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The economic development of Sweden compared to four EMS/EMU countries during 1985-2014 with focus on pros and cons of the European Monetary Union

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Abstract: Sweden has been a "stand-alone" case since 1992 when the krona was set on a free float. The primary aim of this thesis is to compare the economic development of Sweden during 1985-2014 to the core EMU countries of Germany and France and the periphery countries of Italy and Spain. Eleven main economic indicators have been reviewed for each of the five countries which have been studied. The results show that Sweden has had a better economic development regarding most of the economic indicators both during 1985-2014 and after 2008.

The relatively good economic development of Sweden was based on political reforms carried out after a financial crisis in the early 1990s, basically caused by deregulation of the credit market. The present high total debt, including public debt, private debt and company debt, in combination with excessive valuation of homes and stagnating productivity bears likeness to the 1990s and could have a negative influence on the future competitiveness of Sweden.

The second aim of the thesis is to state the pros and cons of EMU based on a thorough review of previous and recent research. The review shows that from a strictly economic point of view the cons are in excess of the pros. It seems obvious that EU as well as EMU are basically political projects with the aim to preserve peace in Europe within "an ever closer union".

Key words: European Monetary Union, Sweden compared to four EMS/EMU countries, future competitiveness of Sweden, pros and cons of EMU

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1. Introduction

Already in the 1960s in the beginning of the European economic cooperation, the European Commission argued for a monetary union, with permanent exchange rates. In 1971 the so called Werner Report was published with the aim to form a common financial policy by creating a monetary union. The two dominant countries in the community, Germany and France, had, however, opposite aims. Germany wanted an orderly economic policy with low inflation, whereas France wanted to support the weak countries within the then European Community. This conflict was never solved.

In 1973 the so called ñcurrency snakeò was established by which the currencies of ten participating countries including Sweden were not allowed to vary more than within a narrow band of +-2.25%. However, devaluations were frequent and the ñsnakeò was subsequently reduced to Germany and a few other related countries.

In 1979 the ñsnakeò was replaced by the European Monetary System (EMS) with the exchange rate mechanism (ERM), which was also joined by Sweden. Again the exchange rates had to be ñrealignedò several times by de facto devaluations.

In 1992 ERM became under attack and several countries including Sweden had to leave the mechanism. This made the politicians even more convinced that a system of exchange rates ñfixed foreverò was the only solution. This was seen as a way to stop the strong German currency from becoming even more powerful. The German reunification in 1991 made the currency union a way to stabilize the D-mark.

As from 1999 a common currency called euro was introduced as an electronic currency in 12 of the then 15 member states of the European Union (EU) and as a physical currency from 2002.

Sweden held a referendum in 2003 by which the issue of joining the European Monetary Union (EMU) was rejected by a clear majority of 56% of the votes, although several of the major parties and organizations were in favour of joining EMU. During the height of the world financial crisis in 2008-2009 the opinion polls showed a slight majority for joining EMU but then the general opinion has been reversed so that a very clear majority is against EMU today (*scb/press releases*). Of the political parties only the small liberal party is in favour of EMU today (*folkpartiet/euro*). However, two former prime ministers still argue that Sweden ought to join EMU: Carl Bildt (*expressen_14 sep 2013*) and Göran Persson (*svd.naringsliv_17 nov 2011*).

It has been argued in the general debate that the relatively successful outcome of the Swedish economy over the last ten years is to a great extent depending on the fact that the Swedish krona has been floating since 1992 and thus Sweden was able to adjust its economy to the world financial crisis as from 2008. This paper will try to analyze if some support for these arguments can be found.

1.1 Research problems and limitation

The primary aim of this paper is to study the effect of the exchange rate regime on the economic development of Sweden during 1985-2014 as a stand-alone case from 1992 compared to the EMS/EMU core countries of Germany and France and the EMS/EMU periphery countries of Italy and Spain.

The paper is limited to the EMS/EMU period. The preceding exchange rates regimes of the gold standard and the Bretton Woods system are thus not studied.

The secondary aim is to state the pros and cons of EMU based on a review of previous and recent research.

1.2 Data sources

All the data for the period 1985-2014 have been gathered from the official databases of Eurostat, OECD, the World Bank, the International Monetary Fund and the Swedish Riksbank.

1.3 Hypothesis

My hypothesis is that Sweden has developed relatively well during the period 1985-2014 as compared to the EMS/EMU countries of Germany, France, Italy and Spain, especially after 1992 when Sweden has had a floating currency and even more after the financial crisis which has effected the world economy as from 2008.

1.4 Outline of the thesis

Chapter 2 gives a general background to the Swedish financial crisis in the early 1990s.

Chapter 3 gives a summary of previous research.

Chapter 4 summarizes the methods and data used and states the reasons for choosing certain economic indicators.

Chapter 5 contains a comparison the economic development of Sweden, Germany, France, Italy and Spain during the periods 1985-2014, 1994-2014 and 2007-2014, respectively, supported by diagrams and tables. An analysis of Sweden compared to the EMU countries is also carried out.

Chapter 6 contains a general discussion of monetary and fiscal unions, based on recent research.

Chapter 7 contains a summary of pros and cons of the European Monetary Union.

Chapter 8 concludes by stating the main findings of this paper.

2. Sweden´s financial crisis in the early 1990s as a background to the subsequent economic development

Ever since the Second World War, the Swedish banking sector had been heavily regulated. The regulations were the basis for the fixed but flexible exchange rate policy which was prevailing within the Bretton Woods system, which was in operation until 1973. In addition to this the Swedish residential building market was heavily subsidized which made credit regulations necessary. The banks were obliged to invest in government bonds and thus lacked the competence to make qualified evaluations of credit risk (*Åsbrink* in Sandberg 2005 p. 75).

Åsbrink (in Sandberg pp. 102-103) summarizes that when the credit market was deregulated from the mid-1980s it led to an expansion which was far in excess of what had been anticipated. The credit expansion led to a surge in real property prices in the late 1980s. During the period 1986 ï 1990 lending from banks increased by 174 percent and from mortgage institutions by 167 percent (*Englund* p. 84).

Pettersson (1993 pp. 28-29) points out that the Swedish economy became overheated in the late 1980s, especially in the construction market and the real property market with price increases far in excess of the consumer price index. Unemployment reached an all-time low of 1.4 percent in 1989.

In 1990/1991 it became evident that the Swedish banking sector was in for a major crisis when two major finance companies went bankrupt. Total credit losses for the commercial banks increased from 1.1 percent of lending in 1990 to 7.6 percent in 1992 and 6.5 percent in 1993 (*Larsson and Sjögren* p. 138).

The Swedish state had to intervene in order to save the banking sector, by issuing a guarantee for all bank obligations, except equity. A bank support board was created in order to manage contingency loans, guarantees when issuing new capital and direct capital infusions (*Östrup et al* 2009 p. 205).

Wallander et al (1994) have summarized the credit losses in the banking sector during 1990 -1993. During the 1980s credit losses were fairly constant at about 0.5 percent of lending. As a result of the financial crisis, losses rose to 7 percent of lending in 1992 before starting to fall back slowly. Total losses during the four-year period amounted to 175 billion SEK (p. 80). Total credit losses to companies amounted to 70 percent of all losses of which two thirds were ñproperty relatedò (p. 140).

The final bill to the tax payers for saving the financial sector is calculated by *Jennergren and Näslund* to some 35 billion SEK or 2 percent of GDP.

Hagberg and Jonung (2000) have compared all the major financial crises which Sweden has suffered from 1870 to 2000. The authors regard the crisis of the 1990s as a boom-bust cycle with a fairly high economic loss. There was a loss of employment of 17 percentage points between 1990 and 1994 which was devastating and led to a sharp fall of GDP per capita, especially in international comparison (p. 40). The loss in real income was exceptional and was second only to the crisis of the 1930s (p 43).

Sweden lost its international top position as regards GDP per capita, which has never been fully recuperated. The authors summarize by stating that the crisis of the 1990s meant a change from negative real interest rate to positive real interests, which caused a decrease in the demand for credit.

The financial crisis led to the decision in 1992 to set the Swedish krona on a free float regime, which has prevailed ever since. The political implications were that budget austerity measures were adopted both by the then governing conservative coalition government and by the Social Democratic government which was formed in 1994. Some 80 percent of the measures taken were increase of taxes and fees (*Berggren* 1997). Also there was an overhaul in 1994 of the generous public pensions (*Pensionsöverenskommelsen)*. A goal of a surplus of one percent of GDP in the public budget as an average over a business cycle was established in 2000 by a large parliamentary majority (*Konjunkturinstitutet* 2013). An inflation target of 2 percent was set in 1995 by Riksbanken, which is politically independent.

3. Previous research

3.1 Development of the European Union

Damsgaard Hansen (2001) gives a broad overview of the development of the financial institutions of the European Community (later the European Union) as from the 1970s (pp. 488-503).

When the Bretton Woods System of õfixed, but adjustableò exchange rates broke down in the early 1970s, West Germany let its currency float. Within the Community there were no formal arrangements regarding exchange rates. This led to the creation of õblock floatingò of EC currencies which were more or less tied to the German mark (p. 488).

The economic policy of West Germany was focused on low inflation combined with a considerable surplus in the current account. The rest of the EC countries then had to adjust their exchange rates in relation to the German mark. In reality this meant that the central bank of Germany, the Bundesbank, decided as well the exchange rate policies as the monetary policies of the EC countries by a system of asymmetric adjustment (p. 489).

In order to stabilize the system the European Monetary System (EMS) was formed. The purpose of EMS was threefold: (1) to create a group of countries within the EC with stable but adjustable exchange rates, (2) to arrange a system where countries with surpluses and deficits could balance each other and (3) to create arrangements which limited the possibilities of speculation against individual currencies. EMS was based on the European Currency Unit, the ECU, which was a statistical concept of the participating currencies with certain weights. Each member state was obliged to let their currencies remain within a certain range to the ECU (p. 490).

EMS came into operation in March 1979. From the very beginning the system was characterized by successive õrealignmentsò of the participating currencies against the German mark. During the period 1979 -1990 the German mark was revalued by 45% against the French franc and by 64% against the Italian lira. In reality the participating countries had to adjust to the leadership of Germany (Ljungberg/Johansson lecture notes 2012).

The next step in the European cooperation was the Single European Act (SEA) which came into force in 1987. Two important points were the establishment of an internal market, with free movement of goods, labour, services and capital, as well as increased cooperation within the fields of economic and monetary policy (Daamsgaard Hansen p. 493).There were only vague references in the SEA to the creation of a monetary and economic union (p. 494).

However, the fall of the Berlin wall in 1989, and the subsequent formation of a united Germany, gave high priority to an enhancement of the European integration.

In the treaty of Maastricht, signed in 1992, the provisions of the forthcoming European Monetary Union (EMU) were outlined. The EU countries had to fulfill certain criteria in order to enroll in the EMU: (1) a high degree of stable prices, (2) stable public finances measured as budget surplus/deficit and total public debt in relation to GDP, (3) exchange rate stability within EMS and (4) low long-term interest rate (p. 497).

The fulfillment of the above criteria would form the basis for a common currency, called the euro. A European Central Bank (ECB) was created to introduce a common monetary and exchange rate policy. Price stability, which had been the central goal of the Bundesbank, would also apply for the ECB. From the outset of the EMU four of the then fifteen members of the EU did not join, namely Britain, Denmark, Sweden and Greece (p. 498), but Greece was subsequently admitted.

During the early 1990s there were several waves of speculation against the European currencies. Britain and Italy left the EMS in September 1992 and Sweden in November 1992. EMS was in reality suspended in 1993 when the limits for exchange rate adjustments were increased from +-2.25 per cent to +-15 per cent (p. 501).

In 1995 it was decided that the EMU should come into force in January 1999. The Stability Pact of 1996 defined the criteria as a budget deficit of no more than 3 per cent of GDP and total public debt of no more than 60 per cent of GDP. A fine should be paid to EU if the budget deficit exceeded 3 per cent of GDP, but this rule has not been followed.

In January 1999 eleven countries joined the EMU, although some countries like Italy and Spain had major problems to fulfill the convergence criteria.

Johansson and Ljungberg (2011) have shown that several of the EMU countries exceeded the maximum allowed budget deficit during the period 1996-2008. Thus Germany exceeded the limit five times in connection with the reunification of the country, France exceeded the limit four times and Italy six times. Spain kept its budget deficit within the limit up to the financial crisis as from 2008, while Greece exceeded the limit each year (p. 4).

Hodson (2009) has analyzed pros and cons of the first decade of the EMU from a perspective of monetary and political integration. The author offers a three-fold answer: (1) EMU members have coordinated economic policies and structural reforms, but have not centralized economic decision-making; (2) during the first decade of the euro there were no plans for political integration and (3) the process may in fact be decoupling (p. 508).

The author refers to several reports which urge for further economic and political integration. Even the Werner report of 1970 recommended a supranational body for decisions on economic policy. The fact that there is low factor mobility and sluggish labour and capital markets will create a need for budgetary instruments on the EU level to adjust to asymmetric shocks (p.510).

Hodson points out that the surveillance of the stability pact is in fact was decided by the individual governments, which meant that no penalties have been decided even when the stability goals have been exceeded, in fact several times by both Germany and France. The author concludes that EMU has not created any strong pressures for centralized economic policy-making. The main question is how EMU can function effectively with its decentralized economic decision-making (p. 522).

Bordo and James (2008) have a long-term perspective on the euro, based on (1) lessons from past monetary unions, (2) fiscal policy arrangements and (3) challenges facing EMU (p 2).

The authors point out that EMU is different from historical experiences of monetary unification. A single currency has been created as well as a common central bank, but the member states have kept most of their political sovereignty. Like during the gold standard regime, which was prevailing up to the 1930s, EMU has an overriding goal of price stability. This has created a conflict between the national goals of full

employment and stable growth, and the absence of a common fiscal policy, which will be evident when asymmetric shocks appear (p. 12).

When comparing with historical cases of fiscal unions, the authors conclude that the existing fiscal unions were preceded by political unions, which often were created after economic disasters (p.18).

