. For this reason, Figure 1.3 shows the pattern of the intra and extra Euro area import value (Eurostat data).

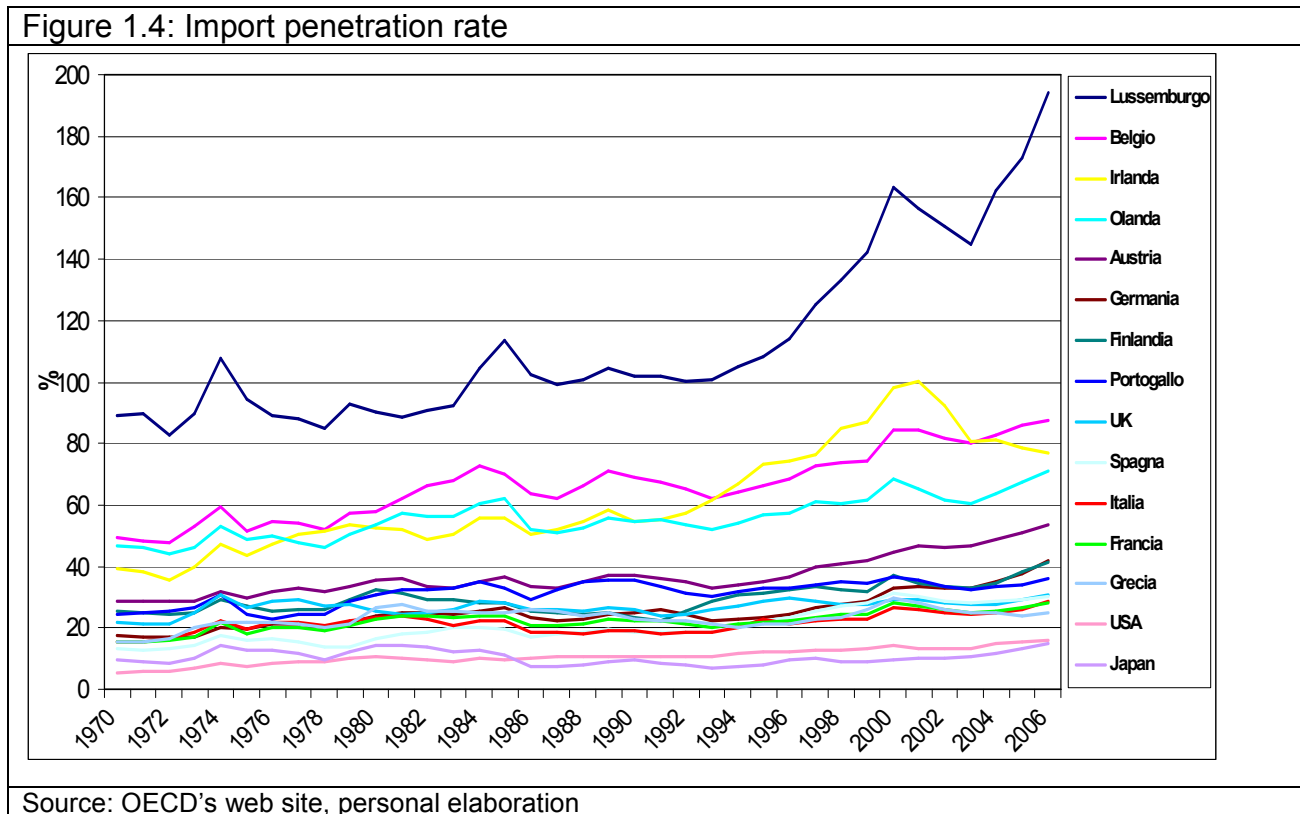
It is straightforward to see that the extra Euro area imports approximately have the same weight of the intra Euro area imports. This feature is important, because it highlights that the role of the external channel is not insignificant: 50% of the imports are influenced by the fluctuations of the exchange rate.



Other data can sustain the importance of the external trade. The Euro area (13 nations) GDP in 2007 was 8,866,576 millions of Euro (Eurostat datum). The extra Euro area imports in the same year was 1,481,000 millions of Euro (see Table 1.9 in the Statistical Appendix of this chapter). So, the extra Euro area imports are equivalent to 16.7 per cent of GDP. A very relevant percentage. It is useful to give other data in order to completely understand the situation. If we consider the Euro area members we can study the path of the import penetration rate² in order to know the relevance of the imports for a nation. Indeed, the import penetration (see Figure 1.4 below and Table 1.8 in the Appendix) shows higher value for the European countries (and for the Euro area members) in comparison with the United States of America and Japan values (but this is quite normal given the different size of these nations). Moreover, the import penetration rates for the

² The import penetration rate is measured as the ratio between imports and domestic demand. It shows to what degree domestic demand D is satisfied by imports. Domestic demand (D) is measured as the sum of domestic consumption by households (C), investment demand by firms (I) and government consumption (G): $D = C+I+G$. Because total GDP (Y) is the sum of domestic consumption and net exports ($X-M$), ($Y=D+X-M$), domestic demand is also computed as $D=Y-(X-M)$. Hence, the import penetration rate equals $M/D=M/(Y-X+M)$.

twelve Euro area members examined here have constantly increased during the last decades (except for Greece). So, this is another indicator of the importance of the imports for the Euro area.

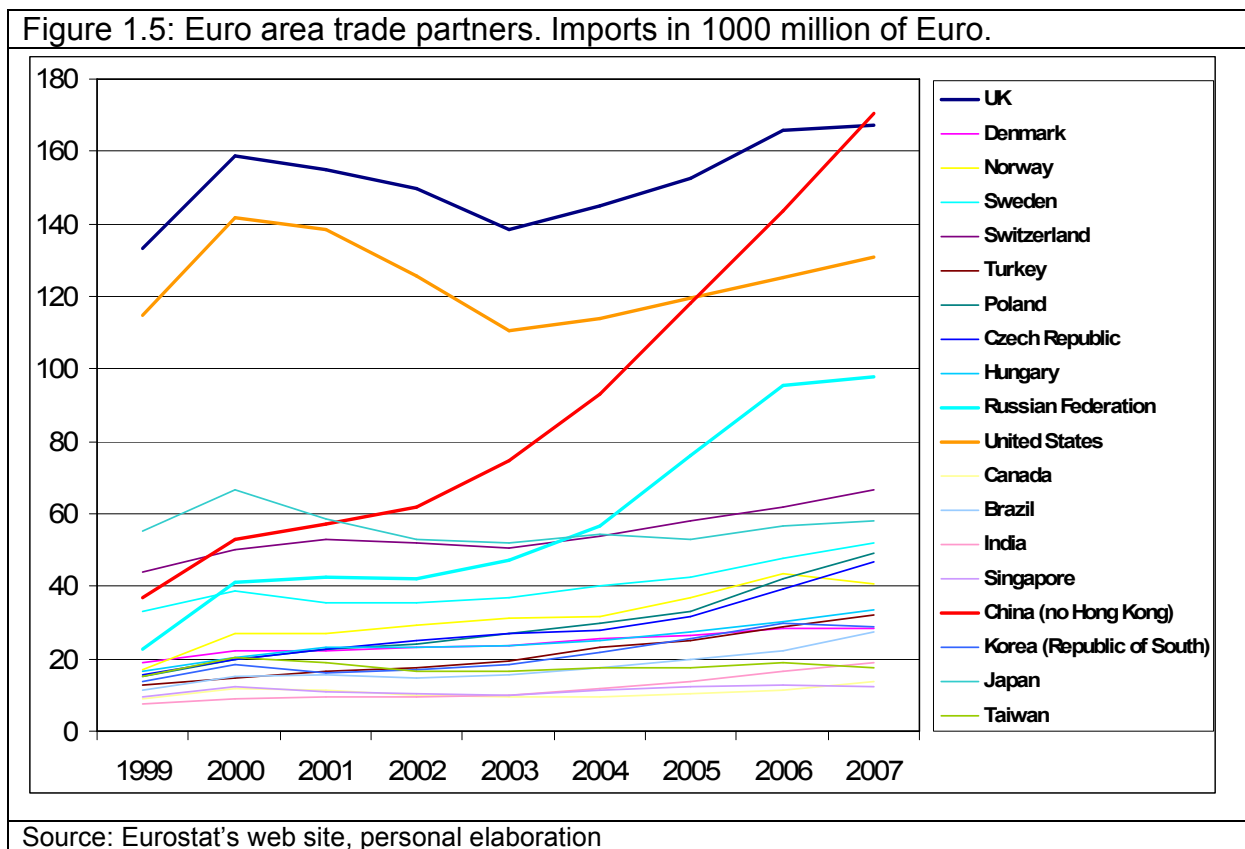


All these data have been useful to understand the key role of imports for the Euro area: the high relevance of the imports from extra Euro area countries, the relevance of the extra Euro area imports with respect to GDP and the growing role of imports in satisfying the domestic demand (import penetration) are evidences of this phenomenon. Now, following what I have said in previous pages, I focus on the Euro area partners in order to observe if a switch from high cost to low cost nations has happened during the last years. In fact, given the just demonstrated key role of imports, this switch could have reduced the Euro area prices.

First of all, I focus on the value of the imports. The data, taken from the Eurostat's web site, are reported in Figure 1.5 and Table 1.9. It is easy to observe, looking at the most important partners, that the value of the imports from the UK, the USA, Japan and Canada has been substantially stable during the last years. On the contrary, we can notice a considerable growth for the value of the imports from China, Russia and Switzerland.

The growth of the imports from China is very remarkable: from less than 40,000 millions € in 1999, up to 170,000 millions € in 2007. This trend is only the tip of the iceberg. Other

data seem to sustain an ongoing deeper and more global change in imports: a growing importance of the low cost nations in the composition of the Euro area import. Indeed, for example, the value of imports from Hungary and Republic of South Korea is doubled from 1999 to 2007 and the value of imports from Brazil, Turkey, Poland, Czech Republic and India is more than doubled during the same period. This is, according to my personal view, a clear evidence of the changing process that has involved the Euro area imports. Another analogous significant evidence is given by the share of the Euro area partners in total extra Euro area imports. This further datum gives a simpler outlook of this phenomenon. Indeed, if we look at Figure 1.6 or read the data in Table 1.10 we immediately understand that the weight of the traditional import partners, such as the UK, the USA, Japan and Switzerland is declining and, on the contrary, the relative importance of the emerging countries, such as China and Russian Federation, is growing.

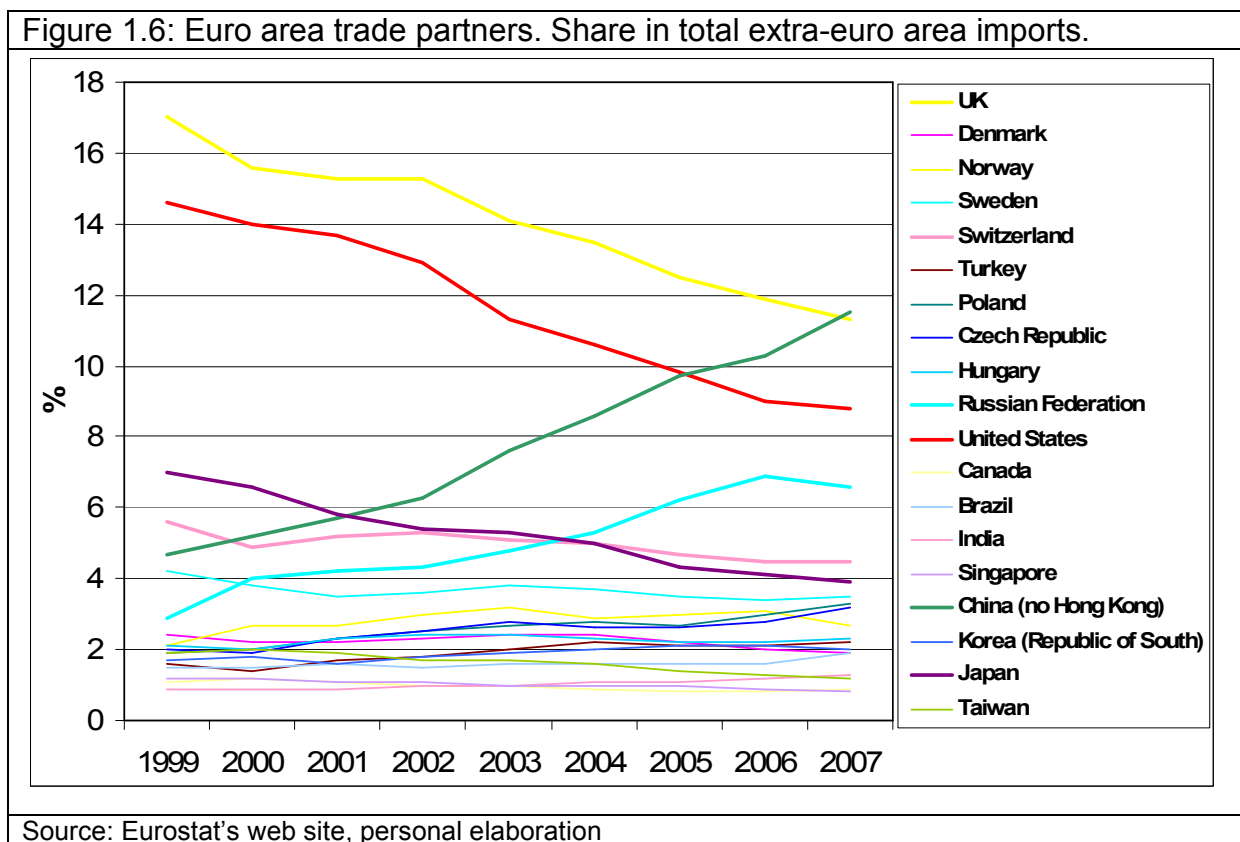


These two analyses (the value and share of imports from Euro area partners) have shown that a switch from high cost to low cost nations has occurred in a marked way during the last years.

So, if we consider that, as I have shown before, the extra Euro area imports are relevant for the Euro area, this change could have influenced the course of import prices and

domestic inflation. The exploitation of this possibility (that is, the possibility to import from low cost countries) can be a sound justification of the low and stable level of the inflation rate in the Euro area. But, before drawing any kind of conclusion, one should see the result of this process in combination with the one of the previous section (that is, the path of the exchange rates). So, in order to build a complete analysis it is useful to directly examine the impact of these two phenomena. In other words, if we examine the path of import prices we can see the final results of all the facts depicted above (the course of exchange rates, the path of commodity prices and the role of import flows).

