Economic effects of the euro: A comparative analysis of Finland and Sweden

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"How has Sweden's economic growth been affected by not adopting the euro?"

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TABLE OF CONTENTS

1. Introduction

In a 2003 referendum, Sweden decided not to adopt the euro as its official currency. There was a heated debate in the country before the vote, but for most of the period since, it has been quieter. However, with the Swedish Krona (SEK) losing 15% of its value against the euro in the past year, calls for Sweden to join the European Monetary Union (EMU) are being heard among academics and other professionals (Öjemar & Björkman, 2023). A similar trend is discernible among the Swedish population, where the share of citizens that oppose the euro has decreased since 2013 but is still in a clear majority (Statistics Sweden, 2022). Before the referendum, the main arguments were as follows: those in favour argued that it would increase Swedish trade; those in opposition argued that relinquishing independence of monetary policy would be too costly in the face of economic shocks. There seems to be an agreement among scholars that countries benefit positively in trade from joining the eurozone, but disagreements exist regarding the size of the increase. On the importance of monetary policy, however, there is some disagreement about whether giving it up is a cost. The euro proponents argue that a floating exchange rate itself causes instability, while the opponents argue that it is the only insurance against economic shocks (Grubel, 2005; Calmfors et al., 1997). Overall, the impact of the euro is not unambiguous. In Sweden's case, 20 years have passed since the landmark referendum, yet evaluations of this decision in the literature have been scant. Moreover, public opinion has begun shifting from the otherwise clear majority of the no-side. New data on trade and monetary policy has surfaced over the past two decades, and thus, this thesis aims to contribute to the debate by answering the research question:

RQ: "*How has Sweden's economic growth been affected by not adopting the euro?"*

To answer the research question, this thesis will adopt a small-N comparative analysis, Most-Similar-Systems-Design (MSSD), comparing Sweden and Finland. By analysing these two countries, which are similar in most aspects besides using the euro, it will try to discern how Sweden's economic performance has been affected by not adopting the euro. This study draws upon the literature on Optimum Currency Areas (OCA) and the scholarly debates on the common currency, in general, and for Sweden specifically. The analysis examined the developments in economic growth, trade, and monetary policy for the two countries. The results indicated that Sweden has not been negatively affected by not

adopting the euro. Instead, Swedish GDP outgrew Finnish, as did its exports. This thesis concludes that the results were in large part due to Sweden maintaining monetary policy independence and a floating exchange rate, which contributes to the understanding of the costs and benefits of adopting the euro.

2. Literature review

The debate on the euro had raged even before the EMU was created. Deriving from the seminal work of Mundell (1961) on the theory of Optimum Currency Areas, much of the original literature debated what indeed constituted an OCA and, later, whether the eurozone (interchangeably used with EMU) constituted one. As the EMU was created, the debate shifted to examining the costs and benefits of being a member of the monetary union. The trade gains due to the euro and the loss of monetary policy independence are of particular focus. Moreover, in addition to the theoretical discussion on currency unions, a broad debate was happening in Sweden leading up to the referendum on adopting the euro in 2003. The Calmfors Commission (SOU 1996:158), tasked with preparing an opinion on EMU membership to the Swedish parliament, laid the foundation for the Swedish discourse. It argued against membership at the time but adopted a "wait-and-see" position (p. 134). Since the referendum, the Swedish debate has substantially cooled off. Nonetheless, the discussion on membership in the eurozone internationally, is vibrant. In the following section, I will review the most foundational literature that has shaped the debate on the euro and its effects. It will be divided into two parts. First, the literature on currency unions, such as the EMU, will be presented. Following this will be a description of the arguments in favour of, and in opposition to, Swedish EMU membership in particular.

2.1 - Optimum currency areas

When imagining the EMU, the primary consideration was based on Mundell's (1961) theory of Optimum Currency Areas. In his seminal piece, Mundell describes a geographical region where countries bound by economic ties would maximize economic efficiency by adopting a common currency. The benefits, he argued, would be optimal economic efficiency due to reduced transaction costs that arise from a common currency (Kunroo, 2015, p. 88). The main cost, however, would be that the constituent countries, after surrendering monetary policy, could not withstand asymmetric economic shocks (Kunroo, 2015, p. 88). The critical criteria that needed to be met were thus a flexible labor market, flexibility in price and wage setting, synchronized business cycles, and, later on, fiscal integration was added as a criterion (Kunroo, 2015, p. 94). Only with the creation of the EMU was Mundell's theory put into practice, but even then, the literature was indecisive on whether it constituted an OCA. Kouparitsas (1999), guided by the claim that the EMU does not constitute an OCA,

investigated the correlation of business cycles in Europe. He concluded that a currency union is indeed viable for some "center countries" – BeNeLux, Austria, Italy, France, Germany, Portugal, and Spain - but advised against including the "peripheral countries," Ireland and Finland (p. 3).