EMU is neither a national, nor an international monetary union, because the sovereignty of the participating countries is incomplete. Many more steps have to be taken for the EMU to match the achievements of Germany or the United States, both of which consisted of a number of relatively small states, before they were united into one country with a common monetary and fiscal policy (pp. 28-29).

3.2 Optimum currency areas

Mundell (1961) first presented a theory of optimum currency areas (OCA).

The benefits of a single currency, like the reduction of transaction costs, must be weighed against the costs of not having an independent monetary policy. The benefits are bigger the more open and flexible the participating countries are as measured by flexible wages and prices and labour mobility. Costs occur when shocks hit the member countries in an asymmetrical way. To adjust for this a common fiscal policy is needed (Bordo and James p. 14).

Mundell points out that an essential ingredient of a common currency is a high degree of factor mobility (p. 661). He argues that the world should be divided into regional currency areas, provided that there is high factor mobility both within and between the regions (p. 663).

McKinnon (1963) stresses the importance of geographic factor mobility among regions participating in a currency union. However, factor mobility among industries must also be considered. The author argues that industries are generally immobile and the optimum extent of a currency area must therefore take this fact into consideration.

Feldstein (1997) summarizes that a number of criteria must be fulfilled if a common currency shall prevail within a monetary union: (1) homogeneity, so that an external shock should result in an equal response of interest rates and exchange rates; (2) flexibility, so that decreased demand will result in an adjustment of wages and prices; (3) mobility, so that labour should be geographically mobile and (4) financial transfer, so that a fall in demand can be offset by a fiscal transfer from other members of the union (pp. 35-36).

Feldstein states that the United States does fulfill all the above criteria, and is therefore a well- functioning monetary union, whereas the European Monetary Union only fulfills the criteria to a minor extent (p. 36).

Barbosa and Alves (2011) have studied the EMU project after the global economic crisis of 2008 with an uneven recovery and a sovereign debt crisis.

The authors have compiled an extensive statistics for the period 1999-2009 for the 12 countries which have been EMU participants for the whole period.

The GDP growth rate has had a tendency to be less dispersed, except for the crisis years of 2008 and 2009 (p. 608).

As regards real effective exchange rates there has been a significant divergence, except for Germany, Austria and Finland, which improved their competitiveness, whereas Spain, Greece and Italy have lost ground (p. 610).

Current accounts have shown persistent surplus for Finland, Germany and Austria as compared to constant deficits for Greece, Portugal and Spain (p. 611).

Wage growth has increased much in Greece and Ireland but this has not been combined with increasing productivity, which indicates a lack of flexibility (p. 613).

The authors conclude that peripheral countries with low nominal wages grew faster than the core countries, although the productivity growth was sluggish (p. 624).

Inflation rates of peripheral countries were usually higher, which in combination with strong wage increase eroded their competitiveness. Some countries had an excessive stock of debt because of violation of the deficit limit (p. 624). Structural reforms are therefore badly needed when autonomous monetary policy cannot be carried out (p. 625).

Jager and Hafner (2013) argue that there are considerable differences between EMU countries, both in regard of income, growth rate, unemployment, labour productivity and domestic price and cost development (p. 317). The competitiveness of the core countries have increased, which has not been the case in the periphery countries. European labour markets are the most inflexible in the world. The obvious conclusion is that EMU is not an optimum currency area (p. 320).

The authors conclude that the creation of EMU has in fact increased its vulnerability to asymmetric shocks. The Achilles heel is the low labour mobility.

Perpelea et al (2013) point to Nobel laureate Milton Friedman, who already in 1996 stated that the collapse of EMS indicated that the EMU would be a failure (p. 139). Also Gary Becker, another Nobel laureate, has stated that EMU is an error, from an economic point of view, but might be justified from a political point of view considering the European history of wars and conflicts (p. 143).

The authors conclude by pointing to some advantages of EMU: (1) dynamism in euro area; (2) increase in purchasing power; (3) increased exports to emerging countries; (4) reasonable public deficits and (5) euro is an international currency, second only to the US dollar. From a political point of view, the euro is here to stay. The German chancellor Angela Merkel said in 2010: ñIf the euro will fail, Europe will failò (pp. 149-150).

3.3 Influence of currency regimes

Baxter and Stockman (1989) have studied business cycles and the exchange-rate regime. The authors have performed major statistical studies to compare economic parameters under alternative exchange-rate systems like pegged, floating and cooperative such as EMS.

Real exchange rates have shown greater variability under flexible than pegged systems, but apart from that the authors have found little evidence of systematic behavior differences under alternative regimes.

The volatility of the economic parameters increased after 1973, when the Bretton Woods system, was definitely abandoned, but no more in countries with a floating-rate regime than in countries which had fixed exchange rates.

Baxter and Stockman conclude that a certain country cannot really adopt a fixed rate regime in a world of floating currencies, since the country to which it fixes its currency is itself probably floating against all the other currencies in the world.

Ghosh et al (1997) have studied 140 countries over the 30 years 1960-1990 with nine different currency exchange-rate regimes in order to examine the connection between the regime on one hand and inflation and growth on the other hand.

The study shows that inflation is lower and also more stable under pegged regimes, and also real volatility is higher. Growth, however, varies only slightly under different exchange-rate regimes, but trade growth is somewhat lower under pegged regimes.

Thus pegged regimes are characterized by lower inflation but more volatile output, whereas floating rates regimes are characterized by less variable output growth and employment.

Aghion et al (2009) have found empirical evidence that real exchange volatility can have a significant impact on productivity. The more financially developed a country is, the faster it will grow with a flexible exchange rate. However, for developing countries a system with more fixed exchange rates will dampen the effect of financial shocks.

The authors conclude that it is important not only to study the exchange rate as an isolated factor, but also to look at the interaction between exchange rate regime and the level of financial development of each country which is subject to macroeconomic shocks.

Sokolov et al (2011) have studied the linkage between the exchange rate policy and the macroeconomic performance, based on a sample of 104 countries for the period 1973-2007, regarding GDP growth and inflation and the volatility of those parameters. The study compares de jure and de facto policy of exchange rate by considering ñwords versus deedsò to provide a more nuanced account of the exchange rate on macroeconomic performance.

The authors conclude that for non-industrialized countries a de jure/de facto floating resulted in a higher growth than for those countries pursuing a de jure/de facto pegging. For industrialized countries the results were statistically insignificant, but the highest growth was recorded for those countries with floating exchange-rate regime.

3.4 Real exchange rates

Real exchange rates are defined as exchange rates adjusted for differences in inflation rates. When the terms of trade change because of productivity difference or the terms of finance change because of difference in asset yield, there will be a change in the real exchange rate (Vaubel 1976, p. 434).

Vaubel (1976) points to other economic criteria like factor mobility, diversification, fiscal integration and openness, which all are related to the real exchange-rate: (1) Mobile labour will generally move to highly productive locations. (2) Countries with highly diversified external transactions will have only minor real exchange-rate changes. (3) Close fiscal integration will mean a small effect on real exchange rates. (4) More open economies will have smaller real exchange-rate adjustments (pp. 437-438).

The author concludes that the European Community (now European Union) is a less desirable currency area than the United States, Italy or Germany. On strictly a priori grounds EC monetary unification is not workable.

Eichengreen (2008) points to China as an example of export-led growth combined with a considerable current account surplus based on a low real exchange rate. As there are still hundreds of millions of workers which are to be transferred from agriculture to industry, the authorities are reluctant to see the real exchange-rate rise (p. 18).

If the Chinese authorities were prepared to allow the real exchange rate to rise, they would have to increase public spending and liberalize financial markets to encourage private spending. Demand would thus shift towards nontraded goods (p. 11).

Rodrik (2008) has studied the effects of the real exchange rate on economic growth. He argues that just as overvaluation of a currency hurts growth, so facilitates undervaluation growth. This is a fact especially for industry in developing countries pp. 365-366).

Which is the causality of the relative price of tradable products and the associated expansion on economic growth? Rodrik argues that real undervaluation can spur growth of tradables and thus generate rapid overall growth (p. 392).

Bohlin (2010) has studied the exchange rate of the Swedish krona from 1913 to 2008 under various exchange-rate regimes. After the fall of the Bretton Woods system in 1973 the Swedish krona was devalued several times, basically because of structural crises in manufacturing and loss of competitiveness. After a major devaluation in 1982 Sweden joined EMS, but had to leave it in November 1992 when several EMS currencies came under speculative attacks. The Riksbank lost more than 10 per cent of the Swedish GDP when it tried to defend the exchange rate by raising overnight interest rate to 500 per cent and by massive purchases in the currency markets (pp. 363-363). Ever since this dramatic event Sweden in 1992 has had a floating exchange-rate regime.

The Swedish krona was devalued by a total of some 50 per cent from 1973 to 1993. The real exchange against the six main trading partners has been more or less stable from 1993 to 2008 (p. 365).

3.5 Crisis in the Eurozone

Bartholdi (2013, p. 12) has summarized the background of the global financial crisis which broke out in 2008. The real property markets in both the United States and Europe were overvalued and many property owners were thus over-indebted after a period of strong credit expansion. The financial crisis which eventually broke out led to an extended period of recession both in the US and Europe.

The American real property bubble emanated from a series of decisions taken in order to stimulate households with below-median income to invest in housing. The state-owned institutions for financing of real property were obliged to direct at least half of their credit volume to low-income households which often could not provide sufficient collateral, so called sub-prime loans.

During the period 2002-2007 the US interest level increased successively and housing became gradually more expensive. The inter-bank interest also increased which led to a higher risk level in the financial sector. The bankruptcy of the investment bank Lehman Brothers in September 2008 triggered a general crisis in the American property market, which to a large extent was refinanced via securitized assets like Mortgage Backed Securities and Collateralized Debt Obligations. Several European banks had also invested in those assets and were hit hard by the crisis.

The bankruptcy of Lehman Brothers meant that there was a loss of confidence between the international financial institutions and that the interbank funding market suddenly vanished. The authorities of all major countries had to enforce stabilization programs in order to stop bank runs and further bankruptcies of financial institutions. The programs included deposit insurance for ordinary bank customers as well as guarantee and stability programs in order to support insolvent banks (p. 12)

De Vylder (2012) has made a study of various exchange-rate regimes from the gold standard to EMU. His general conclusion is that EMU is far from an optimum currency area and that the first decade of the euro 1999-2009 was not a success. The seeming convergence of the economies was in reality a divergence. Many of the EMU countries ñlived beyond their meansò and had major deficits in their current accounts. There were growing tensions between the EMU countries as there were large differences in inflation and productivity. The core countries of Germany and France performed much better than the periphery countries of Italy and Spain (p. 24).

The author asks if a currency union can function without a banking union. ECB did not have the right to issue Eurobonds or invest in the bonds of EMU, apart from in the second-hand market. The four freedoms of EU, namely for goods, labour, services and capital, means that bank runs and capital flight cannot be stopped (p. 36).

De Vylder points on the real property bubbles in Ireland and Spain, which erupted. The Irish state guaranteed the liabilities of the failed banks, which meant that Ireland suddenly became heavily indebted, after having had a low debt ratio (p. 47).

The common interest rate of EMU means that countries with a high inflation rate have the lowest real interest while countries with low inflation will have the highest real interest. This means that the currency union will enhance the swings in the business climate, rather than level out the swings. EMU is in fact a reversal of the policies of Keynes, whose main objective was to stabilize the economic cycles (p. 55).

The original rules of ECB meant that bail-out of member countries in crisis was forbidden. EMU was originally supposed to be strictly a currency union, not a banking union, not a fiscal union and certainly not a transfer union (p. 60).

When the international financial crisis broke out ECB together with EU and the International Monetary Fund (IMF) had to act as a ñlender of last resortò to the crisis countries of Greece, Ireland, Portugal and Spain (called the GIPS) (p. 63).

In order to rectify the economy of the GIPS countries the lenders have recommended ñinternal devaluationò which means that the domestic cost level has to be adjusted to regain international competiveness, by lowering public wages, pensions and contributions. A so called fiscal compact was accepted by EU in 2012, meaning that a budget deficit may not exceed 0,5 per cent of GDP and that the sovereign debt shall successively be lowered to 60 per cent of GDP (p.77).

Calmfors et al (2013) contains a number of short essays. Edquist points out that that the euro crisis is largely a crisis of competitive power, which has arisen after the introduction of the euro. The GIPS countries have had a low increase of productivity after 1999 at the same time as they have made major investment with low profitability. The structural reforms have been too slow and the wage increase has been too high in relation to Germany. All the GIPS countries have increased their unit labour cost considerably as compared to Germany. The necessary remedies are both internal devaluations in the short run and productivity enhancement in the long run. The analysis further shows that the total factor productivity is negative for the GIPS countries (pp. 93-95).

Calmfors has constructed a so called sacrifice ratio of the relation between the increase of unemployment and decrease of relative unit labour cost for the GIPS countries during 2008-2012 and as a comparison for Finland and Sweden during 1990-1994. The sacrifice ratio clearly shows that Finland and Sweden in the 1990s made a much lower sacrifice than the GIPS countries during the 2010s. The obvious reason is that Sweden and Finland had the possibility to devalue their currencies.

Calmfors estimates that it will be politically impossible for the GIPS countries to fulfill their program to improve the public finances. Continued assistance from the core countries is therefore necessary in order to avoid default on the sovereign debt. A default would inevitably lead to a withdrawal from EMU, which could lead to further withdrawals and in the end to a complete break-down of EMU. Calmfors therefore argues that EU and ECB will do their utmost to keep EMU together. This has also been shown by the fact that ECB as from 2012 has the right to undertake outright transactions in the secondary, sovereign bonds market, the so called OMT program (pp. 112-114).

De Grauwe (2011-2014) has contributed in many articles and commentaries to the analysis of the crisis in EMU.

Why is it so difficult in a monetary union to stop contagion? The reason is that government bond markets in a currency union are very vulnerable, as the necessary liquid funds to pay the bond on maturity cannot be guaranteed. A õstand aloneò country can always issue new money to pay the bond when it falls due. A liquidity crisis in one of the GIPS countries therefore easily leads to contagion. The ECB must act as a true central bank in order to avoid mishaps (2011a, pp. 1-5).

It should, however, be pointed out that minor countries with a weak currency are normally obliged to issue bonds in an international currency like US dollars or euros in order to prevent them from õprintingò new local money to pay for their sovereign debt.