This is just what I will do in the next pages.



2.3 The import prices

As I have just said, one can observe the results of the processes described in the previous paragraphs watching the path of the price deflator. Figure 1.7 shows the course of the price deflator of import of goods in national currency for the UK, the USA, Japan and the Euro area (the data are taken from an annual publication of the European Commission, see References). These data catch what we want to know: they are in national currency, so they incorporate the role of the exchange rate, and they fluctuate if

the imports come from low cost nations, since the price of imports from low cost countries is lower than the price of imports from traditional partners.

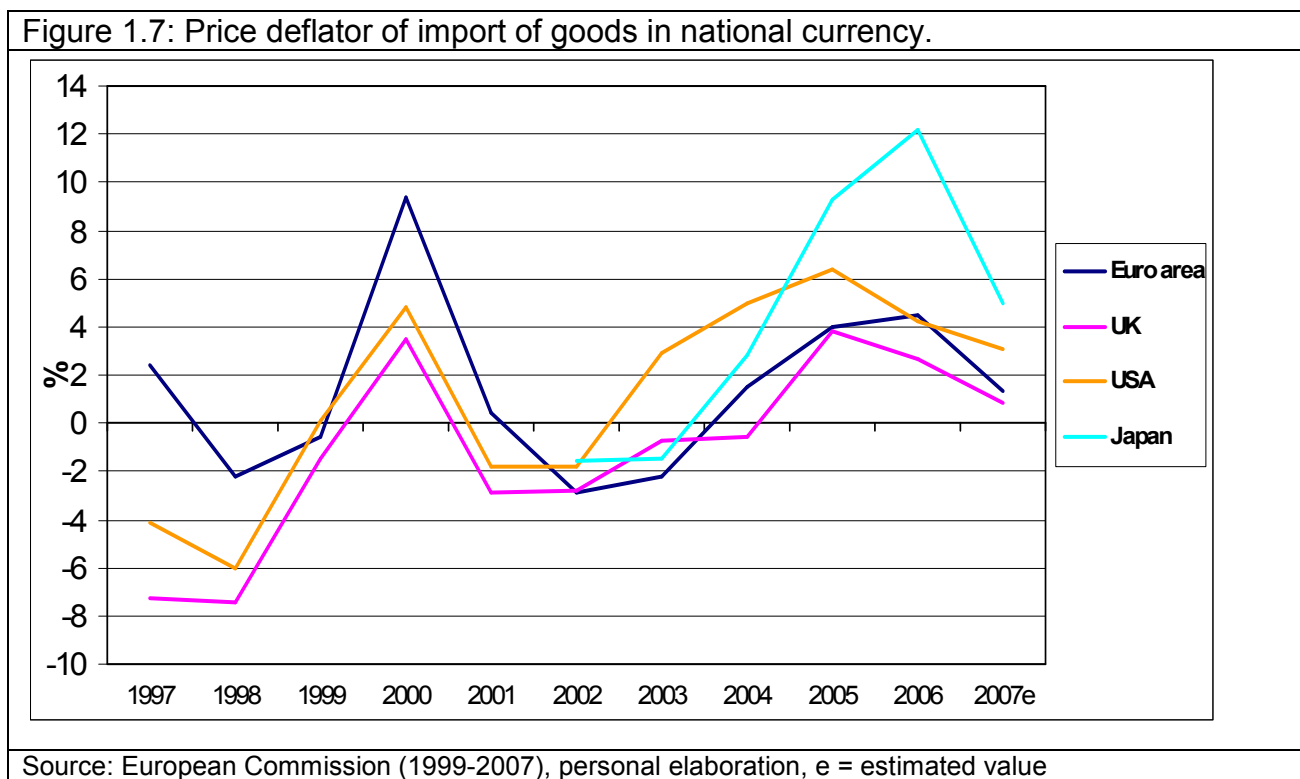


Figure 1.7 highlights that the course of this price indicator has a similar path for all the areas examined. This is probably a symptom of the trifling role of the exchange rate: if the exchange rate was important in guiding the import prices then we should not have observed the same pattern in these different areas, that use different currencies. As a consequence, it is wise to think that there is a global factor that guides the price deflator of imports. It is probably more important the course of the commodity prices and the role of the import flows. This is a possible explanation of the similar course of the lines shown in the figure. The exchange rate could only amplify these fluctuations (for example, the Euro hit its lowest level in 2000 and so this justifies the higher level of the Euro area price deflator of imports in comparison with the value of the other nations in that year). But, at the end, we want to know if the import prices could be useful in explaining the stable level of inflation rate and its small variability.

Figure 1.7 and table 1.11 give a not very satisfying result. Indeed, the price deflator of import of goods is not stable over time, so it could have helped the stabilization and/or the reduction of the level of inflation only in limited periods. For example, focusing on the Euro area, on the one hand import prices can have helped reducing the inflation level in 1998-

1999 and 2001-2003 periods. But, on the other hand, the percentage change of the price deflator of imports was above the 2% threshold in 1997, 2000, 2005 and 2006 with an obvious negative impact on the Euro area inflation. There is no clear and stable trend of import prices in this sample.



Notwithstanding the lack of a trend, I have calculated the coefficient of variation for the USA, the UK and the Euro area price deflators of import (I have not considered Japan because the European Commission does not release these data for the entire sample). The coefficient of variation is 2.33 for the Euro area, 3.34 for the USA and 3.17 for the UK. These values show a more stable course for the price deflator of import in the Euro area in comparison with the other two nations. This finding can be useful in order to find a root for the stability of the Euro area inflation rate.

In addition, in order to eliminate the fluctuations of this indicator we can consider a five years mean.

Figure 1.8 shows the five years means of the price deflators (the data are taken from the European Commission publications, see the references). It appears an odd thing: in the Euro area the mean is lower in 2002-06 period than it was in 1997-2001 period. In the other nations (UK, USA, Japan) the situation is the exact opposite of that in the Euro area. So, what can we say about this situation? The contribution of import prices in stabilizing the Euro area inflation rate is unclear. These prices are not stable in the period examined and so they cannot give an always positive impact on the Euro area domestic prices. But if

we look at a mean of these data it is possible to see that during the last decade import prices went down in a soft way and remained below the 2% ceiling. This is a feature that does not exist in other areas: the means of the price deflators has been higher in 1997-2001 period and, excluding the UK, they were, on average, above the 2% in the last 5 years. So, the data point out that import prices could have had a positive but mild effect in stabilizing the level of inflation in the Euro area, but they certainly should have had a very deep impact on the level of inflation. The *problem* is that we have not observed a declining inflation rate (for example, we have not seen a negative value of the inflation rate) but a stable level of it. The Euro area inflation rate has shown a very stable level during the entire sample in spite of the increases and decreases of the price deflator of imports. It seems to see the same conclusion that I have drawn for the exchange rate: domestic inflation has not been highly influenced by the *external channel* either in positive case (negative import price deflator) or in negative period (high import price deflator).

In sum, the final conclusions of this first paragraph are the following:

First, the Euro has given a positive support from the second part of year 2000 until today. The global appreciation of the European currency has helped to reduce the negative impact of the commodity prices shock of the last lustrum, so it had and still has a role in stabilizing inflation. But, we cannot look at the Euro exchange rate as the decisive cause of the stability of the Euro area inflation rate during the whole sample. Indeed, the Euro area has had a low and stable inflation rate despite the high depreciation that we have seen during the first part of the sample. We should have observed a more declining trend of inflation (even a deflation period) in some years and a higher level of inflation when the Euro was depreciated. This is not what has actually happened. So, the pass through effect has been incomplete (or absent) during the sample.

Second, the analysis of the trade partners has shown a declining trend of the import shares from industrialized countries and a growing share of imports from low cost nations, in primis from China. This situation, linked with the growth of the world trade and with the openness of new big countries to the free-market ideas, probably explains the reduction of the strength of the negative international prices shock effects on the Euro area inflation. But, I do not think that the role of globalization is so limited. The data predicted a stronger effect. Even in this case economic theory cannot explain why a so vigorous growth of the imports from low cost nation has had no effect on the level of domestic inflation that remains stable. Even in this case we should have observed a more evident declining trend of inflation, even deflation.

Third, the price deflator of imports, that represents the final result of the previous tendencies, has shown that the external channel³ has not a great explanatory power. The price deflator has not had the same value all around the world and, in addition, it has not always had a positive impact on domestic inflations. So, this is not a World factor.

Analysing the data, we can say that the external channel has contributed to deeply dampen the inflation but only in short periods (during the 1998-1999 and 2001-2004 periods). Besides, there has been a declining trend of the import prices growth (see Figure 1.8) in the Euro Area and this is obviously a very positive feature, but, at the end, we have noticed a stable inflation rate even in presence of a fluctuating import price deflator. So, in this case there is also an inexplicable trait of the inflation rate course: the stability of the inflation rate is not easy to understand. We should have observed deflation in some years and a slightly higher inflation in other years, but we have always observed a very stable inflation rate.

In the light of these facts, we can say that the extra Euro area factors (the exchange rate, the pattern of the commodity prices and the role of the import partners) cannot fully explain the trend of the Euro area inflation rate during the last decade. So, in order to find some other possible and strongest explanations for the stability of the Euro-area inflation, I will extend my analysis focusing on the Euro area labour market in the following paragraph.

3 Labour and inflation

Labour cost and labour productivity are two important variables that can influence the course of the domestic prices of a nation. A vigorous productivity growth can be fundamental in order to give the possibility to dampen prices: a firm with a strong productivity growth can reduce the prices of its goods or can absorb without difficulty a negative input prices shock. One can draw the same results looking at the role of the labour cost. So, these are two fundamental variables for the life of a firm.

By the light of these facts, in this part of the paper I will examine the course of the labour productivity in the Euro area in comparison with the labour productivity of other industrialized nations in order to see if this variable is really fundamental all around the world. In addition, I study the labour productivity of all the Euro area members. After that, I will focus on the labour cost. Even in this case I compare the path of the labour cost in the Euro area with that in other part of the world.

³ In this last part of the paragraph, when I use the terminology “external channel” I refer to all the phenomena mentioned above: the exchange rate, the commodity prices, the trade partners.

3.1 The labour productivity

According to a widespread idea (see Nickel (2005), Rogoff (2003) and Taylor (1998) for a brief review about this subject) the role of productivity has been important in the USA in order to justify a so low and stable inflation rate during the long period of vigorous economic growth that the USA has experienced since the 80's. For this reason the role of productivity has been emphasized. But, as Rogoff pointed out (2003), the productivity is not the global factor that the economists have tried to find since the Great Moderation started because not all the economies have experimented a productivity growth like the USA.

In this first part I try to observe and analyse the role of the labour productivity inside the Euro area. First of all, in figure 1.9 I show the path of the labour productivity (i.e. real GDP per occupied person) for the Euro area, the UK, the USA and Japan. In the figure it is shown the year over year percentage change of the labour productivity.

The first feature that emerges watching the figure is that the Euro area labour productivity has grown, on average, with a moderate speed in comparison with the other countries. For example, the USA labour productivity has grown faster than the one of the Euro area from 1999 to 2005.

We can draw the same conclusion comparing the Euro area labour productivity with the situation in the UK or in Japan. The Euro area shows a very slow growth of this macroeconomic indicator. The data in table 1.12 (see the Appendix) show in more details this result. If we compare the USA with Germany, France and Italy (the biggest Euro area economies) we can notice that only in two cases, in aggregate, these economies have shown a faster labour productivity growth (I have analysed the sample 1999-2007). So the first conclusion that one can draw is that the labour productivity has not had the same role in the world in reducing the level or stabilizing the fluctuations of the inflation rate. Its role is essential in the USA, the UK and Japan economies (even if with different strength) but one cannot ascribe to labour productivity a crucial role for the whole Euro area.

Figure 1.10 and table 1.12 are useful in order to deeply analyse these stylized facts for the Euro area members. The aim of Figure 1.10 is to depict the path of the labour productivity for fifteen euro area members from 1999 to 2007.

At a first glance, it appears that the situation across the Euro area is extremely varied.

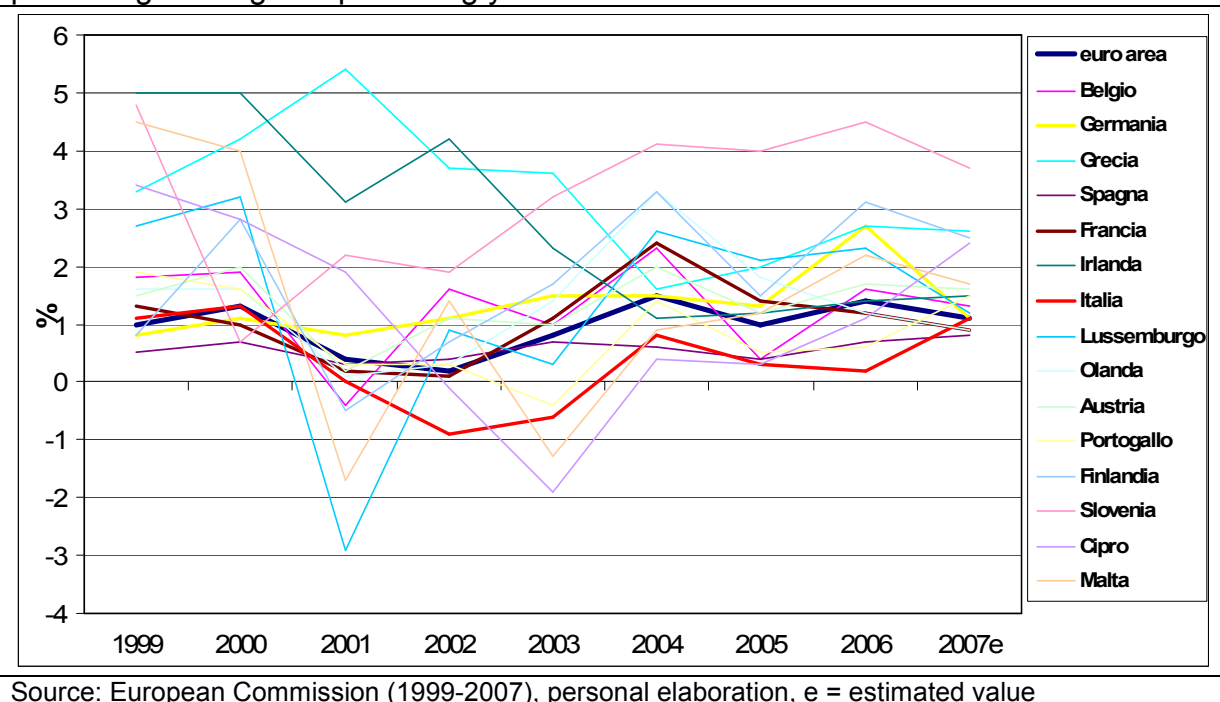
In the sample we can observe some nations with a negative value of the labour productivity in some years (for example Italy) and other ones with a very rapid growth.