Moreover, Caporale (1993) found that asymmetric shocks are a big part of GDP fluctuations in the EU and thus concluded that EMU could be difficult to maintain (p. 100). The eurozone crisis of 2009 put the viability of EMU to the test by exposing the union to a large economic shock. Analysed in the wake of the crisis, Jager and Hafner (2013) concluded that the EMU is not an OCA since the countries differ significantly in economic performance and structure (p. 320). They argue that the main impediment to the EMU is the absence of labour mobility and transfer payments to deal with asymmetric shocks, both crucial preconditions for an OCA to be functional (p. 320). Their conclusion is supported by Olsson (2019), who argues that EMU is institutionally flawed and does not fulfil the OCA criteria (p. 38). Overall, most authors, both pre- and post-eurozone crisis, seem to agree that the EMU does not constitute an optimal currency area.

2.2 - Costs and benefits of the EMU

The most acclaimed benefit of the euro is that it increases trade and, in the long run, economic growth. Rose's (2000) seminal article on the effect of common currencies on trade found that two countries sharing a currency experience a threefold increase in trade volume (p. 23). The size of these effects was, however, quickly questioned on methodological grounds, and a vast debate on the subject ensued. In 2005, Rose and Stanley remade the study and found that, even after correcting for publication bias, the positive effect of trade was 47% (p. 362). However, a study from 2003, the first to specifically investigate the EMU, found that the monetary union caused an increase in trade of merely 8-16% compared to non-euro countries (Micco et al., 2003, p. 343). Some years later, Baldwin (2006, p. 87) found that the pro-trade effect of the euro was of similar size (5-15%), while Flam and Nordström (2008, p. 14) found a larger increase in trade between euro countries of 28%. These numbers seem to be consistent even following the eurozone crisis, which saw a massive drop in European demand. Kunroo et al. (2016) conducted a study, claiming that since more years had passed since the euro's inception, new estimations were relevant (p. 394). The authors found that when both countries use the euro, they experience a trade increase of 21% (p. 391). The positive result is echoed by Gunella et al. (2021), who found that the euro has increased trade

by an average of 4.3-6.3% (p. 3). Ultimately, the literature is convinced that adopting the euro will increase trade. Despite varying quantities, no negative effects have been found, and thus the correlation seems to be reasonably robust.

The EMU does, however, not only come with benefits. The largest cost of membership in the monetary union is arguably the loss of the ability to conduct independent monetary policy (Grubel, 2005, p. 514). The conventional wisdom explains that when a country is struck by adverse economic shocks, monetary policy, i.e. the adjustment of interest rate and re-valuation of the currency, is crucial in reducing the negative impact (Eriksson & Ljungkvist, 2021, p. 69). However, the literature is not assertive regarding this relationship. One counter-argument to the cost of losing monetary policy is that independence often causes more harm than good. For instance, Grubel (2005) explains that the importance of losing monetary policy is often exaggerated as faulty policymaking in the field has caused most of the asymmetric shocks in Europe (p. 522). However, Korkman & Suvanto (2015), in their study on Swedish and Finnish recovery from financial crises, claim that the depreciation of the SEK is what allowed Sweden to escape the 1990s financial crisis (p. 20). A second relevant counter-argument is offered by Beetsma and Giuliodori (2010), who ascribe substantial gains to relinquishing monetary policy for countries that have historically struggled to maintain credibility for an inflation target (p. 613). By allowing a more credible central bank to control monetary policy, countries can “tie their hands" and secure a reduction in inflation (p. 609). Overall, though, it seems that the conventional wisdom of surrendering monetary policy being a bad choice is not unambiguous. Some authors find that monetary policy is crucial for combatting shocks, while others highlight that relinquishing it can come with some benefits.