The European Commission and ECB believe that austerity in the GIPS countries will increase confidence and stimulate the economy. On the contrary, De Grauwe argues, this strategy is causing the sovereign debt crisis to spread. Therefore the austerity programs should be softened. Also, ECB should act as lender of last resort, so that the GIPS countries except Greece, could have access to funding at acceptable interest rates (2011b).

The Euro crisis is self-inflicted by systematic mismanagement. The remedies are: (1) ECB should step in to stop panic; (2) Both deficit and surplus countries should make the necessary adjustments and (3) Eurobonds should be issued (2012).

De Grauwe and Ji (2012) have tested the hypothesis that government bond markets in the Eurozone are more fragile than those in ñstand-aloneò countries. The finding is that a significant part of the increase of interest of the GIPS countries in 2010-2011 was the result of self-fulfilling market sentiments. The ñstand aloneò countries were not affected by negative statistics (p. 1).

The authors argue in a recent paper (2014) that when countries which join a monetary union lose their ability to create money, in fact a strong disciplinary force is exerted. This force is excessive since the start of the sovereign debt crisis.

ECB has finally accepted its role as lender of last resort by the Outright Monetary Transactions (OMT) program which enables ECB to intervene with unlimited amounts. The program has never been used but has had a stabilizing effect and has led to decreases in government bond spreads (p. 359).

4. Method and data. Reasons for choosing the economic indicators

The methodology of this paper is first to describe the background to the research question by giving a summary of Sweden´s financial crisis in the early 1990s and then making a thorough literature study of previous research on monetary unions.

A comparison of the economic development of Sweden, Germany, France, Italy and Spain will then be made.

The focus is on Sweden and all comparisons are therefore in relation to Sweden. No thorough analyses of the economies of the EMU countries of Germany, France, Italy and Spain have been carried out.

Primary data consist of quantitative data for the following economic indicators:

(1) *GDP volume growth* gives a general measure of the economic development

(2) *GDP per capita as purchasing power parity* indicates the volume growth per head in prices recalculated in order to be comparable between countries

(3) *unemployment in relation to the workforce* gives a measure of the participation of the population in the economic development

(4) *change in consumer prices* indicates the change in real monetary value

(5) *current account balan*ce is a measure of a country´s external surplus/deficit

(6) *government surplus/deficit* indicates the state of the public budget

(7) *public debt in relation to GDP* measures the government´s total debt

(8) *total country debt in relation to GDP* gives a measure of overall debt including both public debt, private debt and company debt

(9) *interest rate on public debt* indicates how well a country has performed

(10) *productivity* gives a measure of output per unit

(11) *special analysis of the productivity of Sweden* gives further background to the productivity development

(12) *real effective exchange rate with base year 2005* measures a country´s currency relative to an index of a basket of other major currencies adjusted for the effect of inflation. The choice if base year is important

(13) *ditto with base year 1999* is therefore carried out as a comparison.

The selected variables are intended to give an overview of the economic development of Sweden with a floating currency since 1992 in relation to the four EMU countries over a long time period.

A summary of the economic indicators and an analysis of Sweden compared to Germany, France, Italy and Spain during the thirty-year period of 1985-2014 will then be carried out together with an analysis of the development of Sweden compared to the total of the four EMU countries.

The period of thirty years is selected from a practical point of view as it contains both EMS and EMU currency-exchange rate regimes for the core (Germany and France) and periphery countries (Italy and Spain) of EU. For Sweden it contains a period a period 1985 ï 1992 when Sweden was part of EMS and the period from November 1992 when Sweden has been a ñstand-alone caseò with a floating currency.

The data have been specified by three sub-periods: 1985-2014 for a long-term comparison, 1994-2014 for a comparison of free float to currency union and 2007-2014 for a comparison of the development after the world financial crisis. Further subdivision of time periods would have blurred comparisons.

Data for the study have been gathered primarily from the official databases of Eurostat, OECD, ECB, IMF and World Bank. Descriptive statistics is used in interpretation of the data.

The quantitative data for the period 1985-2014 must be regarded as reliable as it is based on well-regarded official data bases. The conclusions based on the data should therefore be regarded as valid.

A general discussion of monetary and fiscal unions is held based on recent literature. The reliability and validity of the literature study can be regarded as high as the literature is based on an application for a research project regarding different exchange rate systems within the institution of Economic History at Lund University.

Finally, a summary of pros and cons of EMU is made with an explanation of the reasoning behind each factor.

5. Economic development during 1985-2014 of Sweden, Germany, France, Italy and Spain with a special comparison of the periods 1985 ï 2014, 1994 ï 2014 and 2007 ï 2014, respectively

5.1 GDP volume growth

Figure 1 Annual GDP volume growth, %

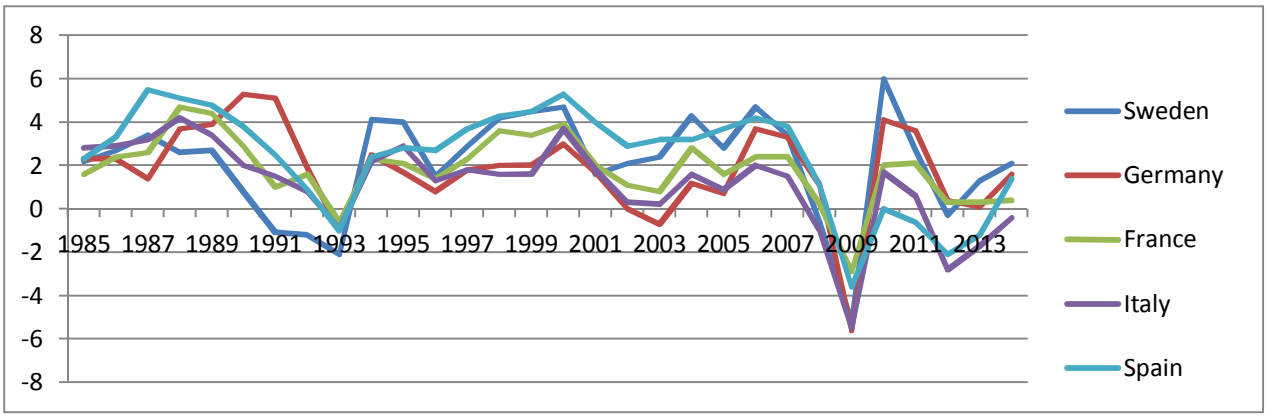


Figure 2 Average annual GDP volume growth, % per period

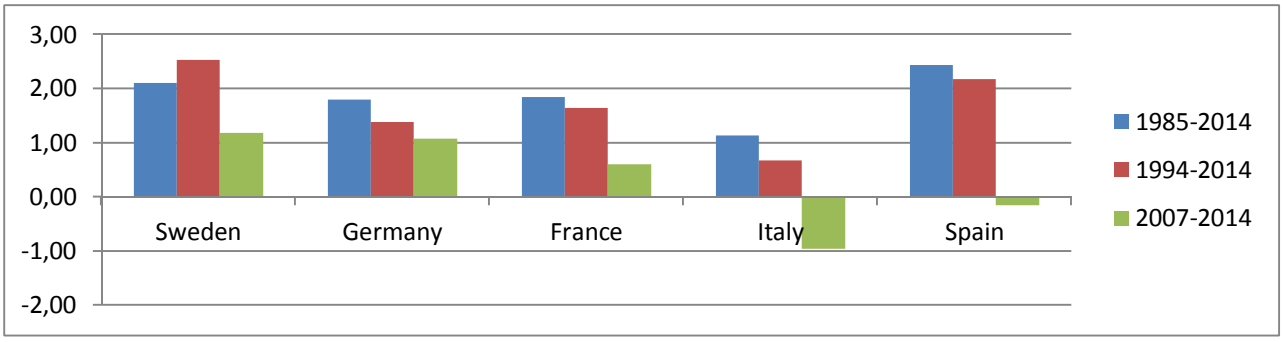


Table 1 Average annual GDP volume growth, % per period

GDP growth	1985-2014	1994-2014	2007-2014
Sweden	2,11	2,53	1,18
Germany	1,80	1,38	1,08
France	1,84	1,64	0,60
Italy	1,14	0,68	-0,95
Spain	2,43	2,18	-0,15

Source: OECD.Stat

The GDP growth of Sweden exceeded the EMU core countries of Germany and France for all three time periods, but especially after the Swedish krona was on a free float regime. Sweden was also ahead of Italy for all three periods, but fell somewhat behind Spain, which benefited from a real property boom, which however was reversed after the financial crisis of 2007-2008.

5.2 GDP per capita as purchasing power parity

Figure 3 GDP per capita, constant PPP, US dollars

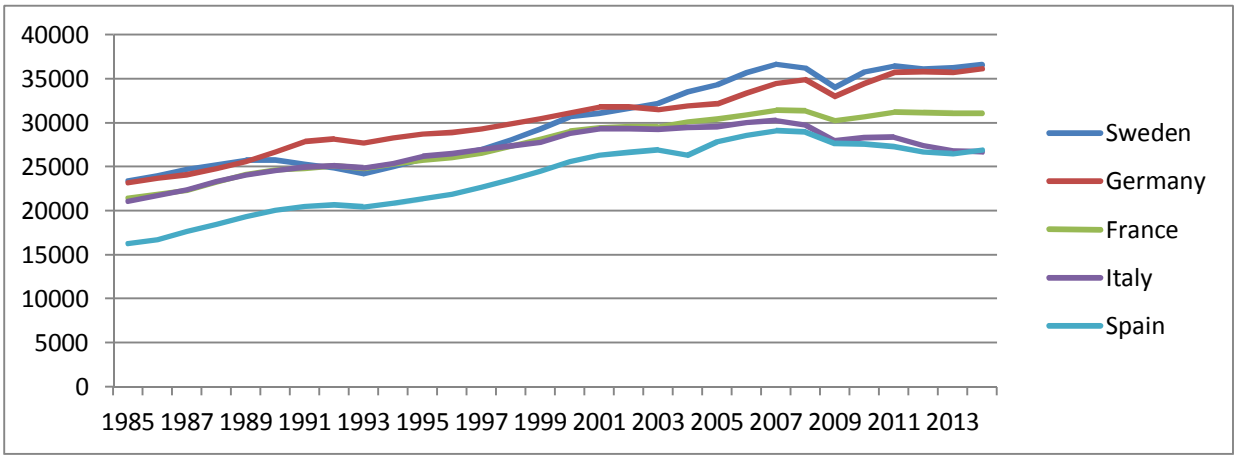


Figure 4 Average GDP per capita per period, constant PPP, US dollars

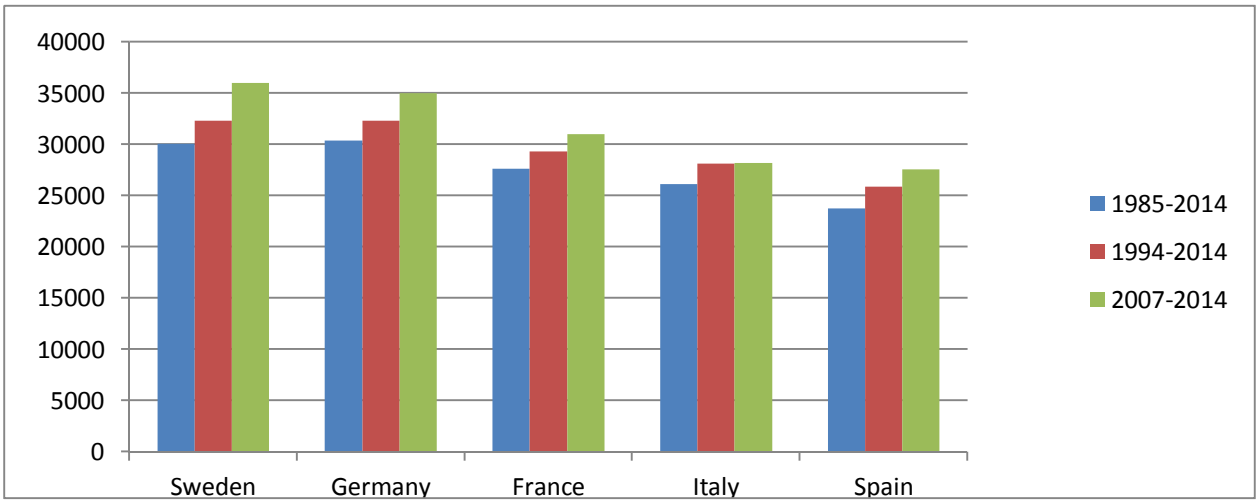


Table 2 Average GDP per capita per period, purchasing power parity, US dollars

GDP/capita	1985-2014	1994-2014	2007-2014
Sweden	30073	32325	36003
Germany	30382	32360	35040
France	27621	29343	31021
Italy	26154	28165	28197
Spain	23792	25886	27562

Source: OECD.Stat

The Swedish GDP per capita in constant PPP has surpassed that of Germany during the last seven year period. Sweden performed clearly better as compared to France, Italy and Spain during the period 2007-2014 after the world financial crisis.