Furthermore, these differences are present during the same years as a consequence one can assert that the labour productivity cannot give any kind of explanation to the Euro area inflation process. Indeed, we have observed a stable level and a reduction of the variability of the inflation even within nations with a slow (and in some years negative) labour productivity growth. One clear case is Italy: in this country there has been a really slack labour productivity growth during the whole sample. In addition, in 2001 there was no productivity growth in comparison with 2000, and in the two following years (2002-2003) there was a labour productivity decrease. Notwithstanding this negative course of the labour productivity even in Italy the level of the inflation rate has been low and stable. And one can affirm the same thing for all the other Euro area members that have shown a not very positive path of the labour productivity. In sum, one does not find differences in the inflation rate of the Euro area members even if these nations had and still have different labour productivity courses.

At the end, the finding of this section, after a world and an intra Euro area comparison, is that the labour productivity growth cannot be recognized as a key factor in explaining the Euro area inflation trend. The productivity growth has a very limited explanation power for the stability of the inflation rate, at least for the Euro area case.



Figure 1.10: Labour productivity (real GDP per occupied person) – Euro area - percentage change on preceding year.



3.2 The labour cost

The other important *labour variable* is the labour cost. It is a very critical factor for firms. The fluctuations of the labour cost influence the price setting of the firm. A positive path of the labour cost (that is, a stable or declining trend of the labour cost) can induce companies to stabilize or reduce the price of the output. Labour is the most important input for the firm all around the world (it is important for both the high quality and the low cost companies). So, it is wise to study the path of this variable. Even in this case, I analyse the Euro area labour cost in comparison with the labour cost of other economies. The analysis is twofold: I will study the nominal and real unit labour cost. In each case it is possible to see some special features, but I think that the real unit labour cost gives more information. Indeed, if we consider that the final price of a good is set by the firm and so, if we think that the inflation can be seen as the increase of the output prices (in other words, the inflation is *set* by the firms), then the real labour cost can show if the weight of the labour cost is going up or down in comparison with the prices of the goods produced by the firms. Therefore, the path of the real unit labour cost can give some useful information about the final price setting behaviour, and as a consequence about the cause of the inflation path.

First of all, Figure 1.11 shows the year over year percentage change of the unit labour cost⁴ (the data are taken from European Commission publications, see references) in the Euro area, the USA, the UK and Japan (see table 1.13 for the data). It is straightforward to see that there has been a negative course of the nominal unit labour cost in Japan, while in the other 3 areas there has been an increase during the sample. The Japan case is exceptional and it has been influenced by the domestic economic condition (one should remember the Japan deflation of the last decades). So, we cannot compare that situation with the other areas if we not consider the role of the inflation rate.

But this Figure is useful to see that during the eleven years of the sample the nominal unit labour cost in the Euro area has been more stable and it has usually been lower than the UK and the USA nominal unit labour cost.

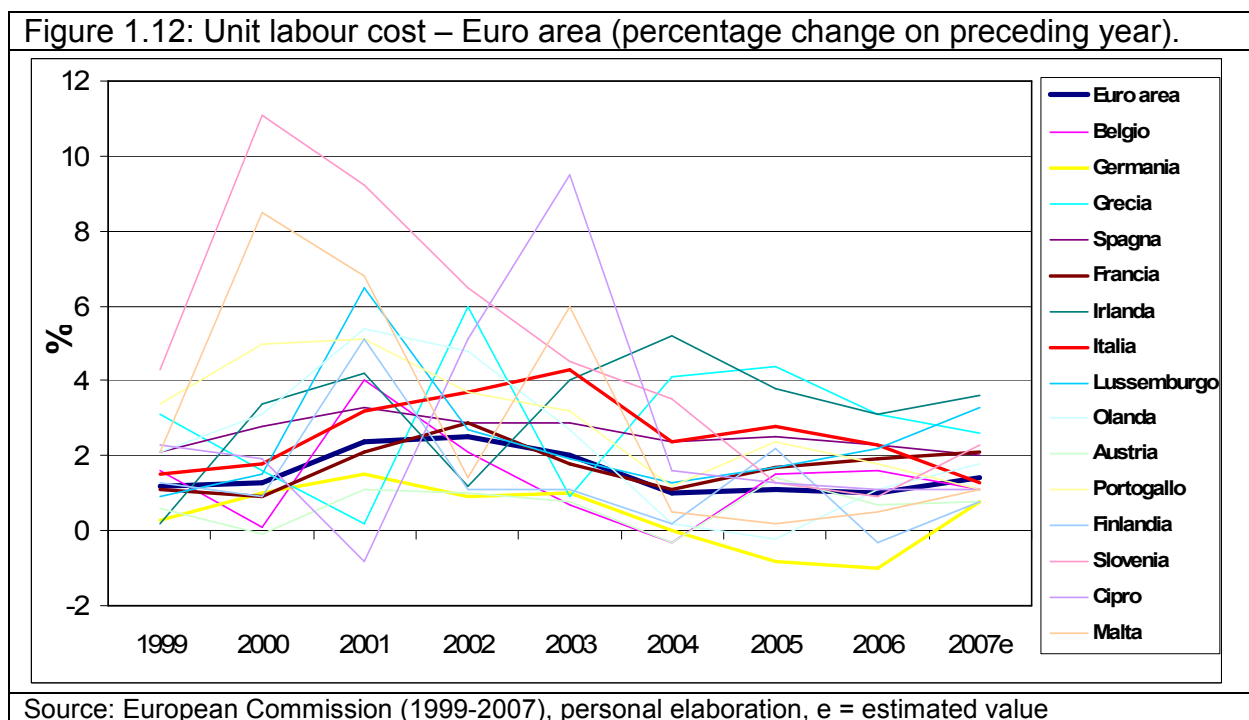
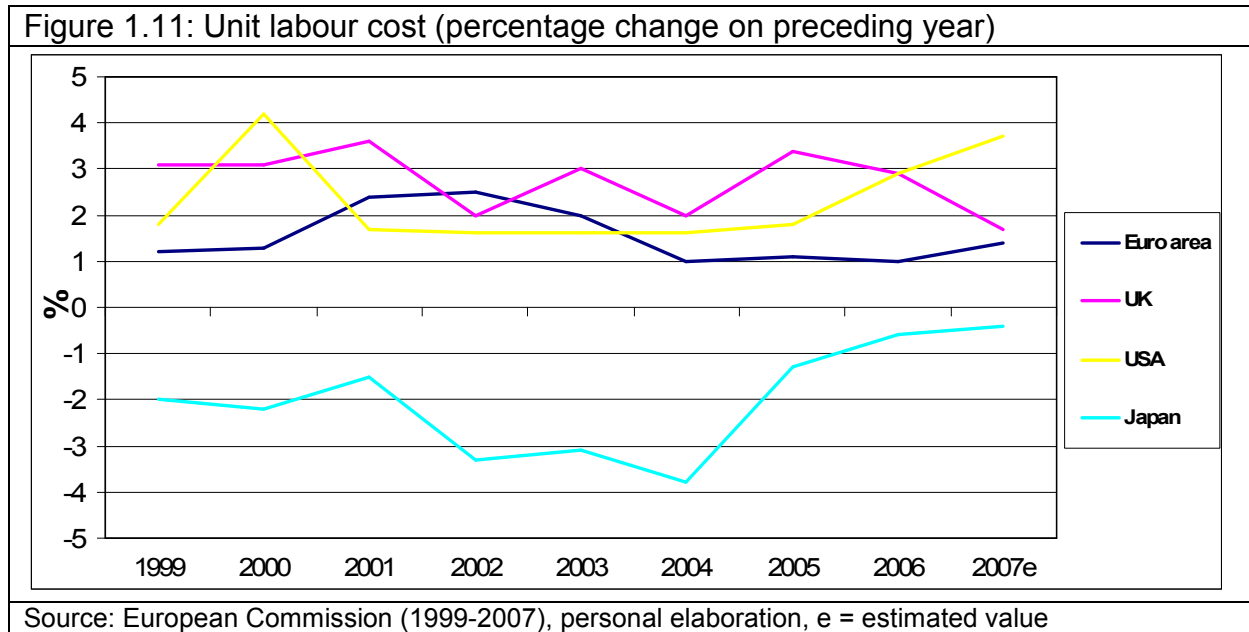
The US unit labour cost has been six times (in nine years) above the Euro area one, and the UK unit labour cost has been only one time below the Euro area value. Furthermore, the fluctuations of the USA and Japan values are more conspicuous than those of the Euro area case. Indeed, the USA and Japan have a higher value of standard deviation while the UK has a standard deviation similar to the Euro area value. So, it emerges that during these nine years the unit labour cost has been more helpful in the Euro area in dampening the possible inflation pressures than it was in the USA and the UK. But I think that it can be useful to see the path of the nominal unit labour cost for all the Euro area members in order to grasp the correct evolution of this indicator in the Euro area. Thus, Figure 1.12 plots the percentage change of the nominal unit labour cost of the fifteen EMU members. There is not a common trend for all the members, even if we can see a less degree of dispersion during the last years of the sample. This can be the result of a growing interdependence of the economies and a growing similitude of the economic policies due to the gradual process of economic convergence.

Figure 1.12 shows that the three biggest economies of the Euro area had very different unit labour cost paths during the sample: - the German unit labour cost (the yellow line) has always been below the Euro area unit labour cost (the blue line) - the French unit cost (the violet line) has been similar to the Euro area one - the Italian unit labour cost has been steadily (except for the 1998 value) above the Euro area values.

These different trends make it hard to state a decisive verdict over the role of the unit labour cost even if we have observed some important and positive features. But, I repeat,

⁴ Compensation of employees per head divided by labour productivity per head, defined as GDP in volume divided by total employment.

this study is imperfect without the analysis of the real unit labour cost for it can give a clearer vision of this situation.

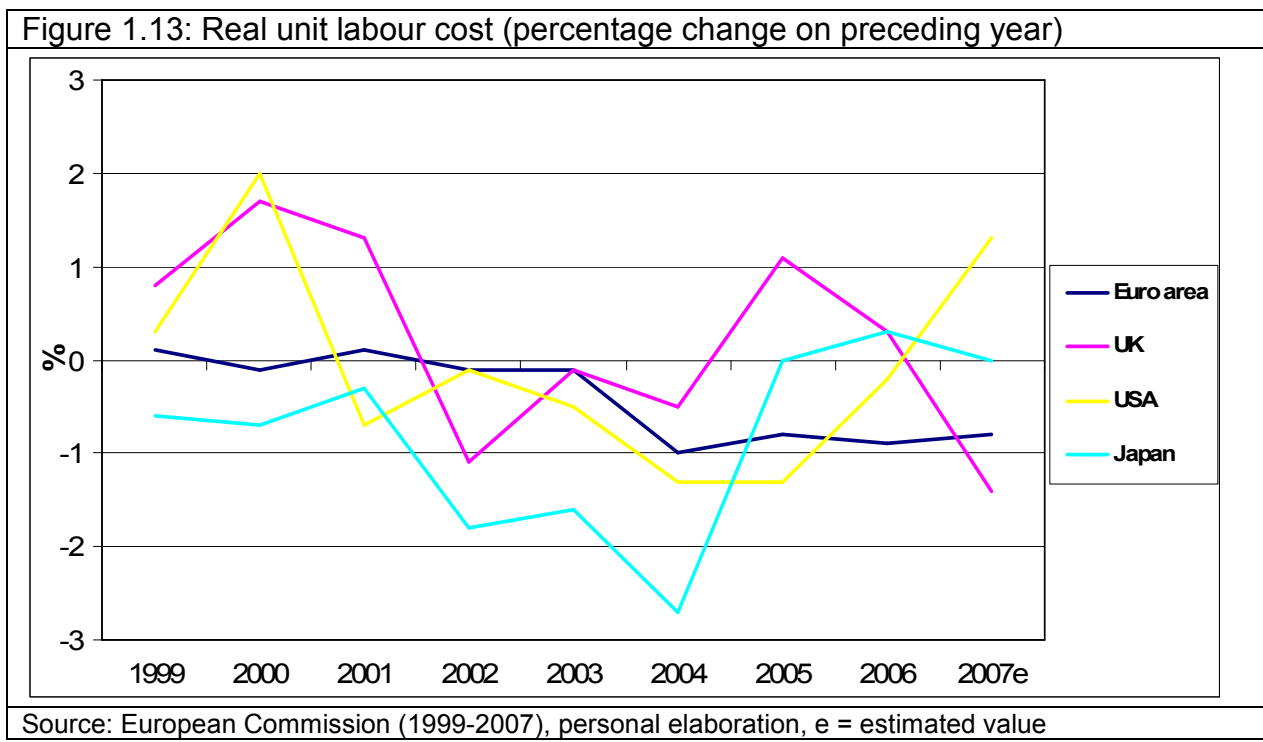


So, Figure 1.13 reproduces the same sample of the previous two figures but now it plots the year over year percentage change of the real unit labour cost⁵. In this way we can study if the growth of this labour cost indicator has been faster than the growth of the

⁵ Nominal unit labour costs divided by GDP price deflator.

prices, that is, the inflation rate (see Table 1.14 in the Appendix for the data). In this way we can recognize if the weight of the labour cost for the firms is going up or down in real terms.