2.3 - Sweden and the EMU

In addition to the broader literature on the EMU, several studies have been conducted on the effects of EMU membership in Sweden specifically. The Calmfors Commission (SOU 1996:158) was the foundational document of the debate. Regarding trade, it found no evidence that adopting the euro, hence reducing transaction costs, would lead to a significant increase in trade (p. 89). However, Rose (2001) was tasked with investigating the same effect and concluded that Sweden’s trade with the eurozone would increase by roughly 50% if it joined the EMU (p. 1). These findings are echoed by Ekholm (2003), who, despite questioning the size of Rose’s finding, agreed with the conclusion that Swedish trade would benefit from adopting the euro (p. 70). Overall, the scholars investigating this issue ahead of

the 2003 referendum seemed to be in agreement that Sweden would benefit trade-wise by adopting the euro. Important to note, however, is that these arguments were proposed 20 years ago, and the current state of European integration may produce different effects.

Regarding monetary policy, Calmfors et al. (1997) argued in their inquiry that independent monetary policy is crucial for stabilization policy (p. 121). The authors reasoned that economic shocks are inevitable, and thus Sweden could not afford to relinquish this tool (p. 120). Few authors, though, seem to agree. Reade and Volz (2009) claim that the independence of monetary policy is not a valid argument against adopting the euro since the Swedish Central Bank, *Riksbanken*, does not have true independence even if situated outside the EMU (p. 26). Other authors also downplay the importance of independent monetary policy. Söderström (2008) favors Swedish EMU membership, arguing that floating currencies today move less according to economic fundamentals and thus risk causing more harm than good (p. 8). The evidence regarding independent monetary policy is thus not clear-cut.

The literature on the costs and benefits of the euro is wide but divided. Much attention has been given to the consequences of joining the EMU, mostly through the lens of trade and monetary policy. Regarding trade, most authors seem to agree that adopting the euro would increase trade but disagree by what amount. Regarding monetary policy, however, scholars seem to disagree on its effectiveness in dealing with economic shocks. The conventional theory is well rooted, but evidence has surfaced that indicates otherwise.

Like the general debate on the euro, the Swedish debate on adopting the currency is inconclusive. The most important inquiry, the Calmfors Commission (SOU 1996:158), argued that Sweden would not expand its trade if it adopted the euro. Others argued that Sweden would have substantial gains from adopting the euro. Also, in regard to monetary policy, the arguments diverged. Calmfors et al. (1997) saw it as necessary to maintain monetary policy as a stabilization tool, but the authors were countered by arguments that a floating currency risked causing more damage than good for the Swedish economy.

Nonetheless, the debate stagnated after 2003 and has left a knowledge gap that this thesis aims to address. As cries for Swedish EMU membership are being heard from pundits and public opinion being more divided than in a long time, an evaluation of Sweden's economic performance is justified. Moreover, two decades have passed since the referendum, and with it, new information on trade patterns and monetary policy has naturally emerged. However, the vast debate that was once raging has not considered this and not attempted any new research. The literature review contains few recent studies, which proves the point of the gap in the literature. Hence, this paper aims to contribute to the debate on a potential Swedish

euro by revisiting the debate from the early 2000s and applying the knowledge that has emerged since. Accordingly, this thesis, through a qualitative analysis, will attempt to answer the following research question:

RQ: "*How has Sweden's economic growth been affected by not adopting the euro?"*

3. Theoretical framework

3.1 - Economic efficiency, trade, and economic growth

The main benefit attributed to a common currency is improved economic efficiency. When countries adopt a single currency, several transaction costs are eliminated. For instance, merchants no longer have to pay commissions to exchange currencies nor for hedging in fluctuations in exchange rates. Moreover, the insecurity inherent in exchange rate volatility discourages trade, so adopting a single currency should increase trade (Calmfors et al., 1997, p. 307). Measuring transaction costs is difficult, though, as many firms do not report the expenses of exchanging currencies, enforcing international contracts, and other transaction costs related to trade.

Trade, however, is a wide concept with various definitions. In this thesis, trade is conceptualized as total exports, i.e. exports of both goods and services. Besides the difficulties of quantifying transaction costs, there are two main reasons for this decision. First, exports make up a large share of GDP for both Finland and Sweden, and have historically been a larger share of GDP than imports. Second, and most importantly, the Swedish recovery (and Finnish non-recovery) from the Global Financial Crisis (GFC) is largely attributed to changes in exports. Korkman and Suvanto (2015, p. 280) argue that the large increase in Swedish exports from 2008 to 2009 is what enabled the country's economy to recover relatively fast. Accordingly, information on exports is of greater significance than other trade measures such as imports or trade balances. It is important to note, however, that exports are not the only road to economic growth. The United States, one of the most developed economies in the world, is consistently a net importer (Buchholz, 2020). Yet, for the two Nordic countries, exports are more important than imports. Hence, the logical choice is to analyse the former.