5.3 Unemployment in relation to the workforce

Figure 5 Unemployment in relation to the workforce, %

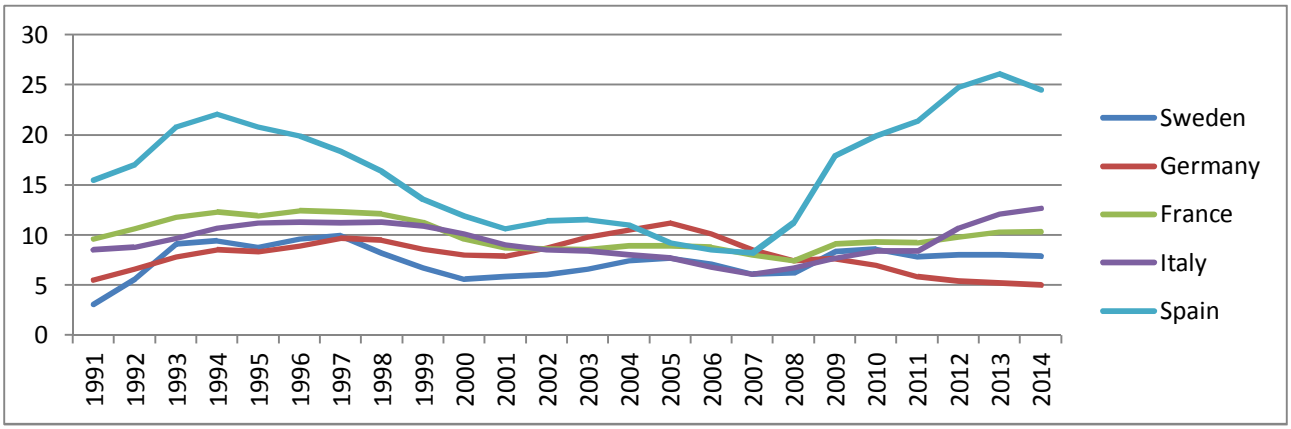


Figure 6 Average unemployment per period, % of workforce

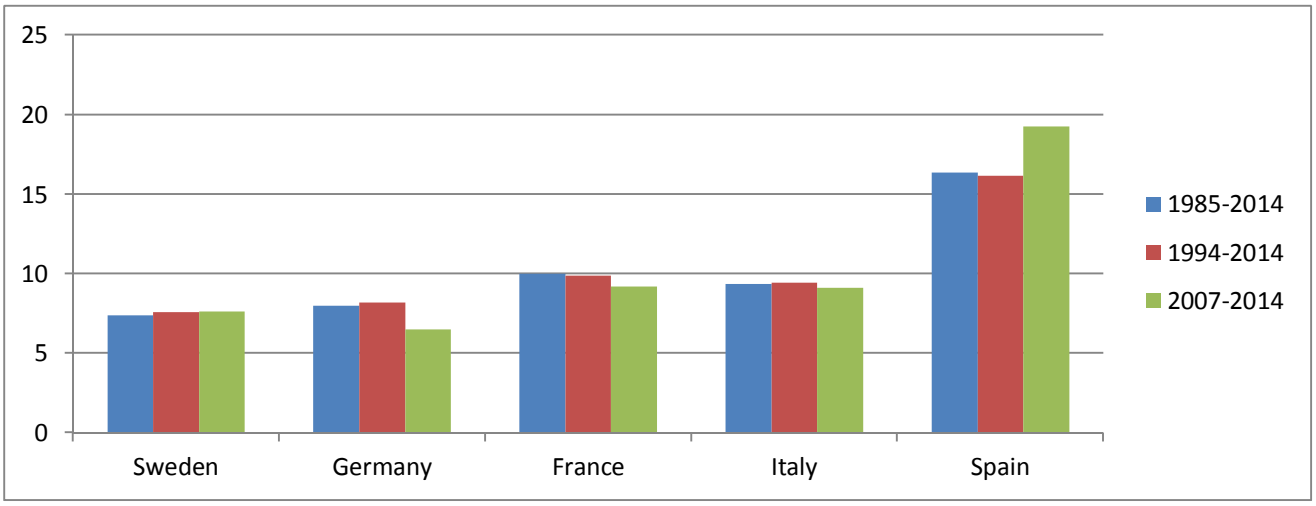


Table 3 Average unemployment per period, % of workforce

Unemployment	1985-2014	1994-2014	2007-2014
Sweden	7,4	7,60	7,61
Germany	7,98	8,17	6,49
France	9,99	9,89	9,18
Italy	9,37	9,42	9,10
Spain	16,36	16,16	19,26

Source: OECD.Stat

Sweden has had relatively low unemployment during the entire period 1991-2014, for which data are available. During the last period 2007-2014 Germany has had a policy of low wages for immigrants which has decreased the unemployment below the Swedish level. Spain enjoyed a boom in the building sector until the financial crisis broke out in 2007-2208.

5.4 Change in consumer prices

Figure 7 Annual change of consumer prices, % per annum

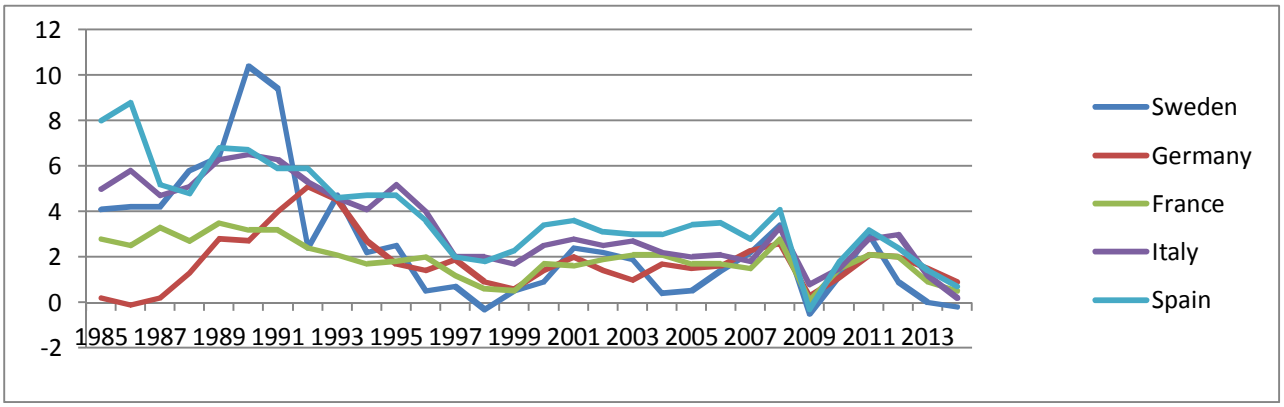


Figure 8 Average annual change of consumer prices, % per period

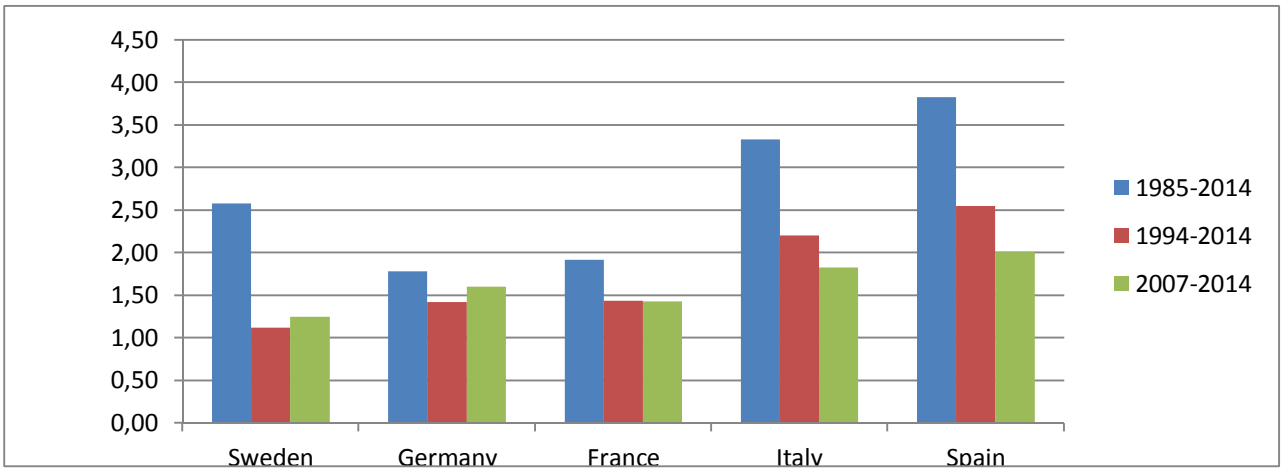


Table 4 Average annual change of consumer prices, % per period

Consumer prices	1985-2014	1994-2014	2007-2014
Sweden	2,58	1,12	1,25
Germany	1,78	1,42	1,60
France	1,92	1,44	1,43
Italy	3,33	2,20	1,83
Spain	3,83	2,55	2,01

Source: OECD.Stat

Sweden had a fairly high inflation rate in the early 1990s before the krona was on a free float regime, but over the last twenty years average inflation has been lower than in the EMU countries. Also Germany had a high inflation after the unification with Eastern Germany in the early 1990s. Italy and Spain has kept their high inflation rate. Over the last few years there is a clear tendency of successively falling inflation in all countries, especially when ECB rate became zero or slightly negative in 2014/15.

5.5 Current account balance

Figure 9 Current account balance, % of GDP

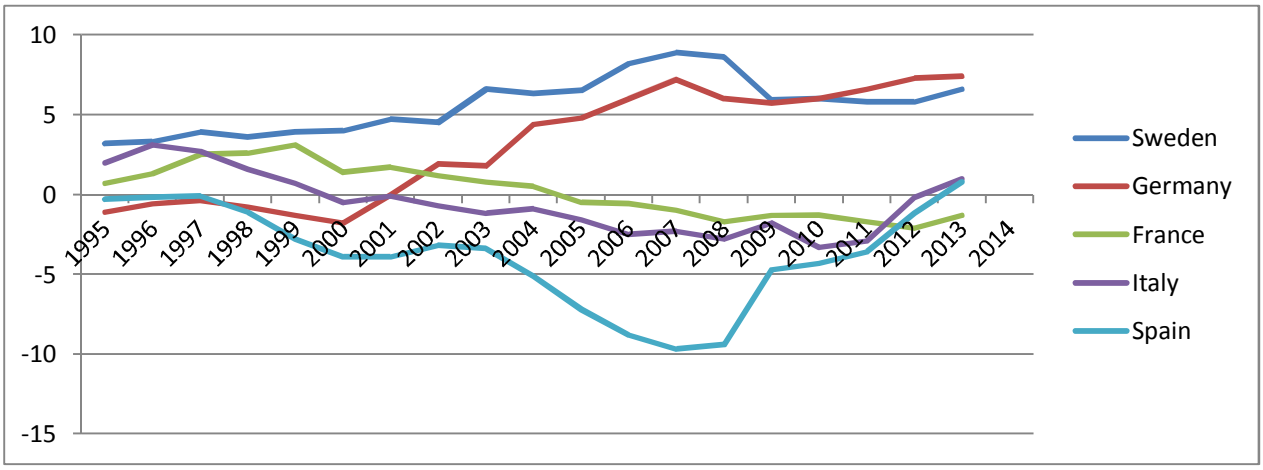


Figure 10 Average annual current account balance, % of GDP per period

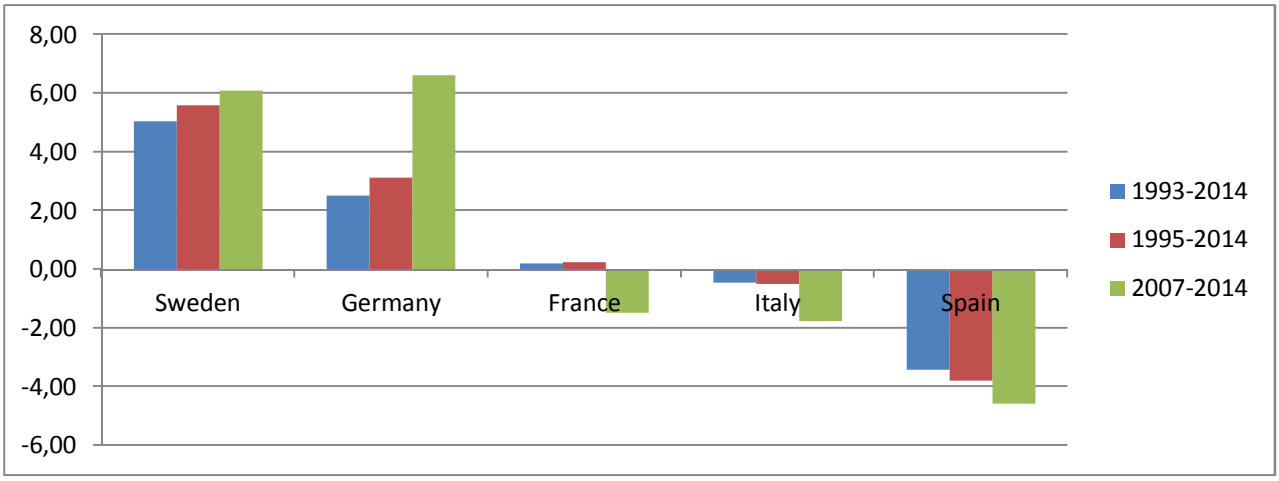


Table 5 Average annual current account balance, % of GDP per period

Current a/c	1993-2014	1995-2014	2007-2014
Sweden	5,05	5,59	6,08
Germany	2,51	3,11	6,60
France	0,20	0,23	-1,49
Italy	-0,46	-0,51	-1,76
Spain	-3,43	-3,79	-4,59

Source: OECD.Stat

Sweden and Germany as export-oriented nations have enjoyed healthy surpluses in their current accounts during the entire period from 1993. During the last period from 2007 Germany has had a stronger development than Sweden. France, Italy and Spain have had break-even or negative balance from 1993, which has deteriorated from 2007.