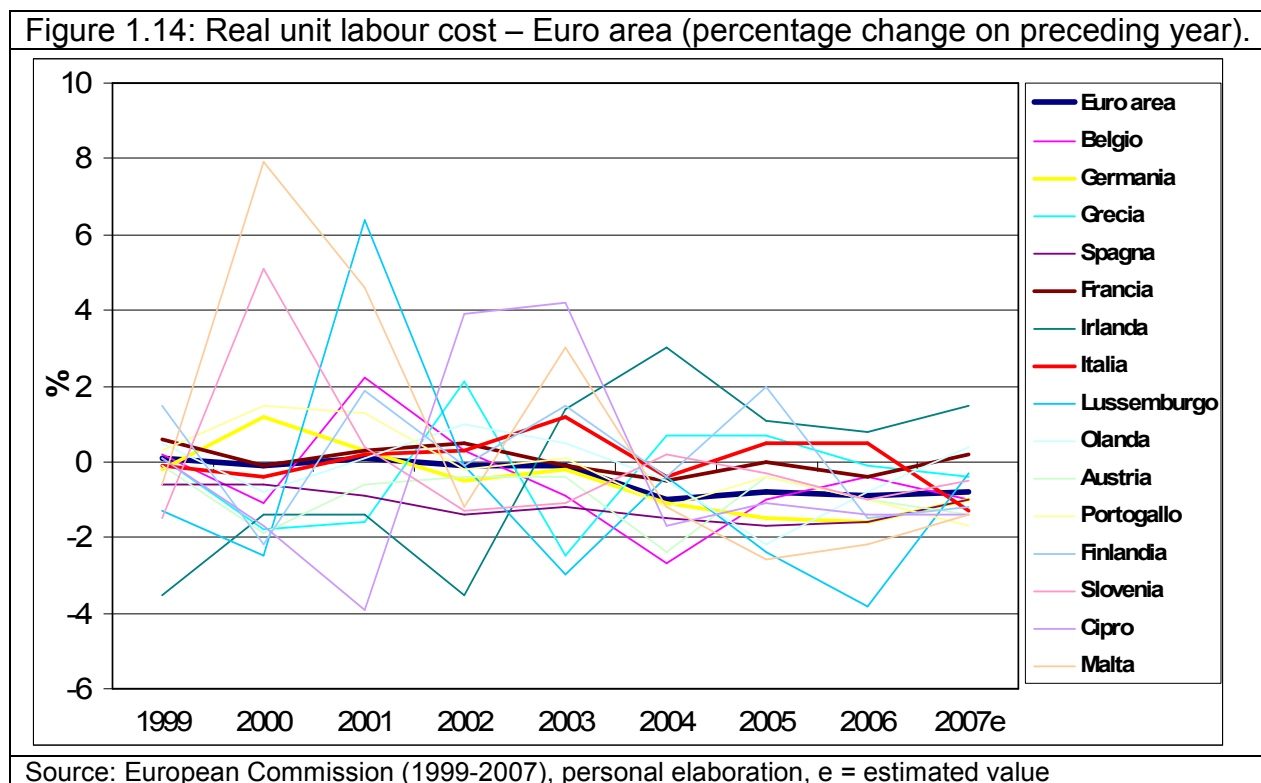
The first detail that one can observe is that the real unit labour cost was negative or close to zero in the Euro area during the whole sample. The other areas show a different path: first, the fluctuations for the USA, the UK and Japan lines are wider than the Euro area case. In those three areas we can observe negative and positive values that are bigger than the ones of the Euro area. So, the Euro area has been characterized by a larger degree of stability; second, if we observe the sample as a whole, the result is that the Euro real labour cost has *grown* slower than the real labour cost in the USA and in the UK and with a similar speed in comparison with Japan.



This feature highlights a peculiarity of the Euro area: a very good path of the real unit labour cost. Even in this case we have found a positive factor, that is, the negative course of the real labour cost could have helped the track of the inflation rate.

But, before drawing any kind of conclusion it is shrewd to analyse the path of the real labour cost of the Euro area members. Indeed, even if we have found that for the entire area the real labour cost could be a possible good explanation for the stable inflation rate, it is important to observe whether this indicator shows the same good path at least for the biggest Euro area members. Figure 1.14 and a deep analysis of Table 1.14 can give the

desired answer. Figure 1.14 shows the path of the real unit labour cost of the fifteen EMU members. It appears a diversified situation, but we can still draw some relevant conclusions: first, it seems that during the last years the real labour cost of the EMU members has converged. The value of the variance has diminished during the sample and if we do not consider the smallest and the *new* EMU countries, this convergence becomes even more significant (see Table 1.14).



In addition, during the whole sample, and in a more marked way during the last years, it seems that a large part of the EMU members has had a negative real labour cost. This finding is really positive but it is not so linked with the stable path of the inflation. Indeed, even in this case the data are so *positive* that one could expect a negative value for the inflation (i.e. a deflation). But we have not recorded a negative trend of the inflation rate.

So, it is correct to say that, differently from the labour productivity, the real labour cost has had a relevant and positive role for the course of the Euro area prices. A so *positive* path has certainly been fundamental for the firms in reducing the input prices pressure. Firms have been able to face the first part of the commodity prices shock (2004-2007) without increasing the output prices in a substantial way thanks to the real reduction of the labour cost.

But, even in this case, as I have underlined above, the data prefigure a deflationary trend that we have not observed. At the end, we can say that the reduction of the real labour

cost has had a positive impact on the Euro area inflation rate, but also in this case we have detected a mild linkage between the two macroeconomic indicators.

This paragraph has been focused on the relationship between inflation and labour market. In particular, I have examined the data of the labour productivity and labour cost. The main findings are two: first, the labour productivity has not shown a really positive path during the sample. The Euro area labour productivity growth has been slower than the growth in the US, the UK and Japan. And so, if the productivity is a central factor for the US economy, it is obviously not so fundamental for the Euro area. Hence, the study has highlighted this global diversity. Second, the real unit labour cost has shown a negative growth in the Euro area during the sample. This is a very good datum for the European firms. A negative real labour cost can be essential for increasing the margins and for facing possible negative input costs shocks. But, as I also stressed for the path of the price deflator of imports and for the pass through effect, the stability of the inflation during the sample finds only a partial explanation in this macroeconomic indicator. We should have observed a declining trend of the inflation and not a stable trend as we have actually seen.

The last global considerations and a final conclusion will be the core of the next section, in which I try to summarize the most important findings of this paper and to analyze some fundamental questions that have come out in the previous pages.

4 Conclusions

In this paper I have focused on two possible causes of the stability of the Euro area inflation rate throughout the last decade. In particular, I have examined the course of the Euro exchange rates against the most important import partners' currencies and I have also studied the course of the NEER and REER. Then, I have linked this first analysis with the path of the commodity prices. After this, I have proposed a deep examination of the Euro area import flows in order to observe the switch from industrialized countries to low cost nations. This first part, focused on the external channel, is followed by the part on the linkage between the labour market and the inflation. Data and figures on labour productivity and labour cost have completed the paper.

At the end of this long and diversified analysis it is possible to highlight three main features that have come out.

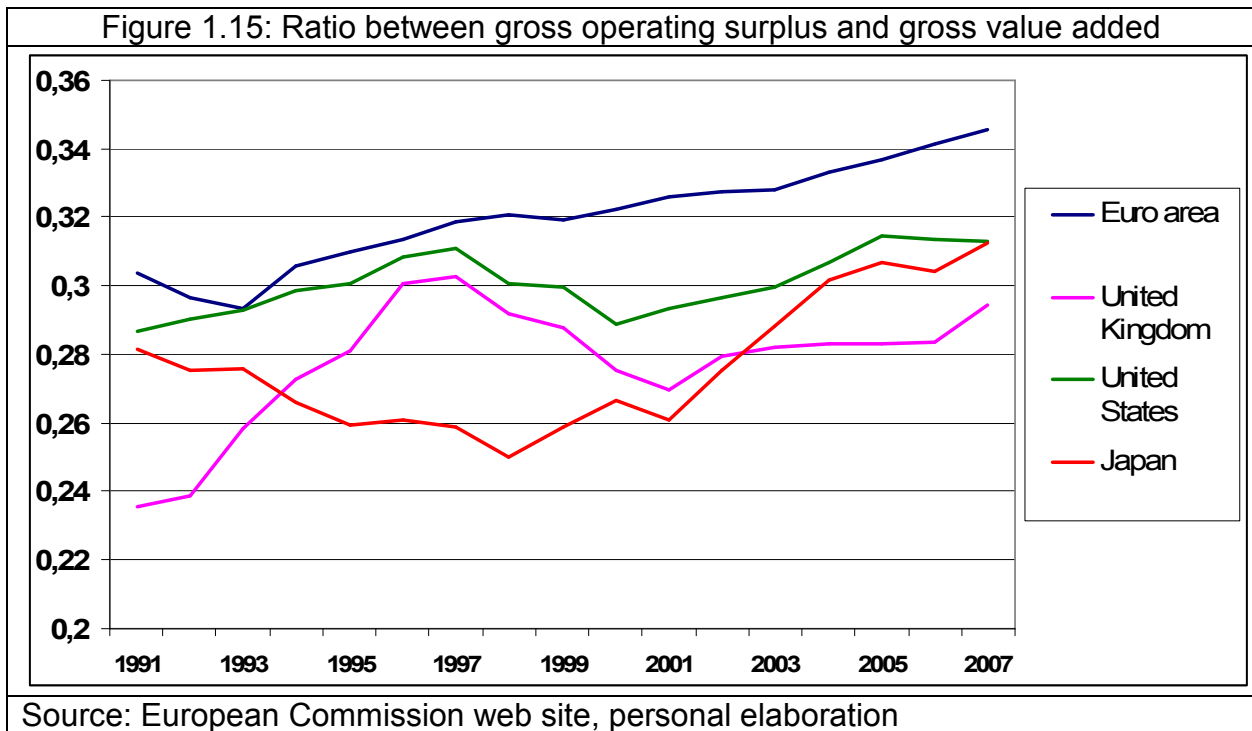
First, the global situation that the analysis has pointed out is a deflationary scenario: the Euro has appreciated against all the currencies and, in some cases, in a very dramatic way. This appreciation could have been partially offset by commodity prices, but during the first years of the appreciation there was not a commodity prices increase. So, the Euro should have dampened the inflation rate below the level of 2%. Moreover, during the years in which the Euro appreciation has been offset by the commodity prices shock there were other positive factors that created a deflationary background. Indeed, the Euro has protected the Euro area from the commodity shocks, but the remarkable increase of the volume and the share of the low cost nations in total Euro area imports has created the basis for importing disinflation or deflation. These two effects (the Euro appreciation and the growing role of the low cost nations) have flowed on the price deflator of imports. This indicator is not stable like the inflation rate, but it shows a very positive course for the Euro area. It is, on average, below the 2% threshold during the last decade and in four years it has been even negative. Given the significant weight of the extra Euro area imports (the Euro area imports a large part of the commodities) and this very positive course of the import prices, one should have expected a lower inflation rate than the actual one. In addition, the second analysis has underlined the positive role of the labour cost. We have observed a very positive path of the real labour cost. This economic indicator has also contributed to the creation of a deflationary scenario. The firms have faced a reduction of the weight of the labour cost. This should have induced the firms to reduce the final prices of the goods. All the factors examined, even the slow productivity growth, have shown a positive trend for the firms. And so, we have arrived to the second feature.

Second, I have depicted a deflationary economic environment, but we have not observed deflation. So, where have the Euro appreciation, the benefits of importing from low cost nations, the negative price deflator, the productivity growth (though it has been slow it still remains a positive factor), the reduction of the real labour cost gone? All these factors have created the conditions for observing a deflationary period in the Euro area. Indeed, if we look at the First Globalization, a period in which the economic situation was similar to the one of nowadays, we realize that the inflation rate was often negative (See Table 1.15 and Table 1.16). During the last two decades, we lived an analogous economic situation but we have not observed the deflation (excluding the Japan case). I think that the most plausible explanation of this difference between the first and the second Globalization is that firms have kept the benefits for themselves and so they have stopped this process during these years. In other words, we have not lived a deflationary period because firms

have not diminished the consumer prices even if they could have done it. We have had a stable inflation rate but we should have had a negative inflation. So, we can solve this puzzle examining some data: the gross operating surplus of the firms⁶ and the ratio between this datum and the gross value added of the firms (see tables 1.17-1.17g for all the data). The gross operating surplus shows the economic *situation* of the firms. The data leave no doubts. The European firms have increased the operating surplus in an impressive way during the last years and we should bear in mind that during the same period the economic performance of the Euro area has not been excellent. It is interesting to notice that even in Italy this macro-indicator shows a very positive path, although in this country we have observed a very weak economic expansion. The unique explanation for this raise is that the firms have kept all the benefits of the positive economic background for themselves. They have increased the prices in a stable way (around 2%) every year while they could have diminished them as it happened during the First Globalization. The *difference* has ended up in the firms' surplus. In this way it is possible to solve the puzzle. But, even if we analyse the ratio between the gross operating surplus and the gross value added (see Table 1.17a) we can notice an analogous situation. This ratio has increased in the Euro area from 1998 to 2007. This datum (the table shows the data for all the EMU members) strengthen the preceding conclusion. Moreover, table 1.17b shows the ratio between the gross operating surplus and the value added of firms divided by sector. A large number of these ratios has increased during the sample. This is another evidence of my finding. At the same time, the absolute change of the gross operating surplus (tables 1.17c-1.17h) is almost always positive and it shows an extraordinary growth in many cases. So, we can infer that firms have absorbed a large part of the positive effects of the economic situation of the last years.

It is important to underline that this behaviour of the firms is not a particular feature of the Euro area. Indeed, figure 1.15 shows that during the last years in the industrialized countries the ratio between gross operating surplus and gross value added has grown. But, the figure also shows that the Euro area has the highest ratio during the whole sample. This fact reinforce the hypothesis of a relevant role of the firms in influencing the course of the inflation, especially in the Euro area. In sum, we probably experienced an higher inflation rate because the firms increased their profits.