3.2 - Monetary policy, exchange rates, and stabilization

While OCAs create the pre-conditions for long-term economic efficiency, the main cost is losing the ability to use monetary policy as a stabilizing tool. Conventional theory states when an economic shock hits countries, the central banks can reduce interest rates to stimulate domestic demand and economic recovery. A lower interest rate makes money cheaper and more accessible, which in turn encourages consumption, investment, and lending, that all stimulate economic activity. Most central banks reason this way and base their decision on domestic circumstances. The European Central Bank (ECB), on the other

hand, conducts its monetary policy for the entire euro area. Therefore, it must consider several different economic realities and find a compromise. The ECB's decision could be suboptimal for some countries and could potentially exacerbate the crisis by requiring painful wage reductions (Eriksson & Ljungkvist, 2021, p. 69). Thus, the inability to act after domestic developments is the main fear of relinquishing monetary policy independence to the ECB. In addition to interest rates, exchange rates are important in dealing with crises. As a currency depreciates, the cheaper goods make exports more attractive abroad and cushion the negative impacts of the crisis. This only works, though, if a currency is floating. If a currency is fixed, like the euro among the constituents of the eurozone, devaluations cannot stimulate exports. Moreover, in times of crises, small currencies often depreciate in relation to larger, and hence safer, currencies (Samuelsson, 2022). Thus, if a country experiences an economic crisis but uses a large currency like the euro, it is less likely that it can utilize weaker exchange rates to escape it.

Accordingly, monetary policy is conceptualized in this thesis through interest rate movements and exchange rate fluctuations. The main monetary policy tool central banks have is the short-term interest rates, hence, they are in focus (Sveriges Riksbank, 2023b). Higher interest rates make it more costly to borrow from the central bank, which then spreads through banks to society. Also exchange rates can be measured in several ways, e.g. nominal or real exchange rates. In this thesis, however, exchange rates are conceptualized as the nominal effective exchange rates, NEER. NEERs offer the benefit of being calculated against a basket of several currencies, weighted after importance as trade partners, and thus provide one number for the value of the currency, which facilitates analysis (Hayes, 2021). The alternative, comparing a currency against all its partners bilaterally, is a tedious process and provides fewer valuable conclusions as they are not weighted based on the importance of every partner's currency.

Based on the literature review and theoretical framework presented, the following hypotheses are derived:

H1: *Sweden's GDP has grown less than Finland's because of higher transaction costs in trade.*

H2: *Sweden's GDP has grown more than Finland's due to more flexibility in responding to economic shocks.*

4. Methodology

4.1 - Research design

To test the aforementioned hypotheses, this thesis will use a Most-Similar-Systems-Design, MSSD. MSSD compares countries that are similar in various relevant aspects but differ along the independent variable, in this case, the use of the euro (Barakso, Sabet & Schafner, 2014, p. 179). This design is useful for gaining an in-depth understanding of the economic effects of the euro. Since euro adoption is a rare event, the number of observations does not suffice for statistical analysis (Barakso, Sabet & Schafner, 2014, p. 177). Moreover, I derive in-depth knowledge of the causality between the observed phenomena. Through the isolation of several relevant variables, the research is able to more precisely explain the causal relationship between the independent and dependent variables.

To test the causal mechanisms that connect EMU membership and economic performance, I will make use of descriptive analysis in combination with process tracing. Process tracing is used to derive inferences from evidence over a period of time (Collier, 2011, p. 824). The independent variable, the adoption of the euro, happens only at one point in time, in 1999. Any divergence in economic performance since then will thus be analysed in light of the choice of currency. Two mechanisms in particular will be analysed. First, by reducing transaction costs, adopting the euro is expected to increase trade, which in turn contributes to economic growth. Second, remaining outside of the EMU grants monetary policy independence, which in times of crisis, is expected to aid the recovery. By investigating the central banks' actions after 1999, I will be able to assess whether independence strengthened economic growth.

4.2 - Case selection

For the analysis, Sweden and Finland are chosen as the cases to be inspected. They are well suited for an MSSD study since the countries are similar in many aspects but differ in that Finland adopted the euro while Sweden did not. Since the independent variable of interest is the euro, I choose to describe the similarities during 1999, the year in which Finland adopted the currency. Based on their salience in the literature, the comparison of the two countries is based on factors that are relevant to monetary policy and trade.