5.6 Government surplus/deficit

Figure 11 Government surplus/deficit, % of GDP

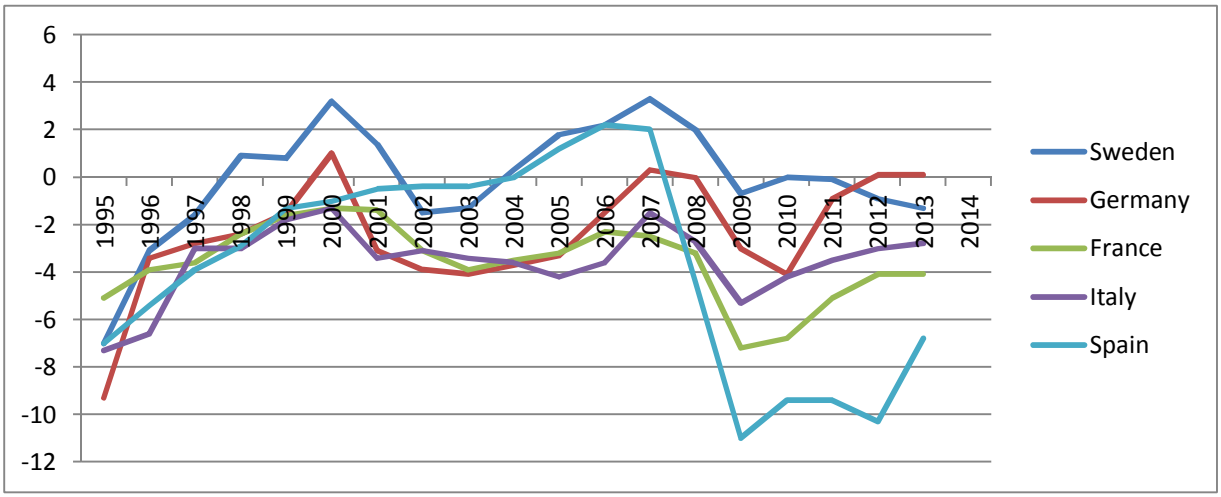


Figure 12 Average government surplus/deficit per period, % of GDP

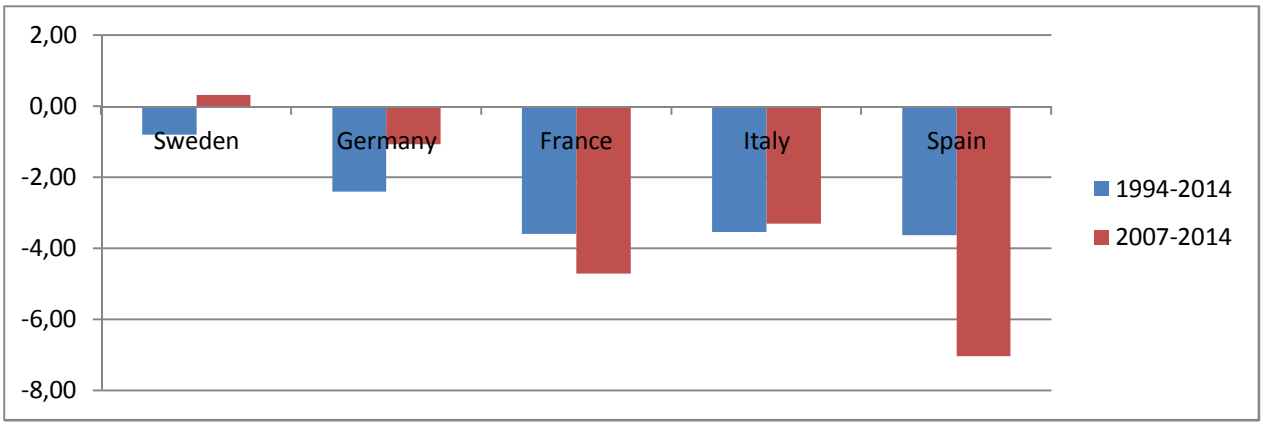


Table 6 Average government surplus/deficit per period, % of GDP

Gov´t net	1994-2014	2007-2014
Sweden	-0,80	0,33
Germany	-2,39	-1,07
France	-3,59	-4,71
Italy	-3,54	-3,29
Spain	-3,62	-7,04

Source: Eurostat

Statistics based on Maastricht criteria is available only from 1995. Sweden has performed far better than the EMU countries, even if Germany has met the criteria during the last few years. France is, however, even worse off than Italy with deficits in excess of the criteria. This also goes for Spain, which has had to ask for financial assistance from EU.

5.7 Public debt in relation to GDP

Figure 13 Public debt, % of GDP

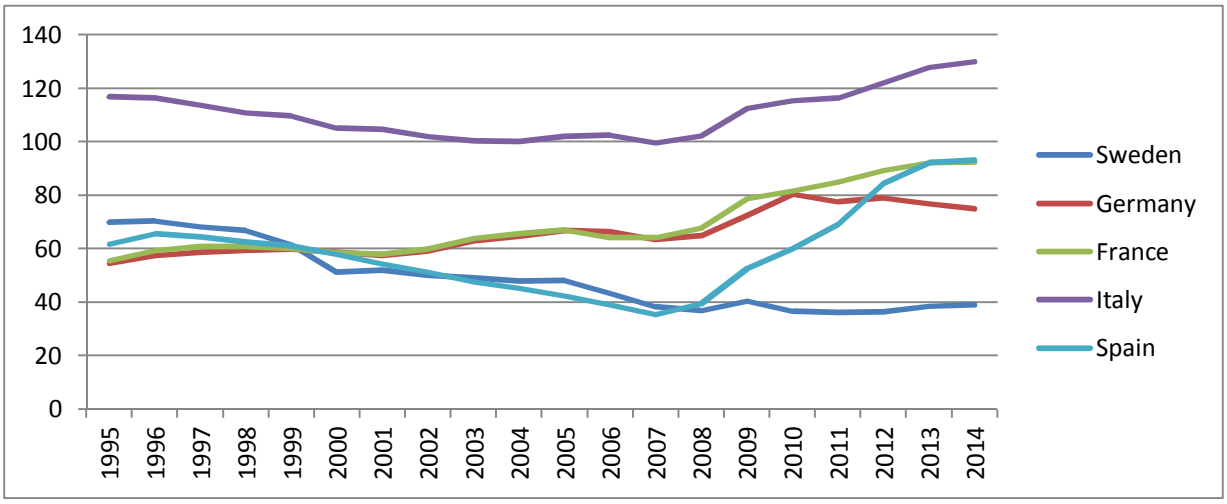


Figure 14 Average public debt per period, % of GDP

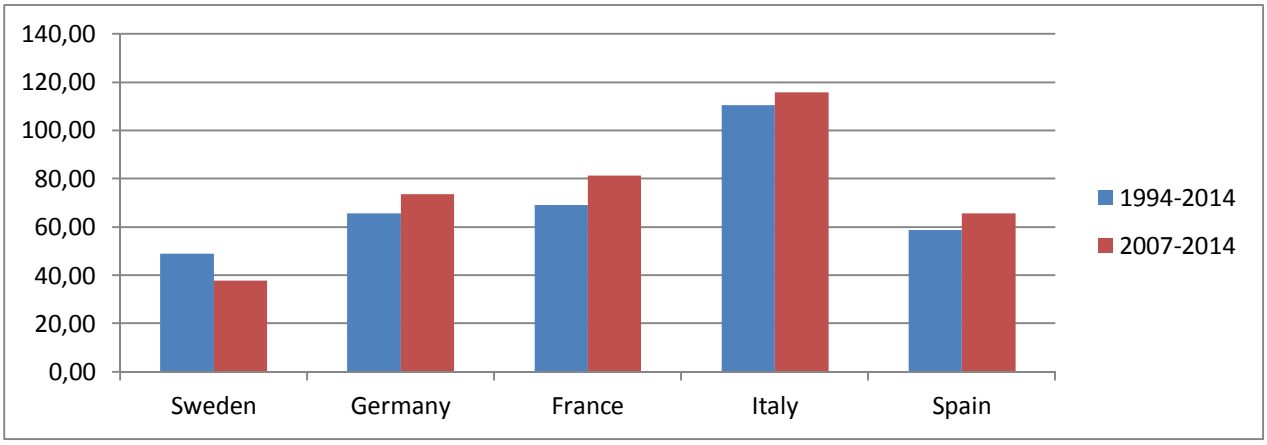


Table 7 Average public debt per period, % of GDP

Debt/GDP	1994-2014	2007-2014
Sweden	49,01	37,76
Germany	65,77	73,70
France	69,22	81,40
Italy	110,50	115,79
Spain	58,96	65,80

Source: Eurostat

After the consolidation of the Swedish public finances in the early 1990s the debt ratio has continuously decreased from 70% in 1995 to below 40% during the last few years. All EMU countries have increased their debt ratios after the financial crisis and are much above the Maastricht criteria, especially Italy which has never been below 100% during the last more than twenty years.

5.8 Total financial debt in relation to GDP

Figure 15 Total financial debt, % of GDP

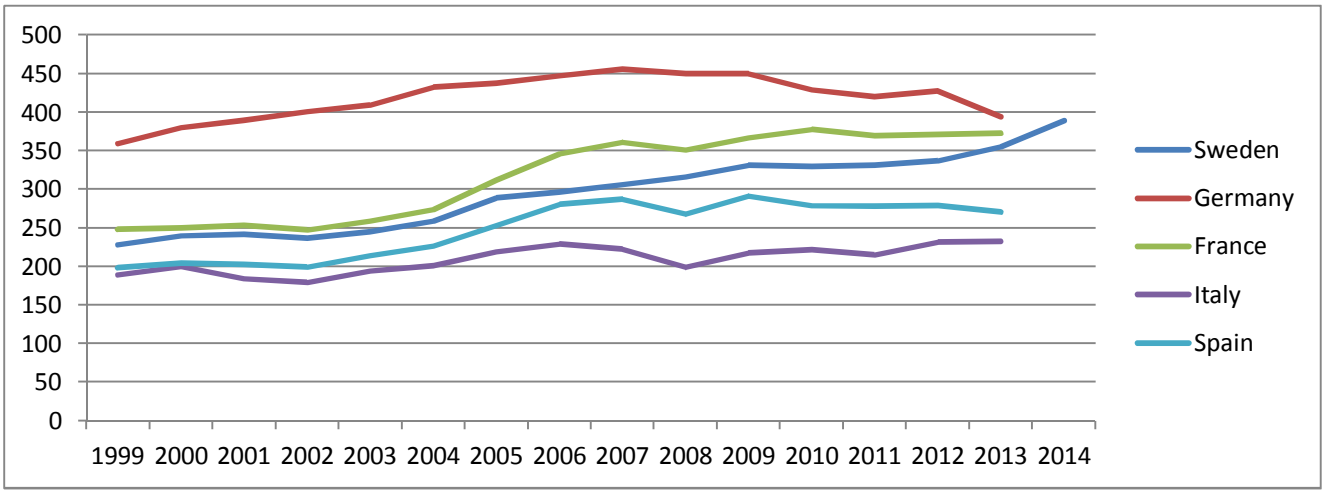


Figure 16 Average total financial debt per period, % of GDP

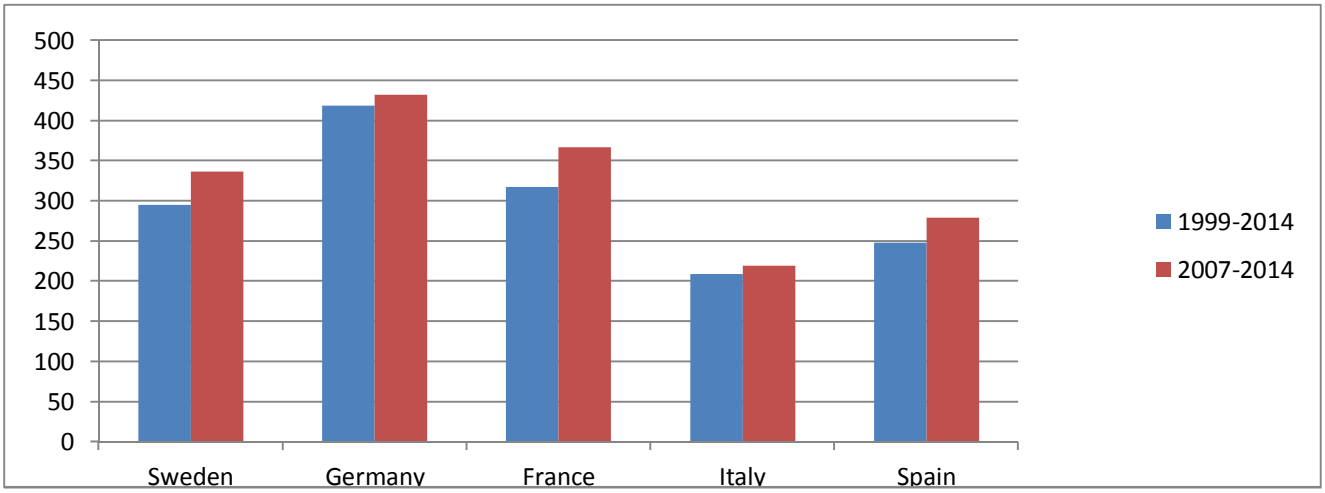


Table 8 Average total financial debt per period, % of GDP

Total debt/GDP	1999-2014	2007-2014
Sweden	296	337
Germany	419	432
France	317	367
Italy	209	220
Spain	249	279

Source: Eurostat

Although Sweden has a low public debt, both the companies and especially the households are heavily indebted. The total financial debt therefore gives quite another picture, so that Sweden is on par with Germany and France and far above Italy and Spain. Please refer to the next page for statistics and further comments.

5.9 Comments on the total debt

Buttiglione et al (2014) state that, in contrary to the general belief, the world economy has not begun to decrease its debt. The global debt to GDP is still growing and reaching new heights. At the same time world growth and inflation are also lower than expected. Low inflation makes deleveraging harder while slow growth exacerbates the economy.

The authors argue that potential output growth in developed economies has been on decline ever since the 1980s. Over the last few years since 2008 output growth has also been on decline in the developing countries, especially in China.

The peripheral countries of the Eurozone have been hit hard during the financial crisis because of the inadequacies of the policies adopted.

Buttiglione et al have gathered data on total debt for 2013 in percent of GDP:

Table 9	Public	Private	Subtotal	Financial	Total
Sweden	41	252	293	129	422
Germany	78	115	193	72	265
France	94	160	254	93	347
Italy	133	125	258	94	352
Spain	94	206	300	94	394

Sweden has a low public debt but high private debt and also high debt in the financial sector. Added together Sweden´s debt is in excess of the EMU countries

The *Riksbank* states in the 2015 report õSvenska hushållens skuldsättningò that household with mortgage loans had a debt ratio of 315 percent of the disposable income in mid-2014.

Bel Habib (2013) points out that the total debt of Sweden is well in line with that of Greece, which has received emergency loans both from ECB, EU and IMF over the last decade. The public debt of Sweden is low but that does not tell very much about the real economy. Germany has decided to have a relatively high public debt while keeping down private and company debt in order to promote the labour market, which is shown in low total unemployment and also in low youth unemployment.

According to the author, the general picture over the last decades is that Swedish debt has been transferred from the state to the households, which is reflected in increasing mortgages and other residential financing.