⁶ Gross operating surplus is the surplus generated by operating activities after the labour factor input has been recompensed. It is the balance available to the unit which allows it to recompense the providers of own funds and debt, to pay taxes and eventually to finance all or a part of its investment. (OECD-Eurostat definition)



Third, another particular feature is that, as I stressed in the previous pages, the Euro area inflation rate mean started to stabilize at a higher level than the mean of the other nations during the second half of my sample. This difference has begun to be constant since 1997. Before 1997, the Euro area inflation mean was quite constantly below the *global* mean, but since that year the situation has been turned over. There is an evident linkage between this trend and the institution of a unique European monetary policy with an explicit inflation targeting. In other words, I think that the Euro area firms decided to set the increase of the prices around the inflation target (2%) because in this way they were able to increase the profits and respect the ECB threshold. But they decided to follow this strategy since they have exploited the positive features that I underlined in the previous sections. So, it is possible that a different monetary policy (a tighter monetary policy) or a different economic background (without all the disinflationary or deflationary forces that I previously described) would have provoked a different path of the inflation rate and a different distribution of the Globalization's benefits.

Statistical Appendix

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Australia	10.2	9.6	11.2	10.1	3.9	6.7	9.1	8.5	7.3	7.5
Austria	6.3	6.8	5.4	3.3	5.7	3.2	1.7	1.4	1.9	2.2
Belgium	6.7	-11.3	8.7	7.7	6.3	4.9	1.3	1.6	1.2	3.1
Canada	10.1	12.5	10.8	5.9	4.3	4	4.2	4.4	4	5
Cyprus	13.5	10.7	6.4	5	6	5	1.2	2.8	3.4	3.8
Denmark	12.3	11.7	10.1	6.9	6.3	4.7	3.7	4	4.5	4.8
Finland	11.6	12	9.3	8.4	7	5.8	2.9	4.1	5.1	6.6
France	13.1	13.3	12	9.5	7.7	5.8	2.5	3.3	2.7	3.5
Germany	5.4	6.3	5.3	3.3	2.4	2.1	-0.1	0.2	1.3	2.8
Greece	24.7	24.3	21.4	20	18.3	19.3	23.2	16.4	13.5	13.8
Hong Kong	4.4	9.5	10.9	10	8.6	3.6	3.6	5.7	7.8	10.2
Iceland	58.5	50.9	51	84.3	29.2	32.4	21.3	18.8	25.5	21.1
Ireland	18.3	20.2	17.2	10.4	8.6	5.5	3	3.2	2.2	4
Israel	131	116.8	120.4	145.6	373.8	304.6	48.1	19.9	16.3	20.2
Italy	21.8	19.5	16.5	14.7	10.7	9.2	5.8	4.7	5.1	6.3
Japan	7.8	4.9	2.7	1.9	2.3	2	0.6	0.1	0.6	2.2
Korea	28.7	21.4	7.2	3.4	2.3	2.5	2.8	3	7.1	5.7
Luxembourg	6.3	8.1	9.4	8.7	5.6	4.1	0.3	-0.1	1.4	3.4
Netherlands	6.5	6.8	5.9	2.9	3.4	2.3	0	-1	0.5	1.1
New Zealand	17.1	15.5	16.1	7.4	6.1	15.4	13.2	15.8	6.4	5.7
Norway	10.9	13.7	11.3	8.4	6.3	5.7	7.2	8.7	6.7	4.5
Portugal	5.9	21.2	22.7	25.1	29.3	19.3	11.7	9.4	9.6	12.6
Singapore	8.5	8.2	3.9	1	2.6	0.5	-1.4	0.5	1.5	2.3
Slovenia	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Spain	15.6	14.5	14.4	12.2	11.3	8.8	8.8	5.2	4.8	6.8
Sweden	17.5	12.1	8.6	8.9	8	7.4	4.2	4.2	5.8	6.4
Switzerland	4	6.5	5.7	2.9	2.9	3.4	0.8	1.4	1.9	3.2
Taiwan	19	16.3	3	1.4	0	-0.2	0.7	0.5	1.3	4.4
United Kingdom	16.8	12.2	8.5	5.2	4.4	5.2	3.6	4.1	4.6	5.2
United States	13.5	10.4	6.2	3.2	4.4	3.5	1.9	3.6	4.1	4.8
Unweighted mean*	18.13	16.71	15.24	15.09	20.02	17.12	6.41	5.32	5.45	6.31
Variance across countries*	582.7	467.8	492.1	860.9	4671.3	3103.4	99.6	32.4	28.6	24.1
Coefficient of variation*	1.33	1.29	1.45	1.94	3.41	3.25	1.55	1.06	0.98	0.77

Source: IMF, WEO, Oct. 2007. *Personal elaboration.

Table 1.1b : Inflation rate, annual mean, consumer price										
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Australia	7.3	3.2	1	1.8	1.9	4.6	2.6	0.3	0.9	1.5
Austria	2.8	3.1	3.4	3.2	2.7	1.6	1.8	1.2	0.8	0.5
Belgium	3.5	3.2	2.2	2.5	2.4	1.3	1.8	1.5	0.9	1.1
Canada	4.8	5.6	1.5	1.9	0.1	2.2	1.6	1.6	1	1.7
Cyprus	4.5	5	6.5	4.9	4.7	2.6	3	3.6	2.2	1.6
Denmark	2.6	2.4	2.1	1.2	2	2.1	2.1	2.2	1.8	2.5
Finland	5	4.2	2.9	2.2	1.1	1	1.1	1.2	1.4	1.3
France	3.4	3.2	2.4	2.1	1.7	1.8	2.1	1.3	0.7	0.6
Germany	2.7	3.5	5	4.5	2.7	1.7	1.2	1.5	0.6	0.6
Greece	20.4	19.5	15.9	14.4	10.9	8.9	7.9	5.4	4.5	2.1
Hong Kong	10.3	11.3	9.5	8.8	8.8	9	6.3	5.8	2.8	-3.9
Iceland	14.8	6.8	3.8	4.1	1.5	1.7	2.3	1.8	1.7	3.4
Ireland	3.4	3.1	3.1	1.4	2.4	2.5	2.2	1.2	2.2	2.5
Israel	17.2	19	11.9	10.9	12.3	10	11.3	9	5.4	5.2
Italy	6.1	6.2	5	4.5	4.2	5.4	4	1.9	2	1.7
Japan	3.1	3.4	1.6	1.3	0.6	-0.1	0.1	1.9	0.6	-0.3
Korea	8.6	9.3	6.2	4.8	6.3	4.5	4.9	4.4	7.5	0.8
Luxembourg	3.7	3.1	3.2	3.6	2.2	1.9	1.4	1.4	1	1
Netherlands	2.5	3.1	3.2	2.6	2.7	2	1.4	1.9	1.8	2
New Zealand	6.1	2.6	1	1.3	1.8	3.7	2.3	1.2	1.3	-0.1
Norway	4.1	3.4	2.3	2.3	1.4	2.4	1.2	2.6	2.3	2.3
Portugal	13.4	11.4	8.9	5.9	5	4	2.9	1.9	2.2	2.2
Singapore	3.4	3.4	2.3	2.3	3.1	1.7	1.4	2	-0.3	0
Slovenia	n/a	n/a	n/a	31.9	20.7	13.7	9.9	8.3	8	6.2
Spain	6.7	5.9	7.1	4.9	4.6	4.6	3.6	1.9	1.8	2.2
Sweden	10.5	9.3	2.3	4.6	2.2	2.6	1	1.8	1	0.5
Switzerland	5.4	5.9	4	3.3	0.9	1.8	0.8	0.5	0	0.8
Taiwan	4.1	3.6	4.5	2.9	4.1	3.7	3.1	0.9	1.7	0.2
United Kingdom	7	7.4	4.3	2.5	2.1	2.6	2.4	1.8	1.6	1.3
United States	5.4	4.2	3	3	2.6	2.8	2.9	2.3	1.5	2.2
Unweighted mean*	6.64	6.04	4.48	4.85a	3.99	3.61	3.02	2.47	2.03	1.45
Variance across countries*	21.4	19.8	11.6	34.5a	18.1	9.2	6.8	4.3	3.7	3.0
Coefficient of variation*	0.69	0.73	0.76	1.21	1.06	0.84	0.86	0.83	0.94	1.19

Source: IMF, WEO, Oct. 2007. *Personal elaboration. aSlovenia is included from 1993.

Table 1.1c : Inflation rate, annual mean, consumer price									
	2000	2001	2002	2003	2004	2005	2006	2007e	2008e
Australia	4.5	4.4	3	2.8	2.3	2.7	3.5	2.3	2.8
Austria	2	2.3	1.7	1.3	2	2.1	1.7	1.9	1.9
Belgium	2.7	2.4	1.6	1.5	1.9	2.5	2.3	1.8	1.8
Canada	2.7	2.5	2.3	2.7	1.8	2.2	2	2.2	1.9
Cyprus	4.1	2	2.8	4.1	2.3	2.6	2.5	2	2.4
Denmark	2.9	2.4	2.4	2.1	1.2	1.8	1.9	1.9	2
Finland	2.9	2.7	2	1.3	0.1	0.8	1.3	1.5	1.8
France	1.8	1.8	1.9	2.2	2.3	1.9	1.9	1.6	1.8
Germany	1.4	1.9	1.4	1	1.8	1.9	1.8	2.1	1.8
Greece	2.9	3.7	3.9	3.4	3	3.5	3.3	3	3.2
Hong Kong	-3.7	-1.6	-3	-2.6	-0.4	0.9	2	2	3.2
Iceland	5.1	6.6	4.8	2.1	3.2	4	6.8	4.8	3.3
Ireland	5.2	4	4.7	4	2.3	2.2	2.7	2.5	2.1
Israel	1.1	1.1	5.7	0.7	-0.4	1.3	2.1	0.5	2.5
Italy	2.6	2.3	2.6	2.8	2.3	2.2	2.2	1.9	1.9
Japan	-0.8	-0.7	-0.9	-0.3	0	-0.3	0.3	0	0.5
Korea	2.3	4.1	2.8	3.5	3.6	2.8	2.2	2.6	2.7
Luxembourg	3.2	2.7	2.1	2	2.2	2.5	2.7	2.2	2.2
Netherlands	2.3	5.1	3.8	2.2	1.4	1.5	1.7	2	2.2
New Zealand	2.6	2.6	2.6	1.7	2.3	3	3.4	2.4	2.7
Norway	3.1	3	1.3	2.5	0.4	1.6	2.3	0.8	2.5
Portugal	2.8	4.4	3.7	3.3	2.5	2.1	3	2.5	2.4
Singapore	1.3	1	-0.4	0.5	1.7	0.5	1	1.7	1.7
Slovenia	8.8	8.4	7.5	5.6	3.6	2.5	2.5	3.2	3.1
Spain	3.5	2.8	3.6	3.1	3.1	3.4	3.6	2.5	2.8
Sweden	1.3	2.7	1.9	2.3	1	0.8	1.5	1.9	2
Switzerland	1.6	1	0.6	0.6	0.8	1.2	1	1	1
Taiwan	1.3	0	-0.2	-0.3	1.6	2.3	0.6	1.2	1.5
United Kingdom	0.9	1.2	1.3	1.4	1.3	2	2.3	2.4	2
United States	3.4	2.8	1.6	2.3	2.7	3.4	3.2	2.7	2.3
Unweighted mean*	2.52	2.65	2.30	1.93	1.79	2.06	2.31	2.03	2.2
Variance across countries*	4.2	3.9	4.1	2.4	1.2	0.9	1.4	0.7	0.4
Coefficient of variation*	0.81	0.74	0.88	0.80	0.61	0.46	0.51	0.41	0.28

Source: IMF, WEO, Oct. 2007. *Personal elaboration. e=estimated value.

Table 1.2: Variance of the inflation rate in the countries.*						
	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2008
Australia	8.46	0.93	6.29	2.86	0.98	0.24
Austria	1.80	0.47	0.08	0.29	0.14	0.02
Belgium	70.43	2.50	0.31	0.12	0.26	0.12
Canada	12.00	0.17	5.40	0.18	0.14	0.02
Cyprus	13.14	1.94	0.63	0.58	0.98	0.06
Denmark	7.50	0.22	0.28	0.06	0.39	0.006
Finland	4.50	2.09	2.41	0.02	1.30	0.17
France	5.94	1.73	0.52	0.43	0.05	0.02
Germany	2.63	1.51	1.09	0.25	0.13	0.02
Greece	7.57	16.57	14.98	7.38	0.18	0.04
Hong Kong	6.41	8.08	1.14	24.34	1.65	0.88
Iceland	392.23	28.84	26.64	0.52	3.05	2.28
Ireland	26.21	1.56	0.64	0.28	1.20	0.07
Israel	12164.61	15672.98	12.95	7.58	5.52	0.78
Italy	18.46	3.15	0.83	2.66	0.04	0.03
Japan	6.05	0.88	1.44	0.77	0.14	0.12
Korea	139.13	4.23	3.45	5.70	0.50	0.06
Luxembourg	2.59	3.46	0.35	0.13	0.25	0.06
Netherlands	3.30	1.51	0.09	0.06	2.18	0.09
New Zealand	27.51	24.01	4.28	2.00	0.15	0.18
Norway	8.09	2.49	1.11	0.30	1.37	0.59
Portugal	79.12	16.22	12.67	0.71	0.56	0.14
Singapore	11.33	1.92	0.31	1.08	0.65	0.34
Slovenia	.	.	62.7	7.99	4.68	0.14
Spain	3.17	3.63	1.18	1.51	0.10	0.26
Sweden	15.65	1.9	15.24	0.68	0.48	0.29
Switzerland	2.6	1.27	3.90	0.43	0.17	0.01
Taiwan	80.60	3.21	0.37	2.15	0.80	0.50
United Kingdom	26.51	0.48	6.08	0.29	0.03	0.04
United States	18.54	1.14	1.32	0.31	0.44	0.24

Source: personal elaboration using IMF, WEO, Oct. 2007 annual data. *The data show the variance of the inflation rates during the different period with respect to an unweighted mean of the national annual inflation rates of the same period.

Table 1.3: Unweighted mean of the Euro area inflation rate and unweighted mean of the Belgium, Germany, Netherlands, Luxembourg inflation rates.

	Euro area 13	Be-Ge-Ne-Lu
1980	11.85	6.22
1981	11.80	2.47
1982	12.35	7.32
1983	10.51	5.65
1984	9.69	4.42
1985	7.52	3.35
1986	5.09	0.37
1987	4.03	0.17
1988	4.10	1.1
1989	5.51	2.6
1990	6.13	3.1
1991	5.79	3.22
1992	5.19	3.4
1993	6.43	3.3
1994	4.86	2.5
1995	3.87	1.72
1996	3.17	1.45
1997	2.35	1.57
1998	2.14	1.07
1999	1.84	1.17
2000	3.23	2.4
2001	3.42	3.02
2002	3.11	2.22
2003	2.59	1.67
2004	2.19	1.82
2005	2.23	2.1
2006	2.36	2.12
2007	2.20	2.02
2008	2.23	2

Source: personal elaboration using IMF, WEO, Oct. 2007 data; see table 1a,1b and 1c for the national values.

	Euro area members*		Be-Ge-Ne-Lu	G30**	G30 – Euro area
1980	46.83		0.33	582.7	937.06
1981	91.96		84.90	467.8	724.69
1982	36.82		4.11	492.1	825.24
1983	45.62		8.86	860.9	1448.49
1984	55.59		3.35	4671.3	7993.51
1985	35.07		1.87	3103.4	5288.89
1986	45.76		0.41	99.6	140.70
1987	23.15		1.16	32.4	38.79
1988	15.27		0.16	28.6	37.33
1989	16.07		1.06	24.1	30.42
1990	29.25		0.34	21.4	17.00
1991	24.52		0.03	19.8	17.71
1992	15.42		1.36	11.6	9.21
1993	69.40	11.83	0.88	34.5	7.04
1994	28.76	6.70	0.06	18.1	10.12
1995	13.58	5.32	0.09	9.2	6.54
1996	7.40	3.62	0.06	6.8	6.91
1997	4.41	1.32	0.05	4.3	4.62
1998	4.14	1.15	0.26	3.7	3.63
1999	2.18	0.51	0.35	3.0	3.65
2000	3.65	0.93	0.58	4.2	4.32
2001	3.24	1.09	2.02	3.9	3.86
2002	2.88	1.25	1.18	4.1	4.36
2003	1.68	0.94	0.29	2.4	2.66
2004	0.73	0.61	0.11	1.2	1.39

2005	0.50	0.54	0.24	0.9	1.25
2006	0.46	0.51	0.21	1.4	2.18
2007	0.26	0.18	0.02	0.7	1.15
2008	0.25	0.20	0.05	0.4	0.53

Source: personal elaboration using IMF, WEO, Oct. 2007 data; see table 1a, 1b and 1c for the national values. *Euro area: Au, Be, Fi, Fr, Ge, Gr, Ir, It, Lu, Ne, Po, Sl, Sp. In italic data without Slovenia. **G30: Euro area + Australia, Canada, Cyprus, Denmark, Hong Kong, Iceland, Israel, Japan, Republic of South Korea, New Zealand, Norway, Singapore, Sweden, Switzerland, Taiwan, USA, UK

	Euro area members*		Be-Ge-Ne-Lu	G30**	G30 – Euro area
1980	0.57		0.09	1.33	1.35
1981	0.81		3.73	1.29	1.33
1982	0.49		0.27	1.45	1.66
1983	0.64		0.52	1.94	2.07
1984	0.76		0.41	3.37	3.22
1985	0.78		0.40	3.25	3.04
1986	1.32		1.70	1.55	1.61
1987	1.19		6.16	1.07	0.99
1988	0.95		0.37	0.98	0.95
1989	0.72		0.39	0.77	0.80
1990	0.88		0.18	0.69	0.58
1991	0.85		0.05	0.73	0.67
1992	0.75		0.34	0.76	0.76
1993	1.29	0.79	0.28	1.21	0.72
1994	1.10	0.72	0.09	1.06	0.95
1995	0.95	0.75	0.17	0.84	0.75
1996	0.85	0.72	0.17	0.86	0.90
1997	0.89	0.62	0.14	0.84	0.83
1998	0.94	0.64	0.47	0.95	0.98
1999	0.80	0.48	0.50	1.19	1.64
2000	0.59	0.34	0.31	0.82	1.04
2001	0.52	0.34	0.47	0.74	0.95
2002	0.54	0.40	0.49	0.88	1.24
2003	0.50	0.41	0.32	0.78	1.06
2004	0.39	0.37	0.18	0.60	0.79
2005	0.31	0.33	0.23	0.46	0.57
2006	0.29	0.30	0.21	0.51	0.65
2007	0.23	0.20	0.08	0.43	0.56
2008	0.22	0.20	0.11	0.28	0.33

Source: personal elaboration using IMF, WEO, Oct. 2007 data; see table 1a, 1b and 1c for the national values. *Euro area: Au, Be, Fi, Fr, Ge, Gr, Ir, It, Lu, Ne, Po, Sl, Sp. In italic data without Slovenia. **G30: Euro area + Australia, Canada, Cyprus, Denmark, Hong Kong, Iceland, Israel, Japan, Republic of South Korea, New Zealand, Norway, Singapore, Sweden, Switzerland, Taiwan, USA, UK

Country	ρ
Austria	0.87
Belgium	0.76
Finland	0.35
France	0.92
Germany	0.82
Greece	0.07
Ireland	0.46
Italy	0.70
Luxembourg	0.78
Netherlands	0.32
Portugal	0.50
Slovenia	-0.08
Spain	0.83

Source: Personal elaboration, Eurostat data.

Table 1.7: Inflation persistence (difference between the national inflation rate and an unweighted mean of the Euro area members inflation rates)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Austria	-5.55	-5.01	-6.95	-7.22	-3.99	-4.33	-3.39	-2.63	-2.21	-3.32	-3.33	-2.69
Belgium	-5.15	23.11	-3.65	-2.82	-3.39	-2.63	-3.79	-2.43	-2.91	-2.42	-2.63	-2.59
Finland	-0.25	0.19	-3.05	-2.12	-2.69	-1.73	-2.19	0.07	0.99	1.08	-1.13	-1.59
France	1.25	1.49	-0.35	-1.02	-1.99	-1.73	-2.59	-0.73	-1.41	-2.02	-2.73	-2.59
Germany	-6.45	-5.51	-7.05	-7.22	-7.29	-5.43	-5.19	-3.83	-2.81	-2.72	-3.43	-2.29
Greece	12.85	12.49	9.05	9.48	8.61	11.78	18.11	12.37	9.39	8.28	14.27	13.71
Ireland	6.45	8.39	4.85	-0.12	-1.09	-2.03	-2.09	-0.83	-1.91	-1.52	-2.73	-2.69
Italy	9.95	7.69	4.15	4.18	1.01	1.68	0.71	0.67	0.99	0.78	-0.03	0.41
Luxembourg	-5.55	-3.71	-2.95	-1.82	-4.09	-3.43	-4.79	-4.13	-2.71	-2.12	-2.43	-2.69
Netherlands	-5.35	-5.01	-6.45	-7.62	-6.29	-5.23	-5.09	-5.03	-3.61	-4.42	-3.63	-2.69
Portugal	-5.95	9.39	10.35	14.58	19.61	11.78	6.61	5.37	5.49	7.08	7.27	5.61
Spain	3.75	2.69	2.05	1.68	1.61	1.28	3.71	1.17	0.69	1.28	0.57	0.11
Avg	11.85	11.81	12.35	10.52	9.69	7.53	5.09	4.03	4.11	5.52	6.13	5.79
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Austria	-1.79	-1.12	-0.85	-1.46	-0.82	-0.66	-0.86	-0.98	-0.78	-0.71	-1.05	-1.04
Belgium	-2.99	-1.82	-1.15	-1.76	-0.82	-0.36	-0.76	-0.38	-0.08	-0.61	-1.15	-0.84
Finland	-2.29	-2.12	-2.45	-2.06	-1.52	-0.66	-0.26	-0.18	0.13	-0.31	-0.75	-1.04
France	-2.79	-2.22	-1.85	-1.26	-0.52	-0.56	-0.96	-0.88	-0.98	-1.21	-0.85	-0.14
Germany	-0.19	0.18	-0.85	-1.36	-1.42	-0.36	-1.06	-0.88	-1.38	-1.11	-1.35	-1.34
Greece	10.71	10.08	7.35	5.84	5.28	3.54	2.84	0.62	0.13	0.69	1.15	1.06
Ireland	-2.09	-2.92	-1.15	-0.56	-0.42	-0.66	0.54	1.02	2.43	0.99	1.95	1.66
Italy	-0.19	0.18	0.65	2.34	1.38	0.04	0.34	0.22	-0.18	-0.71	-0.15	0.46
Luxembourg	-1.99	-0.72	-1.35	-1.16	-1.22	-0.46	-0.66	-0.48	0.43	-0.31	-0.65	-0.34
Netherlands	-1.99	-1.72	-0.85	-1.06	-1.22	0.04	0.14	0.52	-0.48	2.09	1.05	-0.14
Portugal	3.71	1.58	1.45	0.94	0.28	0.04	0.54	0.72	0.02	1.39	0.95	0.96
Spain	1.91	0.58	1.05	1.54	0.98	0.04	0.14	0.72	0.73	-0.21	0.85	0.76
Avg	5.19	4.32	3.55	3.06	2.62	1.86	1.66	1.48	2.78	3.01	2.75	2.34
	2004	2005	2006	2007	2008							
Austria	-0.07	-0.12	-0.65	-0.23	-0.26							
Belgium	-0.18	0.28	-0.05	-0.33	-0.36							
Finland	-1.98	-1.42	-1.05	-0.63	-0.36							
France	0.23	-0.32	-0.45	-0.53	-0.36							
Germany	-0.28	-0.32	-0.55	-0.02	-0.36							
Greece	0.93	1.28	0.95	0.88	1.04							
Ireland	0.23	-0.02	0.35	0.38	-0.06							
Italy	0.23	-0.02	-0.15	-0.23	-0.26							
Luxembourg	0.13	0.28	0.35	0.08	0.04							
Netherlands	-0.68	-0.72	-0.65	-0.13	0.04							
Portugal	0.43	-0.12	0.65	0.38	0.24							
Spain	1.03	1.18	1.25	0.38	0.64							
Avg	2.08	2.22	2.35	2.13	2.16							

Source: personal elaboration using IMF, WEO, October 2007 data.

Table 1.8: Import penetration

	Lux	Bel	Irel	Net	Aus	Ger	Fin	Por	UK	Spa	Ita	Fra	Gre	USA	Jap
1970	89.25	49.45	39.3	46.44	28.87	17.48	25.62	24.23	21.64	13.22	15.59	15.4	15.56	5.46	9.68
1971	89.47	48.22	38.17	45.94	28.67	17.15	24.78	25.06	21.35	12.65	15.55	15.54	15.56	5.6	9.27
1972	83.02	47.98	35.73	44.28	28.65	16.97	24.49	25.4	21.21	13.51	16.28	15.88	16.61	6.04	8.5
1973	89.87	53.15	39.59	46.28	28.77	17.24	25.06	26.35	24.87	14.3	18.35	16.89	20.38	6.68	10.05
1974	107.86	59.41	47.21	53.16	31.6	19.95	28.97	30.95	30.74	17.26	22.32	21.51	21.93	8.57	14.29
1975	94.44	51.61	43.31	48.66	29.86	19.85	27.08	24.55	26.64	15.72	19.45	18.11	21.84	7.63	12.81
1976	89.21	54.61	47.32	50.09	31.98	21.22	25.59	22.92	28.84	16.38	21.77	20.2	21.54	8.34	12.9
1977	87.95	53.92	50.54	47.73	32.67	21	26.21	24.57	29.25	15.22	21.49	20.42	21.4	8.95	11.69
1978	84.84	52.03	51.33	45.98	31.82	20.33	25.97	24.37	27.32	13.59	20.85	19.36	20.34	9.22	9.58

	Lux	Bel	Irel	Net	Aus	Ger	Fin	Por	UK	Spa	Ita	Fra	Gre	USA	Jap
1979	92.65	57.13	53.73	50.59	33.54	22.01	29.32	28.74	27.55	13.81	22.45	20.6	21.43	9.84	12.4
1980	90.36	57.86	52.47	53.59	35.44	23.82	32.32	30.99	25.47	16.47	23.1	22.61	26.48	10.56	14.51
1981	88.55	61.87	51.85	57.3	35.99	24.91	31.18	32.23	24.51	18.26	24.1	23.77	27.5	10.19	14.07
1982	90.97	66.18	48.62	56.46	33.66	24.73	29.34	32.23	24.86	18.75	23.01	23.93	25.38	9.33	13.93
1983	92.18	67.96	50.45	56.2	33	24.3	29.29	32.98	25.78	20.05	20.78	23.1	25.22	9.23	12.42
1984	104.46	72.45	55.84	60.64	34.93	25.63	28.35	35.09	28.46	20.15	22.22	24.1	24.85	10.11	12.68
1985	113.51	70.08	55.68	62.18	36.57	26.34	28.1	33.14	28.08	19.87	22.32	23.89	24.78	9.7	11.33
1986	102.43	63.68	50.16	51.81	33.48	23.14	25.3	29.07	26.24	17.05	18.42	20.73	25.76	9.94	7.67
1987	99.18	62.23	52.12	50.89	33.02	22.33	25.13	32.47	26.25	18.13	18.38	20.62	25.3	10.5	7.55
1988	100.95	66.08	54.64	52.59	34.9	22.8	24.58	34.77	25.68	18.7	18.26	21.22	24.09	10.72	7.93
1989	104.29	70.96	58.59	55.78	36.9	24.43	25	35.3	26.66	19.62	19.3	22.74	25.18	10.7	9.02
1990	101.77	68.86	54.46	54.73	37.18	24.85	23.57	35.51	25.77	18.78	19.07	22.29	23.01	10.8	9.63
1991	101.62	67.23	55.24	55.33	36.29	26.07	22.29	33.27	23.84	18.66	17.82	22.4	22.21	10.45	8.55
1992	100.48	65.32	57.14	53.62	34.89	24.42	25.23	31.29	24.37	18.79	18.38	21.43	22.03	10.58	7.9
1993	100.82	61.9	61.47	51.98	32.68	22.3	28.43	30.16	26.1	18.65	18.8	20.3	21.17	10.81	7.09
1994	105.02	64.43	67.06	54.21	34.1	22.98	30.81	31.63	26.92	20.81	20.13	21.17	20.32	11.45	7.21
1995	108.1	66.33	72.99	56.92	35.25	23.6	31.14	32.9	28.54	22.38	22.8	21.88	21.03	12.16	7.86
1996	113.95	68.41	74.08	57.38	36.37	24.21	32.1	32.85	29.51	23.21	21.05	22.02	21.38	12.28	9.37
1997	125.29	72.77	76.2	61.11	39.6	26.56	33.32	33.89	28.53	25.66	22.22	23.48	22.76	12.65	9.88
1998	132.93	73.55	84.95	60.72	40.86	27.67	32.46	34.81	27.4	26.83	22.81	24.31	23.53	12.6	9.21
1999	142.44	74.21	87.25	61.42	41.66	28.78	31.89	34.57	27.52	28	23.04	24.56	25.76	13.21	8.83
2000	163.3	84.18	98.15	68.33	44.67	33.14	37.14	36.66	29.33	31.19	26.37	27.91	29.47	14.55	9.67
2001	156.59	84.25	100.22	65.27	46.51	33.47	34.49	35.37	29.12	30.28	26.08	27.28	28.27	13.4	9.99
2002	150.54	81.69	92.37	61.65	46.22	32.66	33.23	33.5	28.29	28.84	25.01	25.85	25.79	13.19	10.19
2003	144.72	80.12	80.66	60.53	46.78	32.98	33.01	32.42	27.43	28.03	24.14	24.8	25.12	13.5	10.55
2004	162.23	82.75	81.28	63.72	48.83	35.08	34.68	33.6	27.37	28.79	24.83	25.63	24.94	14.68	11.59
2005	172.87	85.9	78.57	67.2	51.04	37.75	38.38	34.21	29.02	29.43	26.11	26.7	23.87	15.46	13.14
2006	193.95	87.36	76.92	71.09	53.48	41.9	41.48	36.11	30.93	30.31	28.43	27.89	24.91	16.05	15.04