5.10 Interest rate on public debt

Figure 17 Interest rate on public debt, %

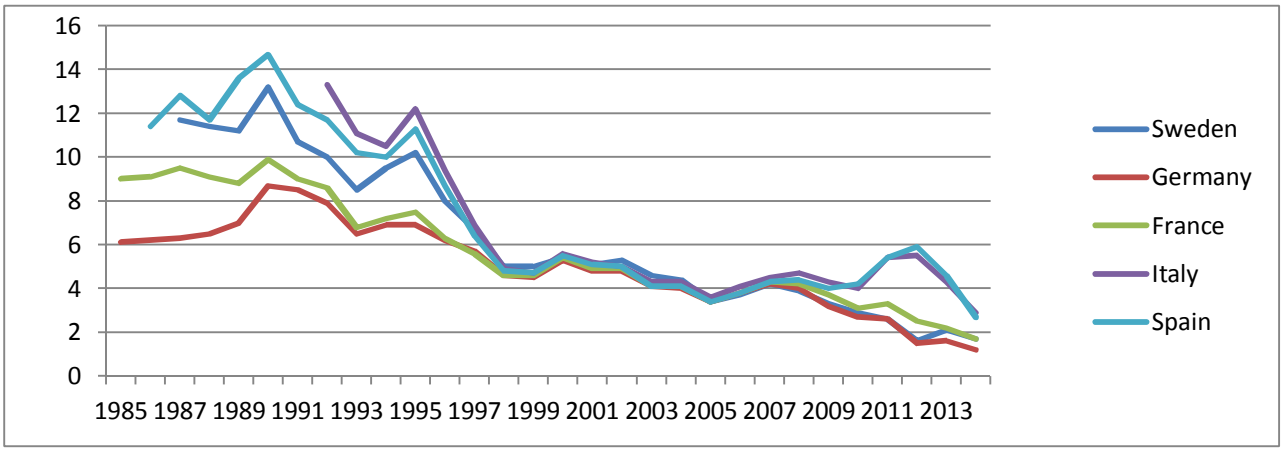


Figure 18 Average interest rate on public debt, % per period

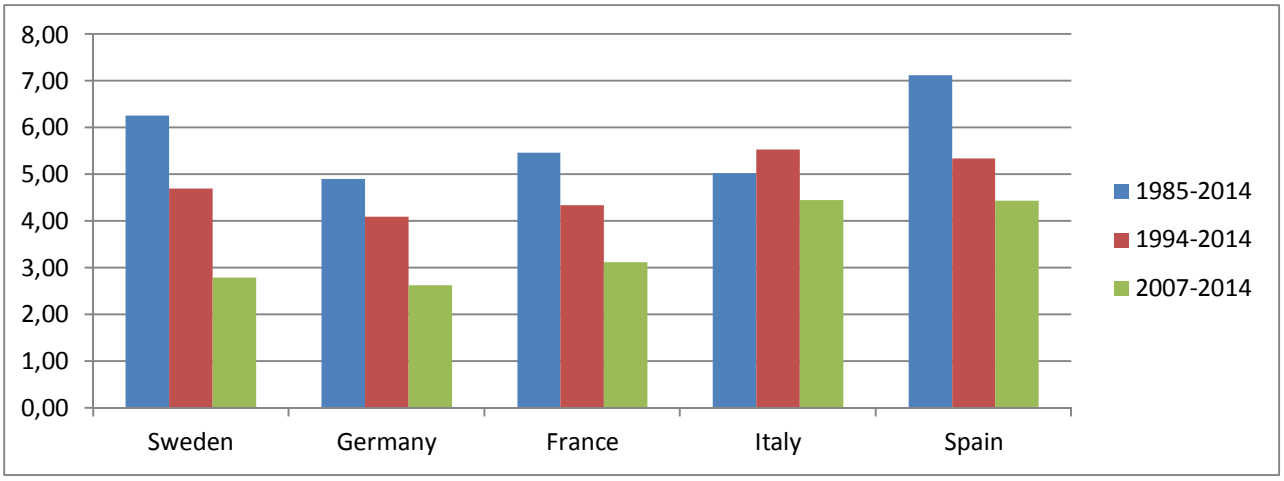


Table 10 Average interest rate on public debt, % per period

Interest rate	1985-2014	1994-2014	2007-2014
Sweden	6,26	4,70	2,79
Germany	4,91	4,10	2,63
France	5,47	4,35	3,13
Italy	5,03	5,54	4,45
Spain	7,13	5,35	4,44

Source: OECD.Stat

Sweden and Germany with their relatively strong economies together with a lower inflation rate have enjoyed falling interest rates since 1985. Up to 2005 interest rates converged around 3,5% for all the five countries. After the financial crisis of 2007-2008 the rates increased but have then continued to fall except for Italy and Spain.

5.11 Productivity

Figure 19 Productivity, % per annum

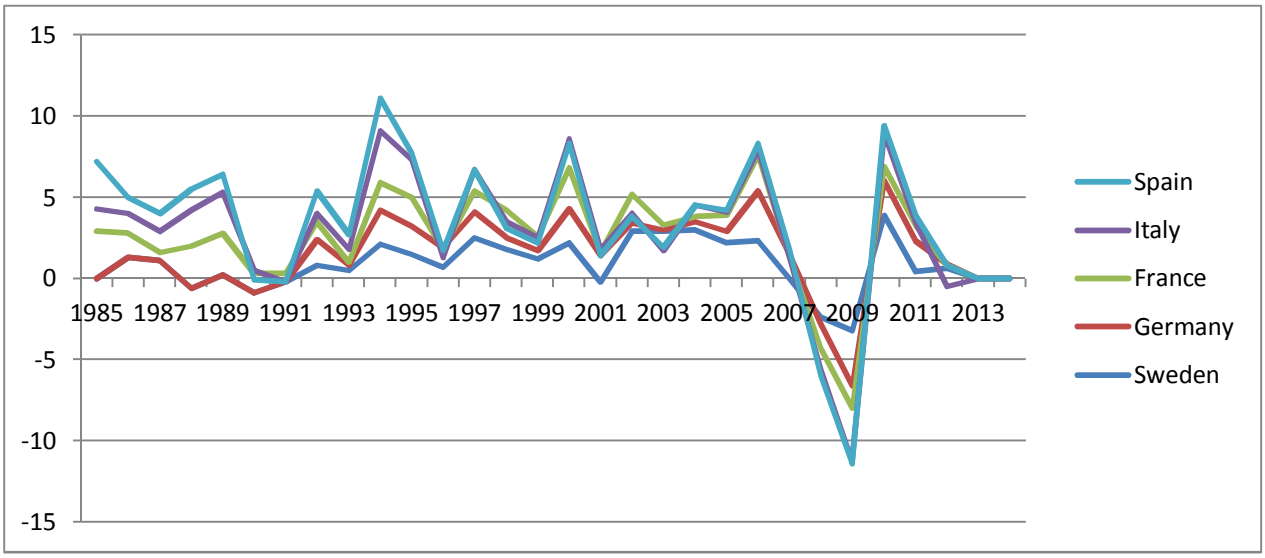


Figure 20 Average productivity per period, % per annum

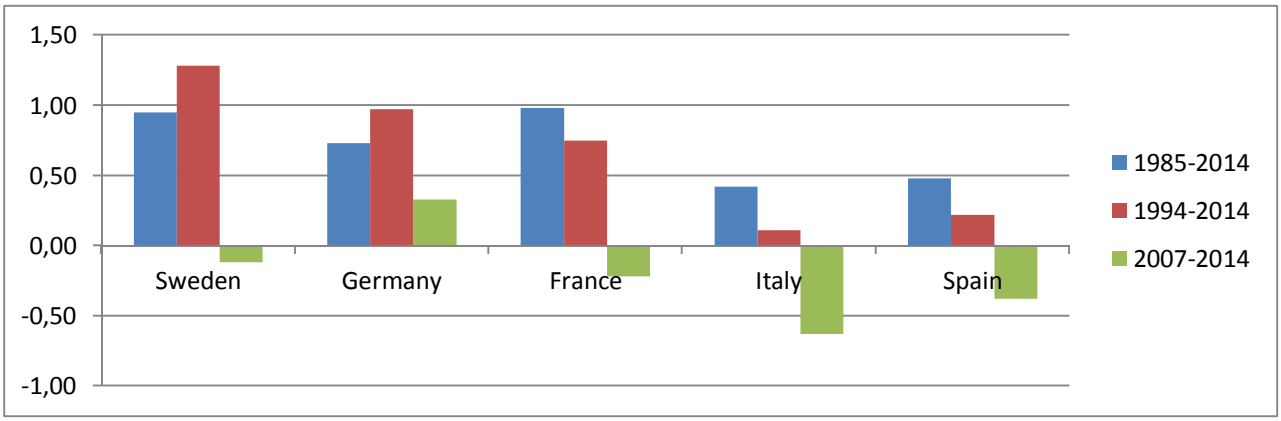


Table 11 Average productivity per period, % per annum

Productivity	1985-2014	1994-2014	2007-2014
Sweden	0,95	1,28	-0,12
Germany	0,73	0,97	0,33
France	0,98	0,75	-0,22
Italy	0,42	0,11	-0,63
Spain	0,48	0,22	-0,38

Source: OECD.Stat

Sweden has had higher average productivity growth than the EMU countries during the last thirty years, and especially during the period 1994-2014. This is part of the explanation behind that Sweden has outperformed the Eurozone. As from 2007 Sweden has had a slightly negative productivity and has fallen behind Germany.

5.12 Comments on the productivity of Sweden

Boumedienne et al (2015) have published a report on productivity development, investments and economic growth.

Productivity measures the efficiency of the production process. Work productivity is defined as production volume per hour worked. A high work productivity thus means that more can be produced at a certain number of hours worked and also that fewer hours are needed to produce a certain production volume.

The productivity growth decides the competitive power of Swedish industry, because productivity influences the cost level of the companies. Labour cost per unit produced is based on labour cost in relation to labour productivity.

After a good growth of productivity in the early 1970s, productivity had a weak development between the mid-1970s and the early 1990s. This led to a weak development of GDP per capita in Sweden as compared to other countries during the period. In the early 1990s a number of reforms were carried out in order to enhance the growth of productivity in the Swedish economy. Deregulation as well as membership in the European Union contributed to the productivity growth. Also new goals were established for the public finances, with the aim to reach a public surplus, while keeping inflation down. Please refer to chapter 2 above.

During the last decade the growth of productivity in the Swedish economy has stagnated. After a period from 1994 to 2006 with a productivity growth of circa three and a half percent, productivity grew by only half a percent between 2006 and 2013, depending on the finance crisis in combination with the euro crisis. As the fall in productivity began before the financial crisis, also in relation to other countries there must be another factor behind the weak productivity development.

The obvious factor behind productivity growth is investments, both in material and immaterial capital. Companies affiliated to Svenskt Näringsliv have pointed to the following factors in which reforms are needed to make companies invest, namely education, legislation and rules and finally access to financing.

Education has a positive effect on productivity, especially higher education. Most companies point to a lack of competent labour. The recent PISA statistics show a lack of ability in reading but also in mathematics and science, which is now below average both in the Nordic countries and within OECD. Also, less than half of those who start on a college program will graduate, which is far less than in comparable countries. The reason is that the pay-off of higher education is fairly low.

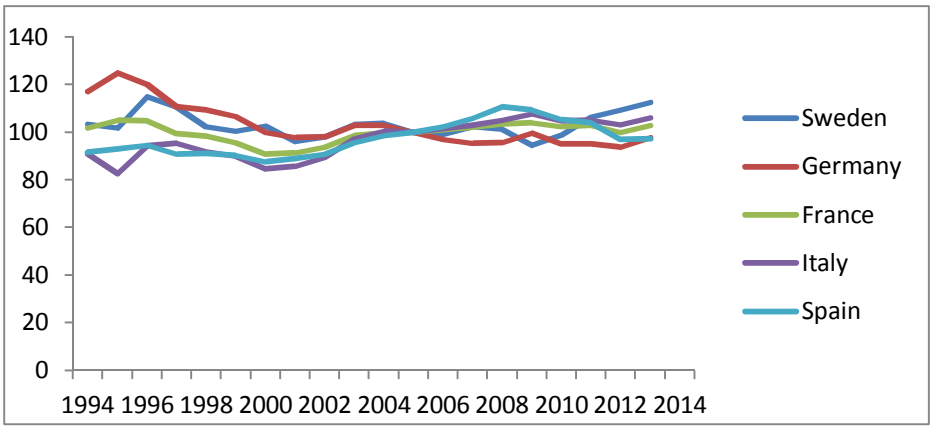
Legislation and rules are also obstacles for investments.

Insufficient access to financing is stated by one third of the companies as the reason for not carrying out investments.

5.13 Real effective exchange rates (REER) base year 2005

REER is defined as the weighted average of a country´s currency relative to an index or basket of other major currencies adjusted for the effects of inflation. A rise in the index means a loss of competitiveness.