Source: OECD's web site

	1999	2000	2001	2002	2003	2004	2005	2006	2007
UK	133.34	158.92	154.74	149.59	138.65	145.00	152.57	166.06	167.12
Denmark	18.96	22.29	22.11	22.94	23.73	25.44	26.38	28.42	28.33
Norway	16.84	27.10	27.15	29.26	30.98	31.61	36.92	43.39	40.51
Sweden	33.15	38.83	35.65	35.65	36.93	39.99	42.29	47.77	51.75
Switzerland	43.72	50.25	52.94	51.89	50.53	53.64	57.99	61.97	66.85
Turkey	12.75	14.60	16.73	17.66	19.30	23.22	25.23	29.02	31.95
Poland	15.15	20.03	22.73	24.01	26.82	29.76	32.91	41.94	49.02
Czech Republic	15.47	19.69	22.76	24.89	27.04	27.73	31.83	39.28	46.84
Slovakia	5.71	6.58	7.68	9.17	11.72	12.36	12.55	14.76	18.93
Hungary	16.32	20.55	23.17	23.37	23.71	25.07	27.22	30.14	33.68
Russian Federation	22.77	41.09	42.75	42.12	47.39	56.58	76.17	95.56	97.88
United States	114.57	141.85	138.22	125.67	110.50	114.00	119.68	125.15	130.80
Canada	8.85	11.68	11.25	9.99	9.48	9.47	10.34	11.38	13.68
Brazil	11.50	15.28	15.79	14.61	15.43	17.59	19.65	22.20	27.57
India	7.44	9.19	9.52	9.68	9.98	11.72	13.58	16.46	19.06
Singapore	9.54	12.29	10.98	10.32	9.77	11.21	12.07	12.86	12.09
China (no H.K.)	36.99	52.91	57.09	61.77	74.45	93.13	118.24	143.84	170.67
Korea (Republic of South)	13.47	18.20	16.21	17.19	18.60	21.89	25.29	29.75	28.93
Japan	55.12	66.78	58.63	52.69	52.05	54.37	53.05	56.55	58.31
Taiwan	15.27	20.13	18.84	16.64	16.33	17.66	17.66	18.69	17.45
Saudi Arabia	6.92	13.78	11.31	10.98	11.87	14.43	19.89	21.72	17.07
Extra Euro area 13	783.84	1015.56	1008.35	977.45	982.04	1077.45	1224.01	1392.19	1481.11

Source: Eurostat web site.

	1999	2000	2001	2002	2003	2004	2005	2006	2007
UK	17.0	15.6	15.3	15.3	14.1	13.5	12.5	11.9	11.3
Denmark	2.4	2.2	2.2	2.3	2.4	2.4	2.2	2.0	1.9
Norway	2.1	2.7	2.7	3.0	3.2	2.9	3.0	3.1	2.7
Sweden	4.2	3.8	3.5	3.6	3.8	3.7	3.5	3.4	3.5
Switzerland	5.6	4.9	5.2	5.3	5.1	5.0	4.7	4.5	4.5
Turkey	1.6	1.4	1.7	1.8	2.0	2.2	2.1	2.1	2.2
Poland	1.9	2.0	2.3	2.5	2.7	2.8	2.7	3.0	3.3
Czech Republic	2.0	1.9	2.3	2.5	2.8	2.6	2.6	2.8	3.2
Slovakia	0.7	0.6	0.8	0.9	1.2	1.1	1.0	1.1	1.3
Hungary	2.1	2.0	2.3	2.4	2.4	2.3	2.2	2.2	2.3
Russian Federation	2.9	4.0	4.2	4.3	4.8	5.3	6.2	6.9	6.6
United States	14.6	14.0	13.7	12.9	11.3	10.6	9.8	9.0	8.8
Canada	1.1	1.2	1.1	1.0	1.0	0.9	0.8	0.8	0.9
Brazil	1.5	1.5	1.6	1.5	1.6	1.6	1.6	1.6	1.9
India	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.3
Singapore	1.2	1.2	1.1	1.1	1.0	1.0	1.0	0.9	0.8
China (no Hong Kong)	4.7	5.2	5.7	6.3	7.6	8.6	9.7	10.3	11.5
Korea (Republic of South)	1.7	1.8	1.6	1.8	1.9	2.0	2.1	2.1	2.0
Japan	7.0	6.6	5.8	5.4	5.3	5.0	4.3	4.1	3.9
Taiwan	1.9	2.0	1.9	1.7	1.7	1.6	1.4	1.3	1.2
Saudi Arabia	0.9	1.4	1.1	1.1	1.2	1.3	1.6	1.6	1.2

Source: Eurostat web site.

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007e
Euro area	2.4	-2.2	-0.6	9.4	0.4	-2.9	-2.2	1.5	4	4.5	1.3
Belgium	6.5	-2.7	0.8	12.6	2.4	-1.8	-2.3	2.8	4.8	4.4	0.5
Germany	2.9	-2.9	-1.5	8.5	0.2	-3.4	-3	0.1	2.5	3.4	-0.1
Greece	2.9	3.6	1.8	10.4	2	0.3	1.3	0.9	2.9	5.6	0.4
Spain	3.3	-0.7	0.4	10.4	-1.5	-3	-1.6	2.3	4.1	3.7	1.1
France	1.8	-2.9	-1.7	5.9	-1.2	-4.2	-2.3	0.7	3.1	2.5	0.8
Ireland	0.4	2.3	3	8.5	3	-3.8	-8.4	-2.3	0.9	4.7	0.5
Italy	0.5	-2.6	-0.9	16.4	3.5	0.2	-0.4	5	9	10.5	5.5
Luxemburg	0.1	-1.2	-1.3	6	-0.6	-2.6	-2.6	6.7	7.4	-0.7	1
Netherlands	2.1	-2	0.5	9.5	-0.2	-4.6	-2.4	1	3.3	3.9	1.5
Austria	1.3	-0.5	-0.1	2.7	-0.4	-1.9	-0.9	0.7	3	4	1.1
Portugal	0	-1.6	-1	7.5	0	-2.3	-2.1	2.2	3.9	4.6	0.8
Finland	-0.3	-4.1	-1.7	6.4	-3.7	-4.2	-0.4	2.2	5.7	7.4	3.5
Slovenia			0.9	14.7	5.8	1.7	1.5	3.9	5.2	3.3	4
Cyprus			1.4	6	0.5	0.3	-0.9	4	6.4	3.8	1.2
Malta			1	18.2	-4.2	2.5	-4.3	-3.3	3.7	9.5	2.8
Variance (excluding the Euro area value)	3.75	5.01	2.03	18.62	7.03	5.12	5.62	6.76	4.31	7.53	2.5

Source: European Commission (1999-2007)

	92-96	97-01	02-06	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007e
Euro area		1.4	1	1.6	1	1	1.3	0.4	0.2	0.8	1.5	1	1.4	1.1
Belgium	1.3	1.3	1.4	2.8	0.8	1.8	1.9	-0.4	1.6	1	2.3	0.4	1.6	1.3
Germany	2.8	2	1.6	1.6	0.9	0.8	1.1	0.8	1.1	1.5	1.5	1.3	2.7	1.1
Greece	0.1	3.6	2.6	4.2	-0.7	3.3	4.2	5.4	3.7	3.6	1.6	2	2.7	2.6
Spain	1.8	0.2	0.5	1.1	0.2	0.5	0.7	0.3	0.4	0.7	0.6	0.4	0.7	0.8
France	1.6	1.2	1.2	1.4	2.2	1.3	1	0.2	0.1	1.1	2.4	1.4	1.2	0.9
Ireland	3.6	3.2	2.1	5	0.2	5	5	3.1	4.2	2.3	1.1	1.2	1.4	1.5
Italy	2.1	1	0	1.6	0.8	1.1	1.3	0	-0.9	-0.6	0.8	0.3	0.2	1.1
Luxemburg	0.1	1.5	1.6	5.8	2.9	2.7	3.2	-2.9	0.9	0.3	2.6	2.1	2.3	1.2
Netherlands	1.4	1.4	1.6	0.6	1.4	1.6	1.6	0.1	0.3	1.4	3.3	1.8	1.2	0.9
Austria	2.2	1.6	1.4	1.1	2.4	1.5	2	0.2	1.1	1	2	1.2	1.7	1.6
Portugal	2.4	1.8	0.5	2.2	1.8	1.9	1.6	0.3	0.3	-0.4	1.4	0.5	0.6	1.5
Finland	3.7	2.2	2.1	2.9	2.9	0.8	2.8	-0.5	0.7	1.7	3.3	1.5	3.1	2.5
Slovenia		3.9	3.6			4.8	0.7	2.2	1.9	3.2	4.1	4	4.5	3.7
Cyprus		2.6	-0.1			3.4	2.8	1.9	-0.1	-1.9	0.4	0.3	1.1	2.4
Malta	3.5	2.6	1			4.5	4	-1.7	1.4	-1.3	0.9	1.2	2.2	1.7
UK	2.5	1.9	1.6	1.4	1.4	1.3	2.7	1.4	1.3	1.8	2.2	0.9	2	2.6
USA	1.5	1.8	2.1	2.1	2.1	2.6	1.4	0.7	1.9	2.7	2.7	1.7	0.9	1
Japan	1	1.1	1.9	0.8	-0.5	0.9	2.5	1	1.9	1.7	2.5	1.5	1.8	1.6

Source: European Commission (1999-2007)

	1992-96	1997-01	2002-06	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007e
Euro area		1	1.5	0.7	0.3	1.2	1.3	2.4	2.5	2	1	1.1	1	1.4
Belgium	2.1	1.5	1.1	0.1	0.8	1.6	0.1	4	2.1	0.7	-0.3	1.5	1.6	1.1
Germany	2.5	0.3	0	-0.7	0.2	0.3	1	1.5	0.9	1	0	-0.8	-1	0.8
Greece	10.7	3.7	3.9	9.1	6.1	3.1	1.6	0.2	6	0.9	4.1	4.4	3.1	2.6
Spain	4.1	2.3	2.6	1.2	2.5	2.1	2.8	3.3	2.9	2.9	2.4	2.5	2.3	2
France	1.1	0.8	1.9	0.9	0.2	1.1	0.9	2.1	2.9	1.8	1.1	1.7	1.9	2.1
Ireland	0.9	2.6	3.4	-0.9	4.4	0.2	3.4	4.2	1.2	4	5.2	3.8	3.1	3.6
Italy	2.7	1.1	3.1	2.3	-2.3	1.5	1.8	3.2	3.7	4.3	2.4	2.8	2.3	1.3
Luxemburg	3.8	1.7	1.9	-2.5	-1.2	0.9	1.5	6.5	2.7	1.9	1.3	1.7	2.2	3.3
Netherlands	1.5	2.7	1.7	1.5	2	2.1	3.1	5.4	4.8	2.7	0.2	-0.2	1.1	1.8
Austria	1.7	0.2	0.7	0.4	0.1	0.6	-0.1	1.1	1	0.8	-0.3	1.4	0.7	0.8
Portugal	5.7	3.8	2.5	1.5	2.1	3.4	5	5.1	3.7	3.2	1.2	2.4	1.8	1.1
Finland	-1.1	1.1	0.9	-1.1	1.4	1.3	0.9	5.1	1.1	1.1	0.2	2.2	-0.3	0.8
Slovenia		6.4	3.4			4.3	11.1	9.2	6.5	4.5	3.5	1.3	0.9	2.3
Cyprus		1.9	3.7			2.3	1.9	-0.8	5.1	9.5	1.6	1.3	1.1	1.1
Malta	4.2	1.9	1.6			2.1	8.5	6.8	1.4	6	0.5	0.2	0.5	1.1
UK	1.1	3.2	2.7	2.9	3.7	3.1	3.1	3.6	2	3	2	3.4	2.9	1.7
USA	1.5	2.4	1.7	1	2.3	1.8	4.2	1.7	1.6	1.6	1.6	1.8	2.9	3.7
Japan	0.1	-1.1	-2.4	0.8	0.3	-2	-2.2	-1.5	-3.3	-3.1	-3.8	-1.3	-0.6	-0.4

Source: European Commission (1999-2007)

	1992-96	1997-01	2002-06	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007e
Euro area		-0.6	-0.6	-1	-1.4	0.1	-0.1	0.1	-0.1	-0.1	-1	-0.8	-0.9	-0.8
Belgium	-0.2	0	-0.9	-1.2	-0.8	0.2	-1.1	2.2	0.3	-0.9	-2.7	-1	-0.4	-1
Germany	-0.2	-0.1	-1	-1.4	-0.9	-0.2	1.2	0.3	-0.5	-0.2	-1.1	-1.5	-1.6	-1
Greece	-0.7	-0.8	-0.3	2.2	0.8	0.1	-1.8	-1.6	2.1	-2.5	0.7	0.7	-0.1	-0.4
Spain	-0.6	-0.7	-1.5	-1.1	0.1	-0.6	-0.6	-0.9	-1.4	-1.2	-1.5	-1.7	-1.6	-1
France	-0.4	-0.2	-0.1	-0.4	-1.2	0.6	-0.1	0.3	0.5	-0.1	-0.5	0	-0.4	0.2
Ireland	-1.7	-2.5	0.5	-4.8	-1.7	-3.5	-1.4	-1.4	-3.5	1.4	3	1.1	0.8	1.5
Italy	-1.6	-1.2	0.4	-0.1	-4.9	-0.1	-0.4	0.2	0.3	1.2	-0.4	0.5	0.5	-1.3
Luxemburg	0.1	0.7	-1.9	-5.2	-3.2	-1.3	-2.5	6.4	-0.1	-3	-0.4	-2.4	-3.8	-0.3
Netherlands	-0.4	-0.4	-0.4	-0.5	0.3	0.5	-0.8	0.1	1	0.5	-0.5	-2.2	-0.8	0.4
Austria	-0.6	-0.7	-0.9	-0.5	-0.4	-0.1	-1.9	-0.6	-0.4	-0.4	-2.4	-0.4	-1	-1.4
Portugal	-0.6	0.3	-0.6	-2.2	-1.6	0.3	1.5	1.3	-0.2	0.1	-1.2	-0.4	-1	-1.7
Finland	-2.8	-1.3	0.3	-3.1	-2.2	1.5	-2.2	1.9	-0.1	1.5	-0.4	2	-1.5	-1.2
Slovenia		-1	-0.6			-1.5	5.1	0.4	-1.3	-1.1	0.2	-0.3	-1	-0.5
Cyprus		-1.1	0.8			0.1	-1.7	-3.9	3.9	4.2	-1.7	-1.1	-1.4	-1.4
Malta	1.2	-0.2	-1.1			-0.6	7.9	4.6	-1.2	3	-1.2	-2.6	-2.2	-1.4
UK	-1.7	0.9	-0.1	0	0.8	0.8	1.7	1.3	-1.1	-0.1	-0.5	1.1	0.3	-1.4
USA	-0.6	0.6	-0.9	-1	1.1	0.3	2	-0.7	-0.1	-0.5	-1.3	-1.3	-0.2	1.3
Japan	0	-0.4	-1.2	0.5	0.4	-0.6	-0.7	-0.3	-1.8	-1.6	-2.7	0	0.3	0
Variance Euro12	0.68	0.71	0.56	3.9	2.3	1.4	1.5	4.3	1.6	1.8	1.8	2	1.7	1.3
Variance Euro 8 (Au-Be-Fr-Es-Ge-It-Lu-Ne)	0,25	0,32	0,55	2,6	3,1	0,3	1,2	5,6	0,5	1,5	0,8	1,0	1,6	0,47
Source: European Commission (1999-2007)														

Year	Inflation rate USA	Inflation rate UK
1870	-4.24	0.42
1871	-6.40	2.80
1872	0	4.22
1873	-2.03	0.78
1874	-4.83	-4.54
1875	-3.62	-1.49
1876	-2.35	0.21
1877	-2.31	-0.07
1878	-4.73	-3.03
1879	0	-4.47
1880	2.48	2.01
1881	0	-1.24
1882	0	0.15
1883	-2.02	0
1884	-2.06	-3.38
1885	-2	-3.50
1886	-2.15	-0.88
1887	1.10	-1.99
1888	0	-0.23
1889	-3.25	0.79
1890	-1.12	0.45
1891	0	0.78
1892	0	0.44
1893	-1.13	-1.99
1894	-4.36	-2.59
1895	-2.40	-1.39
1896	0	-0.23
1897	-1.23	2
1898	0	1.85
1899	0	-1.02

1900	1.24	4
1901	1.23	-0.33
1902	1.21	0
1903	2.28	1.10
1904	1.17	-0.33
1905	-1.16	0.33
1906	2.23	-0.11
1907	4.47	1.64
1908	-2.09	1.29
1909	-1.12	0.21
1910	4.42	2.12
1911	0	0.21
1912	2.06	2.90
1913	2.13	0.60
Annualized inflation rate 1870-1913	-0.64	-0.06

Source: Lawrence H. Officer and Samuel H. Williamson "Annual Inflation Rates in the United States, 1775 - 2007, and United Kingdom, 1265 - 2007," MeasuringWorth.com, 2008.

Year	100 = mean of prices 1901-1910
1873	152
1874	139
1875	131
1879	113
1880	120
1887	93
1889	98
1894	86
1896	83

Source: Luzzatto (1960)

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	98→06-07
Euro area	2337091	2415634	2550588	2760598	2862269	2954346	3105170	3222410	3382568	3576810	+53%
Euro area 12 ^a	2405890	2487816	2626169	2760598	2862269	2954346	3105170	3222410	3382568	3564847	+48%
Belgium	85305	86791	93151	93578	95938	99905	108069	115195	121011	-	+42%
Germany	731834	739880	743790	771580	792910	802920	841910	874740	918530	963360	+31%
Greece	59681	62395	75582	79023	84119	93318	100410	107635	115057	120993	+102%
Spain	220627	235308	255488	280393	303245	325728	352121	381903	415644	451782	+104%
France	455090	465398	496531	518113	531823	549052	569919	585465	616805	-	+35%
Ireland	38162	43743	51349	58318	65829	69148	71183	76024	80370	-	+110%
Italy	504530	524423	561901	592369	609487	627902	656257	658087	665124	694084	+38%
Luxemburg	7093	8448	9117	8770	9426	10546	11076	12461	14877	-	+109%
Netherlands	139169	146814	161182	170196	175658	178848	185112	196948	208076	-	+49%
Austria	68963	72012	78274	81588	83672	87234	93775	98220	105494	112384	+63%
Portugal	40746	43896	46070	49217	50762	51493	54537	-	-	-	+33%
Finland	46323	48829	54237	57395	58635	57490	60573	60860	66240	72677	+57%
Slovenia	6444	6954	7114	7491	8134	8624	9098	9658	10733	-	+66%
Cyprus	4005	4329	4732	5049	4960	4753	5070	5386	5683	-	+46%
Malta	1520	1602	1909	1798	1925	1880	1841	2010	2157	2394	+57%

a) Euro area 12: Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland.
Source: Eurostat's web site

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Euro area	0.435	0.431	0.432	0.438	0.439	0.440	0.445	0.447	0.449	0.452
Euro area12 ^a	0.439	0.435	0.438	0.439	0.439	0.440	0.445	0.447	0.449	0.452
Belgium	0.418	0.409	0.416	0.404	0.401	0.406	0.419	0.428	0.429	-
Germany	0.414	0.409	0.401	0.405	0.410	0.412	0.421	0.431	0.439	0.443
Greece	-	-	0.620	0.614	0.604	0.612	0.606	0.605	0.605	0.507
Spain	0.450	0.449	0.448	0.454	0.458	0.461	0.465	0.469	0.476	0.480
France	0.388	0.381	0.384	0.385	0.382	0.383	0.382	0.378	0.382	-
Ireland	0.535	0.542	0.549	0.553	0.565	0.555	0.539	0.533	0.523	-
Italy	0.519	0.522	0.528	0.527	0.523	0.522	0.524	0.513	0.504	0.506
Luxemburg	0.457	0.474	0.465	0.433	0.438	0.456	0.452	0.464	0.486	-
Netherlands	0.433	0.426	0.432	0.428	0.424	0.421	0.424	0.436	0.439	-
Austria	0.403	0.403	0.415	0.420	0.422	0.428	0.442	0.446	0.454	0.458
Portugal	0.442	0.443	0.432	0.436	0.431	0.427	0.435	-	-	-
Finland	0.460	0.460	0.471	0.469	0.466	0.454	0.457	0.446	0.457	0.466
Slovenia	0.393	0.397	0.388	0.383	0.388	0.391	0.390	0.391	0.403	-
Cyprus	0.504	0.506	0.507	0.508	0.486	0.446	0.442	0.438	0.434	-
Malta	0.495	0.492	0.508	0.475	0.491	0.482	0.473	0.491	0.497	0.509

Euro area12: Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxemburg, Netherlands, Austria, Portugal, Finland.
Source: Personal elaboration, Eurostat data. *All NACE Branches

Nation	M&Q (1)	Ma(2)	E,G&W(3)	Con(4)	W&rt, re(5)	T,S&C(6)	RE, ren, b(7)
France	0.13→0.58 1998→2005	0.28→0.27 1998→2005	0.51→0.49 1999→2005	0.15→0.20 1998→2005	0.29→0.28 1999→2005	0.22→0.33 1998→2005	0.28→0.31 1998→2005
Germany	0.29→0.27 1999→2005	0.22→0.25 1998→2005	0.53→0.58 1998→2005	0.13→0.22 2000→2005	0.39→0.43 2000→2005	0.38→0.46 1999→2005	0.59→0.52 2000→2005
Italy	0.69→0.76 1998→2005	0.41→0.39 1999→2005	0.65→0.70 1999→2005	0.50→0.51 1998→2005	0.60→0.53 1999→2005	0.39→0.47 1999→2005	0.60→0.58 1997→2005
Spain	0.31→0.46 1999→2005	0.39→0.41 1998→2005	0.74→0.77 1998→2005	0.24→0.42 1999→2005	0.45→0.43 1999→2005	0.49→0.53 1999→2005	0.56→0.50 1999→2005

Nation	M&Q (1)	Ma(2)	E,G&W(3)	Con(4)	W&rt, re(5)	T,S&C(6)	RE, ren, b(7)
France	+766% 1998→2005	+6.5% 1998→2005	+5.7% 1999→2005	+101% 1998→2005	+25% 1999→2005	+129% 1998→2005	+114% 1998→2005
Germany	-42% 1999→2005	+15.3% 1998→2005	+21% 1998→2005	+31% 2000→2005	+26% 2000→2005	+42% 1999→2005	+4.6% 2000→2005
Italy	+145% 1998→2005	+5.8% 1999→2005	+13% 1999→2005	+72% 1998→2005	+11% 1999→2005	+67% 1999→2005	+94% 1997→2005
Spain	+114% 1999→2005	+55% 1998→2005	+43% 1998→2005	+152% 1999→2005	+60% 1999→2005	+77% 1999→2005	+73% 1999→2005

Nation	M&Q (1)	Ma(2)	E,G&W(3)	Con(4)	W&rt, re(5)	T,S&C(6)	RE, ren, b(7)
France	+875% 1997→2005	-37% 1998→2005	+42% 1998→2005	+62% 1998→2005			
Germany	-70% 1999→2005	+756% 1999→2005	+44% 1998→2005	+95% 2000→2005			
Italy	+38% 1998→2005	-2% 1999→2005	+494% 1998→2005	+72% 1998→2005			
Spain	+283% 1998→2005	+78% 1998→2005	+446% 1998→2005	+106% 2000→2005			

Nation	M&Q (1)	Ma(2)	E,G&W(3)	Con(4)	W&rt, re(5)	T,S&C(6)	RE, ren, b(7)
France	+210% 1998→2005	+12% 1998→2005	+138% 1999→2005	+127% 1998→2005			
Germany	Negat→120 1999→2005	+5% 1999→2005	+31% 1998→2005	+10% 2000→2005			
Italy	+36% 1998→2005	+15% 1999→2005	+248% 1998→2005	+96% 1998→2005			
Spain	+92% 1999→2005	+32% 1998→2005	+369% 1998→2005	+53% 2000→2005			

Table 1.17f: G.o.s., percentage change by sector, firms between 20 and 49 workers.							
Nation	M&Q (1)	Ma(2)	E,G&W(3)	Con(4)	W&rt,re(5)	T,S&C(6)	RE,ren,b(7)
France	+130% 1998→2005	-3% 1998→2005	+125% 1999→2005	+152% 1998→2005			
Germany	-28% 1999→2005	+5% 1998→2005	+34% 1998→2004	-10% 1998→2005			
Italy	+53% 1998→2005	-2% 1999→2005	+270% 1998→2005	+65% 1998→2005			
Spain	+114% 1998→2005	+40% 1998→2005	+164% 1998→2005	+177% 1999→2005			
Table 1.17g: G.o.s., percentage change by sector, firms between 50 and 249 workers.							
Nation	M&Q (1)	Ma(2)	E,G&W(3)	Con(4)	W&rt,re(5)	T,S&C(6)	RE,ren,b(7)
France	+47% 1998→2005	-2% 1998→2005	+44% 1999→2005	+250% 1998→2005			
Germany	-18% 1998→2005	+28% 1998→2005	+34% 1998→2003	-20% 1999→2005			
Italy	+111% 1998→2005	+2% 1999→2005	+102% 1998→2005	+42% 1998→2005			
Spain	+123% 1998→200 5	+29% 1998→200 5	+85% 1998→200 5	+134% 2000→200 5			
Table 1.17h: G.o.s., percentage change by sector, firms with 250 or more workers.							
Nation	M&Q (1)	Ma(2)	E,G&W(3)	Con(4)	W&rt,re(5)	T,S&C(6)	RE,ren,b(7)
France	negat→957 1998→2005	+17% 1998→2005	+3% 1999→2005	+320% 1998→2005			
Germany	+6% 1998→2005	+17% 1998→2005	-15% 1998→2003	-46% 1999→2005			
Italy	+18% 2002→2005	+7% 1998→2005	-0.4% 1999→2005	+78% 1998→2005			
Spain	+400% 1998→2005	+51% 1998→2005	+20% 1998→2005	+122% 2000→2005			
Source: Personal elaboration using Eurostat data.							
(1)Mining and quarrying; (2)Manufacturing; (3)Electricity, gas and water supply; (4)Construction; (5)Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods; (6)Transport, storage and communication; (7)Real estate, renting and business activities.							

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