Figure 21 Real effective exchange rates, base year 2005



2005=100

Figure 22 Real effective exchange rates per period, base year 2005

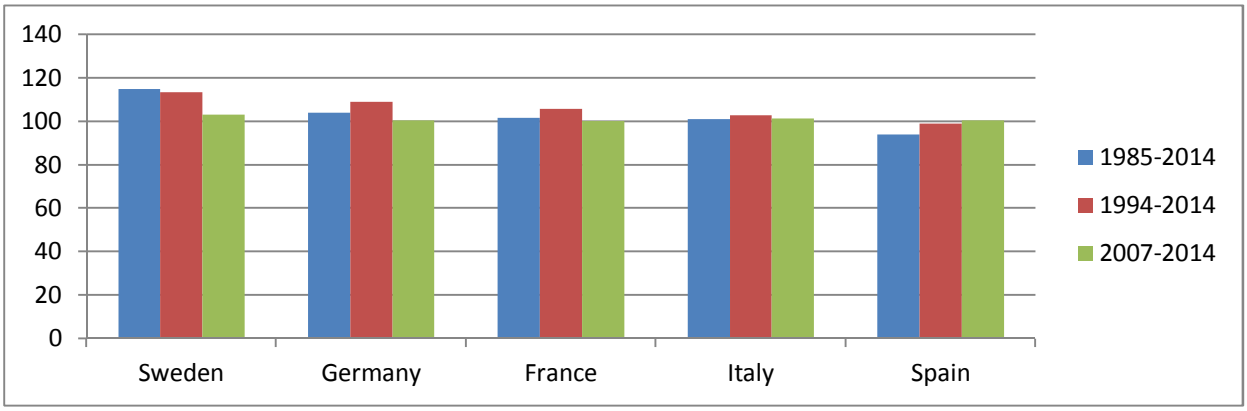


Table 12 Real effective exchange rates per period

REER	1985-2014	1994-2014	2007-2014
Sweden	114,93	113,37	103,06
Germany	104,1	109,11	100,6
France	101,83	105,85	100,17
Italy	101,12	102,98	101,47
Spain	94,14	99,13	100,51

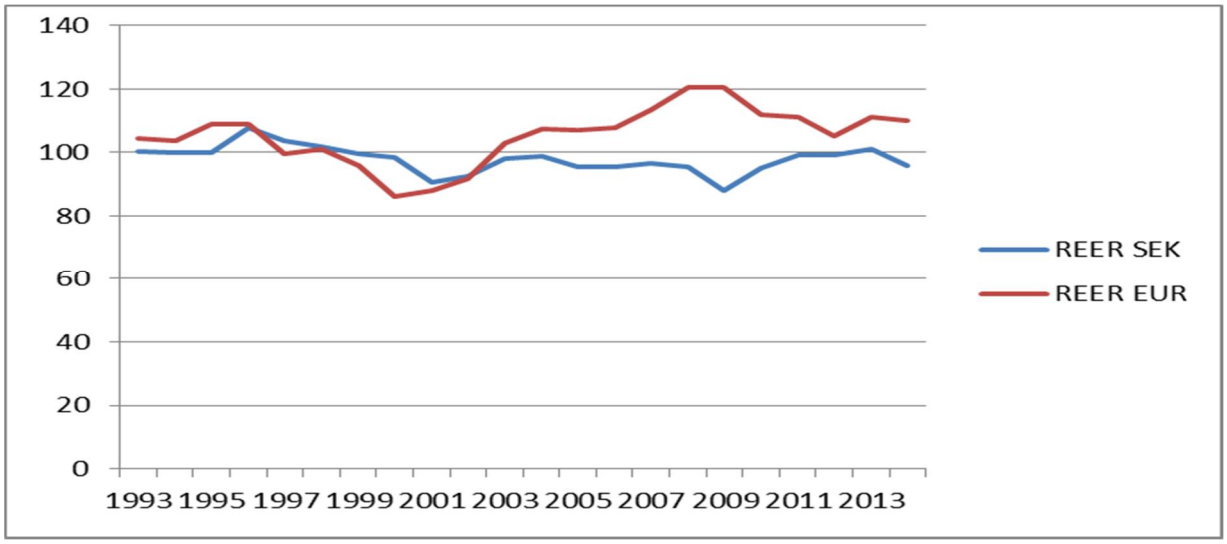
Source: Eurostat

During the last thirty years Sweden has continuously shown a decrease of the real effective exchange rate, which indicates an improvement of the competitiveness.

5.14 Real effective exchange rates (REER) base year 1999

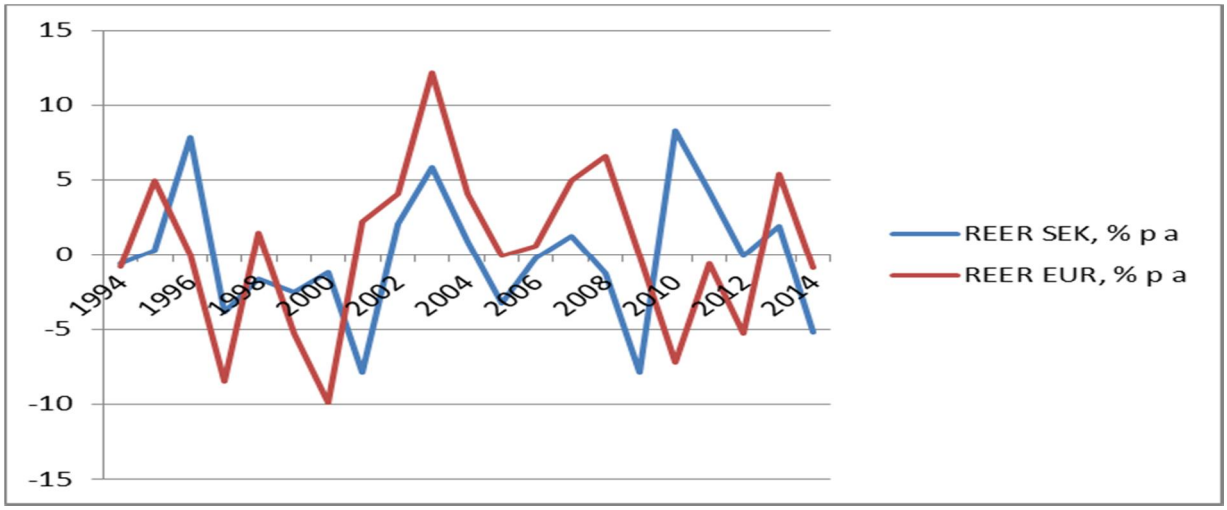
The European Central Bank has published statistics on the euro area compared to a group of twelve trading partners including Sweden, denominated both in euros and Swedish kronor, expressed as real effective exchange rates, deflated by consumer price index, with the base year 1999.

Figure 23 Real effective exchange rates, base year 1999



The real effective rate of the Swedish krona has been fairly constant at 90 to 100 over the last 20 years while the euro has had a tendency to increase well above 100. This indicates an improvement in the competitiveness of the Swedish krona in relation to the euro.

Figure 24 Year to year change in percent, base year 1999



Source European Central Bank

The Swedish krona had a tendency to fluctuate less than the euro over the period.

5.15 Summary of the economic indicators

Table 13 Ranking of Sweden, Germany, France, Italy and Spain

	SWEDEN			GERMANY			FRANCE		
POSITION	1985-2014	1994-2014	2007-2014	1985-2014	1994-2014	2007-2014	1985-2014	1994-2014	2007-2014
GDP growth, volume, % per annum	2	1	1	4	4	2	3	3	3
GDP per capita, constant PPP, USD	2	2	1	1	1	2	3	3	3
Unemployment, % of workforce		2	2		1	1		4	4
Consumer prices, % per annum	3	1	1	1	2	3	2	3	2
Current account balance, % of GDP	1	1	2	2	2	1	3	3	3
Gov´t surplus/deficit, % of GDP		1	1		2	2		4	4
Public debt in relation to GDP		1	1		3	3		4	4
Total debt in relation to GDP, 2013			5			1			2
Interest rate on public debt, % p a	4	3	2	1	1	1	3	2	3
Productivity, % per annum	2	1	2	3	2	1	1	3	3

	ITALY			SPAIN		
POSITION	1985-2014	1994-2014	2007-2014	1985-2014	1994-2014	2007-2014
GDP growth, volume, % per annum	5	5	5	1	2	4
GDP per capita, constant PPP, USD	4	4	4	5	5	5
Unemployment, % of workforce		3	3		5	5
Consumer prices, % per annum	4	4	4	5	5	5
Current account balance, % of GDP	4	4	4	5	5	5
Gov´t surplus/deficit, % of GDP		3	3		5	5
Public debt in relation to GDP		5	5		2	2
Total debt in relation to GDP, 2013						
Interest rate on public debt, % p a	2	5	5	5	4	4
Productivity, % per annum	4	5	5	5	4	4

Source: Calculations based on Eurostat and OECD.stat

The ranking of the economic indicators for the three periods 1985-2014, 1994-2014 and 2007-2014 indicates that Sweden has successively improved its position from 1992 when the Swedish krona has been on a free-float regime. Sweden is slightly ahead of Germany in the ranking with France in the third place. Italy and Spain are number four and five, respectively, for the entire period except when Spain enjoyed positive effects of a boom in the building sector before the financial crisis broke out in 2008.

A further analysis of Sweden with a free float currency follows on the next page.

5.16 Analysis of Sweden´s economy with a floating currency from 1992

In the early 1990s Sweden suffered a financial crisis in which GDP fell by circa 5 percent during the years 1991-1993. The financial crisis led to the decision in 1992 to set the Swedish krona on a free float regime, which has prevailed ever since.

The political implications were that budget austerity measures were adopted in order to stabilize the public budget which then had a considerable deficit of more than 10 percent of GDP (*Eurostat*). Also there was an overhaul in 1994 of the generous public pensions (*Pensionsöverenskommelsen*). A goal of a certain surplus in the public budget was established in 2000 by a large parliamentary majority (*Konjunktur-institutet* 2013). An inflation target of 2 percent was set in 1995 by Riksbanken. Please refer to chapter 2 above.

This process of putting the public finances in order meant that Sweden subsequently had a clear advantage over most of the EMU countries which had not carried out a similar process. As a result of this process Sweden has enjoyed a healthy growth of GDP combined with a surplus in the public budget. The public debt in relation to GDP has been reduced from more than 70 percent in the mid-1990s to less than 40 percent in mid-2010s. However, both private and company debt have grown very fast over the last decade so that Sweden´s total debt in 2013 was far in excess of Germany and also larger than that of France, Italy and Spain. Please refer to section 5.9 above.

As an export-oriented nation with a floating currency Sweden has enjoyed substantial surpluses in the current account as from the mid-1990s.

The reforms carried out in the 1990s contributed to a steady growth of the productivity which, however, started to fall in the mid-2000s due to a lack of competent labour, since the education system is showing a falling score in international comparison. Please refer to section 5.12 above.

The analysis of real effective exchange rates shows that Sweden has improved the competitiveness from the early 1990s. Please refer to sections 5.13 and 5.14 above.

So, to summarize, some support can be found for that the decision in 1992 to set the Swedish krona on a free float has been positive for the Swedish economy as the above statistics show.

However, the picture is far from genuinely positive, as shown in falling productivity and high total debt. Swedish residential buildings are excessively valuated, both in relation to disposable income and in relation to rents according to *The Economist April 16, 2015.* A fall in housing prices in combination with high household debt could easily result in a financial crisis similar to that of the early 1990s.

6. General discussion of monetary and fiscal unions

Gustavsson (2012:18-19) has analyzed the state and development of the European Monetary Union.

The integration of the European Union has been successive in several steps over the years:

1. Independent countries
2. Free trade area
3. Customs union
4. Common market
5. Monetary union

Within a *free trade area* no customs will be charged between the participating countries, but external custom rates are not coordinated.

Within a *customs union* also the external customs rates, which are applied for countries not participating in the customs union, are coordinated.

In a *common market*, not only customs rates but also other restrictions may function as trading obstacles. Such restrictions are higher quality in processes and products, better environment in manufacturing, more consumer safety and higher employment. Such obstacles will disappear in a common market.

In a *monetary union* the countries forgive their right to their own currency which means that exchange rates and interest rates are not controlled by the local authorities. The citizens of the union have to adjust to the prevailing circumstances by labour mobility.

A final step which has not yet been taken by EU is a *fiscal union*, in which the tax bases are centralized for common use. This means that resources which are created within the fiscal union can be used within the entire union for the total population. Thereby the regional, social and demographic differences can be evened out. There is then not the same need for labour mobility or general adjustment of the living standard as in a monetary union. When a monetary union has been formed there must be a readiness of the politicians to eventually proceed to a fiscal union.

In the European Union the governments decided only to introduce a monetary union, based on the Stability Pact with a limit of three per cent of government deficit and a maximum of sixty per cent of public debt in relation to the gross domestic product. If the countries complied with these limits there would never be any need of a fiscal union. The world-wide financial crisis of 2007-2008 was seen as an extraordinary event. Default of a major bank like Lehman Brothers in the United States was not an option for the European Union.

A number of bail-out schemes took place for over-indebted banks in Greece, Ireland, Portugal and Spain by providing emergency loans from ECB, EU and IMF to the governments of the GIPS countries. In order to keep their credit worthiness the GIPS had to reduce their outgo for other purposes than interest and amortization. Thereby unemployment increased and the economies stagnated.

From a strictly economic point of view a monetary union should not have been created without considering a fiscal union as the final step. Solely a monetary union meant a major risk. The EMU countries thereby became dependent of German credits.

The political background to creating only a monetary union was the reunification of Germany in 1991. France demanded a monetary union as compensation for letting the united Germany become the dominating power in Europe.

Rodrik (2012) states that the international community faces a trilemma: economic globalization, democracy and national decision-right are not possible at the same time. Only two of the three objectives can be attained at the same time. If the aim is to have far-reaching economic globalization and democracy, the national state will have to be surrendered. If, in the other hand, the national state shall be prevailed and economic globalization shall be carried out, then democracy must be abandoned, as important matters cannot be decided on the national level.

In an interview with the *Respons* magazine Rodrik states that if the European countries do not want to surrender democracy, they have to choose between political integration and economic disintegration. Either Europe heads for a political and fiscal union or the common currency and the true common market will have to be abandoned. Unfortunately the economic crisis has been characterized as thrifty North Europeans like the Germans as opposed to lazy South Europeans like the Greeks.

Today it is more or less accepted that a currency union also demands a fiscal union, but that is far from enough. In the United States there is also a common legal system, financial regulations, a central bank which is a true lender of last resort, a much higher labour mobility and a federal constitution which limits the decision-rights of the states. Most important is the political system which enables the citizens of each state to elect their federal representatives. Europe therefore has a long way to go to create a union which is comparable to the United States. A fiscal union will not function if it is not supported by democratic mechanisms.

Sweden is now benefitting from not having joined the Eurozone, by having an independent currency, its own tax policy and its own financial regulations. Sweden remains a most globalized economy but is not integrated in the Eurozone.

The political leaders have not explained to the general public that the countries within the Eurozone are mutually dependent. Once the crisis has been presented as a case of South European falsehood and lavishness against North European moral and thrift, it is not easy to present the present state of affairs as a case of mutual dependence.

It is interesting to note that there has been no tendency for protectionism after the crisis of 2007-2008, which was the greatest financial crisis since the 1930s. The explanation is that both the states and the markets have expanded. The only exceptions are countries like Greece and Spain, where we can also see a growth of very radical political parties, after the crisis.

Norberg (2012) has characterized EMU as a tragedy in three acts, named hubris, ate (blindness) and nemesis (revenge).

The fall of the Berlin wall in 1989 led to a German reunification during the following years. France realized that the D-mark was the strongest currency in Europe, based on healthy growth and low inflation. France therefore demanded a common currency to be introduced. The French president Mitterand is said to have warned the German chancellor Kohl that the other major European powers could form an alliance against Germany.

The growth and stability pact was created in order to stop the southern European countries from going heavily into debt, once the interest rate on their sovereign debt was more than halved when the Euro project had been announced in 1995.

There were several warnings that the German dominance would be even larger when the periphery countries of southern Europe would not be able to devalue their currencies after a period of excessive inflation.

In 1998 the criteria for joining the monetary union should be fulfilled, namely no more than three per cent budget deficit, a maximum of sixty per cent public debt and an inflation rate no more than 1.5 percentage points above the average of the three EU countries with the lowest inflation rate. Several countries, like Greece and Italy, more or less openly manipulated their statistics in order to comply with the criteria. Eventually, all countries which had applied for membership in EMU, were allowed.

The weakness of a common interest rate became evident, especially after the 2001 terror attack in New York, when ECB cut the refi rate from 4,5% to 2,0%. This resulted in a considerable increase of real property prices, especially in the GIPS (Greece, Italy, Portugal and Spain) countries. In real terms, excluding inflation, real property in Spain doubled in price from 1997 to 2006 and the debt ratio for households more than doubled. Spain even built more than Germany, France and Italy together. The bubble created many new jobs in the Spanish building sector. Major investments were also made in new airports, highways and high-speed trains.

Several of the GIPS countries have a sad history of default on their sovereign debt. During the last 200 years Italy has defaulted once, Portugal six times, Greece seven times, France nine times and Spain 13 times. Worry that this could happen again resulted in very high interest rates on the public debt. In the mid-1990s the bond market demanded 12 per cent interest from Italy, Spain and Portugal and almost 20 per cent from Greece. After the entry of the GIPS countries in EMU the interest rates fell to around five per cent. The euro was regarded as a success story, but the crisis was soon to come.

The European banks invested in government bonds which were regarded as being without any risk. When the solvency of the GIPS countries was in doubt after the financial crisis had broken out in 2007-2008 this also reflected on the banks which had invested heavily in government bonds.

ECB was forbidden by the Maastricht treaty to invest directly in bonds of the EMU countries, but was allowed to act on the second hand market, with the purpose to let the countries borrow at low interest rates. Eventually bail-out schemes were arranged for Greece, Ireland, Portugal and Spain. Only Ireland is back on a regular bond financing of the public debt.

Persson (2012) discusses the finance compact which is regarded as an illogical combination of fines and subsidies.

The original stability pact of 1997 stipulated that the maximum budget deficit allowed was three per cent of the GDP. A break of this rule should result in a fine to EU. Also, the government debt should not exceed sixty per cent of GDP. The stability pact had no effect in reality, as almost all the EU countries have broken the rules. Already in 2003 both Germany and Italy exceeded the maximum allowed budget deficit. Today there are only four countries which never have broken with the rules, namely Estonia, Finland, Luxemburg and Sweden.

The finance compact is based on the stability pact with some addenda, the most important of which is that the financial rules shall be incorporated in the national legislation. Sweden established such rules already after the financial crisis of the early 1990s.

A general principle of the finance compact is that the budget deficit of a member country is to be covered by subsidized loans at a low interest rate from the surplus countries. The deficit country will have to make reforms of their economy in order to be able to amortize their favorable loans.

Does a monetary union demand a fiscal union? In reality this means that a common currency demands a common system of taxes and contributions. In many cases a currency union could function better in combination with a fiscal union, but this need not necessarily be true. A fiscal union could be regarded as an insurance system designated in order to spread the risks of country specific shocks. The obvious disadvantage is that a country can suffer from self-inflicted shocks, like in the south European countries.

Persson argues that the long-range solution seems to be a õpureò currency union based on the Maastricht treaty. Without any bail-out schemes there would have been default on the sovereign debt for countries like Greece and Portugal in 2010. This would have led to the failure of a number of German and French banks, which should have been recapitalized by their governments, which would have taken over the banks temporarily. The taxpayers would then not have to save all the lenders which have invested in bonds of the defaulting countries.

Andrén and Oxelheim (2011) have analyzed the importance of producer prices as an integral part of price harmonization within the European Monetary Union. The authors have studied producer prices in the transition from national exchange-rate regimes to the EMU for the first eleven countries which adopted the euro. It was found that there was a considerable price convergence before the euro was introduced but only modest convergence after the introduction of the euro.

According to the authors the importance of producer prices is underplayed and therefore deserves more attention. It is thus inefficient to base monetary policy decisions solely on consumer prices.

Import of inflation from non-euro-area trade is an important moderating variable for price changes after the introduction of the euro. Different price development in producer and consumer prices means that the monetary policies must be based on both on producer prices and consumer prices, since trade partners are not the same for all countries.

Nergelius (2013) has analyzed the legal and practical aspects of the Euro Pact, the formal name of which is õTreaty on Stability, Coordination and Governance in the Economic and Monetary Unionò. The treaty was signed in March 2012 and came into force as from 1 January 2013 for the 17 countries in the Euro Zone.

The most important article of the Euro Pact states that the EMU countries shall have a maximum deficit in their budgets of 0,5 per cent of the gross domestic product, which could be extended to 1 per cent of GDP if the public debt considerably exceeds 60 per cent of GDP. The European Commission shall suggest when the aim shall be reached for each country. No fines have been exercised for countries which have violated these rules, although there is a possibility to enforce penalties.

The author points out that the Euro Pact does not contain any form of coordination of the fiscal system, which is entirely decided by each country. However, in the long run, it will probably be difficult to accept that the member countries have very different rules for the retirement age.

It should also be pointed out, from a legal point of view, that the European Court in 2004 accepted that both Germany and France had budget deficits during several years which were far in excess of the rules of the Euro Pact. Also, it seems quite obvious that Greece should never have been accepted as a member of EMU as the public finances were in a very bad shape.

Eichengreen (2015) argues that the ECB misunderstood its mission, by not supplying adequate support for the European economy. The money supply grew by just 0,6 per cent in 2010 and by only 1,5 per cent in 2012. At a growth rate of 1 to 2 per cent and an inflation target of 2 per cent the money should grow by at least 4 per cent. This eventually prompted ECB in July 2012 to issue a statement that õthe ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enoughò said Governor Draghi. A program of Outright Monetary Transactions (OMT) was then established as a mechanism for purchasing government bonds of EMU countries in trouble. The OMT program, which was unlimited, calmed the financial markets.

The crisis which led to the OMT decision, clearly showed the weaknesses of the EMU: (1) Fiscal discipline was inadequate; (2) Surveillance was inadequate; (3) There was no single supervisor capable of reigning in the banks and (4) There was no mechanism for transfers of resources from regions with high employment to regions with low employment. The general picture was of hard-working Northern Europeans as opposed to spendthrift Southerners.

In 2013, it was finally decided, that ECB should act as the single bank supervisor, which required tight walls between its monetary and supervisory functions. However the issues of a common European unemployment insurance fund and a scheme for Eurobonds are far from solved today.

7. Pros and cons of the European Monetary Union

First and foremost it must be pointed out that the European Union is basically a peace project, which was created after World War Two in order to prevent further devastating wars on the European continent. Apart from the wars on Balkan in the early 1990s and the present hostilities between Russia and Ukraine, this has also been accomplished, which must be regarded as a major achievement.

Having said that, the pros and cons of the European Monetary Union, must be analyzed from a strictly economic point of view.

Pros

- *No exchange rate risk*: In a currency union there is no internal exchange rate risk as the same currency prevails for all the participating countries. However, there is an external risk in relation to other currencies.

- *Reduction of transaction costs*: There is no need in a currency union to make hedging arrangements referring to currency fluctuations. Transaction costs will refer primarily to non-union currencies.

- *Increased price transparency*: Prices are easily comparable within a currency union, as they are expressed in the same currency. However, prices of goods and services could still vary within the union due to varying market conditions.

- *The ñfour freedomsò of goods, capital, labour and services*: Within the European Union there has been a general freedom for goods, capital, labour and services ever since the Single European Act of 1987. This has generally had a positive impact on economic growth.

- *The Euro is an international currency, second only to the US dol*lar: The euro is far more of an international currency than the German D-mark or the French franc ever was and has today a far higher trading volume than the British pound or the Japanese yen.

Cons

- *No possibility to devalue when an EMU country is hit by an asymmetric shock*: Traditionally many European countries have devalued their currency when their economy was in bad trouble. Even when the European Monetary System was in force ñrealignmentsò of the currencies were frequent. This has not been possible since EMU came in force.

- *The common interest rate of EMU means that countries with high inflation have a low real interest rate and vice v*ersa: A currency union will in fact enhance the swings in the business climate, rather than level out the swings, which is contrary to Keynesian policy.

- *EMU is far from an optimal currency area as it lacks (1) homogeneity, (2) flexibility, (3) geographical mobility and (4) financial transfers*: Ideally, decreased demand would result in an adjustment of wages and prices, labour should be geographically mobile and fiscal transfer should take place. None of this happens in EMU. The Achilles heel is the very low mobility of labour.

- *The very low labour mobility, which is based on cultural and historical differences, is the major drawback of EMU*: There are major differences in Europe regarding both language and culture, which makes mobility difficult. Only the well-educated labour has some mobility.

- *Most of the political sovereignty has been kept by the member sta*tes: The European Union is far from the US, which has a common legal system, financial regulations, a central bank with more power than the ECB and a federal constitution which limits the decision-rights of the states.

- *No common fiscal policy*: The fiscal system of the EU countries is entirely decided by the individual countries.

- *High inflation rate in the peripheral countries in combination with strong wage increase has led to an erosion of competitiveness in those countries*: The Southern European countries carried on their habit of high inflation and strong wage increase some years after joining the EMU, which has eroded their competitiveness, without having the possibility of devaluation.

- *The fixed nominal internal exchange rate puts the adjustment pressure on the deficit countries*: Without the possibility to devalue, a deficit country will have to arrange an ñinternal devaluationò which means cuts in public wages, pension and allowances in addition to carry out economic reforms.

- *ECB has not acted as ña lender of last resortò until 2012 when the OMT program of unlimited financial support was established*: Only during the last few years the ECB has had the possibility to act as a real central bank. The Outright Monetary Transaction program has however not yet been put on test.

- *Common bonds for the Eurozone, so called Eurobonds, are not allowed*: Each country has to issue its own government bonds which are not backed jointly by the union.

- *The stability pact which limits public deficits and debts has never really been followed by the EMU countries. Even Germany and France have several times broken the rules*: The original rules of making countries with excessive budget deficits or public debt to pay fines have not been enforced. The current finance compact has not been tested.

- *The bail-out schemes which have been introduced for the periphery countries after the financial crisis of 2007-2008 have created major tensions between ñhard-working northernersò and ñlazy southenersò.* In fact the countries are mutually dependent, which should be pointed out to the public.

- *Basically, EMU has suffered from several weaknesses: (1) Inadequate fiscal discipline, (2) Inadequate surveillance, (3) No bank supervision and (4) No mechanism for transfers within the union. In 2013 a bank supervision to be enacted by ECB was, however, decided upon*: Some steps have eventually been taken in order to rectify the weaknesses of the EMU, the most important of which are to increase the power of the ECB and to create a bank supervision authority within the ECB. However, there remains to be created instruments in order to enhance labour mobility and a scheme for Eurobonds.

From a strictly economic point of view the cons are well exceeding the pros. Only the political objective of ñan ever closer unionò in order to prevent European wars and diminish the economic differences between countries can therefore motivate EMU.

The German chancellor Merkel said in 2010: ñIf the euro will fail, Europe will failò.

8. Conclusion

The primary aim of this paper is to study the effect on the exchange rate regime of the economic development of Sweden during the thirty-year period 1985-2014 as a stand-alone case from 1992 compared to the EMS/EMU core countries of Germany and France and the EMS/EMU periphery countries of Italy and Spain.

The results give support to the hypothesis that Sweden has developed relatively well in relation to the four selected countries in respect of most of the main economic indicators which have been studied for the period 1985-2014, namely

(1) GDP volume growth;

(2) GDP per capita as purchasing power parity;

(3) Unemployment in relation to the workforce;

(4) Change in consumer prices;

(5) Current account balance;

(6) Government surplus/ deficit;

(7) Public debt in relation to GDP;

(8) Total debt in relation to GDP;

(9) Interest rate on public debt;

(10) Productivity and

(11) Real effective exchange rate.

The data indicate that Sweden on average performed better than the EMS/EMU countries after 1992 when the Swedish krona was on a free float basis and especially after 2007.

However, it must be pointed out there are some obvious weaknesses in the Swedish statistics:

- After the financial crisis in the early 1990s GDP fell by circa 5 percent during 1991-1993. The free float regime of the Swedish krona was established in 1992. Several political reforms were then carried out: an overhaul of the generous public pensions was decided in in 1994, an inflation target of 2 percent was set in 1995 and a surplus of one percent of GDP in the public budget over a business cycle was decided in 2000. This laid the foundation to a healthy growth of GDP, especially in relation to the EMU countries which have not carried out the corresponding reforms.

- Although Sweden today has lower public debt than the four EMU countries, the total debt including private debt and financial debt is in excess of the EMU countries. According to *Riksbanken* households with mortgage loans on average had a debt ratio of more than 300 percent of their disposable income in 2013. According to *The Economist* Swedish residences are excessively evaluated.

- Productivity growth, which was fairly high until 2006 has stagnated over the last decade, partly due to the world finance crisis. *Svenskt Näringsliv primarily* points to a lack of competent labour, because of a fall in the basic abilities of reading, mathematics and science.

- The combination of high total debt, residences with a high valuation and a weak growth of productivity could have a negative influence of Swedish future competitiveness like in the early 1990s.

The secondary aim is to state the pros and cons of EMU based on a review of previous and recent research. The review shows that the cons are well in excess of the pros from a strictly economic point of view. Only from a political point of view can the EMU be motivated, based on preserving peace in Europe and the overall objective of õan ever closer unionò.

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