Both Finland and Sweden are export-oriented economies, and exports account for a large portion of both countries' GDP. Between 1970 and 1990, exports accounted for 25-28% of total output, while following the financial crisis of 1992, the share rose to nearly 40%

(World Bank, n.d.). Moreover, for both countries, imports amounted to almost 30% of their respective GDP. The importance of trade is crucial for the projected trade effects of the euro to materialize. Second, the two neighbours shared similar trading partners in 1999. The major recipients of their exports were Germany, the United Kingdom, and the USA (WITS, n.d.). Third, the industrial base is similar in the two countries. Both Finland and Sweden are endowed with natural resources such as wood and metal ores. Moreover, machinery, paper, iron ore, and vehicles are all crucial exports for both countries.

The main difference is the decision by Finland to adopt the euro as its official currency in 1999. This is a critical juncture in which the countries took different decisions that could affect their future economic performance. By adopting the euro, Finland transferred its ability to conduct monetary policy to the ECB, while *Riksbanken* maintained its independence. However, before this, the two countries shared one relevant similarity in monetary policy. In 1992, both countries were struck by a financial crisis that shrank GDP, increased government debt ratios, and unemployment (Korkman & Suvanto, 2015, p. 280). Both countries had recovered until 1999 thanks to the depreciation of the respective currencies, which were floating (p. 280). This is important because it shows that, historically, both countries conducted similar monetary policies and made use of a floating exchange rate.

There have been many changes affecting Sweden and Finland during the past 20 years that are not related to the currency. The decision to adopt the euro, however, is of major significance, so isolating this effect is merited. It is impossible to analyse all possible variables that may affect the dependent variable, but by focusing on two major causal pathways, I aim to increase the validity of my findings.

4.3 - Operationalization and data collection

To conduct my analysis, data will be collected on a plethora of indicators. Most sources are reliable, but to avoid errors in methodology and calculation, I aim to use only one source per indicator. First, to measure economic growth, data on GDP will be collected from the World Bank, which has plentiful and detailed data. The economic output will be measured in nominal GDP in constant local currencies (LCU), which is chosen for two reasons. First, it removes the influence of price fluctuations, and thus the impact of inflation, on GDP. Instead, it measures the actual changes in the volume of goods and services. Second, by erasing the exchange rate fluctuations, it is more apt to compare two countries using different currencies.

The analysis will then proceed with the section on trade. Exports will be used as the main variable of interest because both countries are export-reliant and since exports are

affected by choice of currency. Data on trade is collected from the 'World Integrated Trade Solution' (WITS) database, which contains data from international organizations such as WTO and UNCTAD. There is no comprehensive data on exports for all the years of interest. Instead, data on the value of exports and export partners will be collected for each individual year, and then used to calculate the value of, as well as the share of, exports to the EMU from the two countries. The value is measured in US$ because most world trade is conducted in the currency and because the data is provided in that format.

Lastly, the chapter will conclude with the section on monetary policy. Firstly, the interest rate paths of the two countries will be analysed to discern how independent *Riksbanken* has been operating and how it acted during the GFC. The indicators to be used are the main policy interest rates of the two central banks, the *Riksbank's* 'policy rate' (Swedish: *Styrränta*) and ECB's rate on 'main refinancing operations' (MRO). These are plotted on graphs collected from the website tradingeconomics.com, but the data originates from the two institutions themselves. Second, the exchange rates of the two currencies, SEK and euro, will be compared. The indicator for the Swedish Krona is the KIX-index, which displays its movements against a basket of different currencies that are weighted based on their trade share with Sweden (Sveriges Riksbank, 2023a). The benefit of using an index instead of comparing the SEK to individual currencies is that the exchange rate is important in deciding the levels of exports, so comparing it to the currencies of Sweden's trading partners offers the closest resemblance to a "correct" value. If the index moves higher, it means that the SEK has depreciated against the basket of currencies, and vice-versa if it moves lower. The value of the euro will be measured by its NEER. The NEER is a "weighted average of nominal bilateral rates between the euro and a basket of foreign currencies" (ECB, n.d.). If the index goes up, the euro has appreciated against its counterparts. While the data originates from two different sources, the methodology of calculating the two exchange rates are comparable, and so, the interpretations are also comparable.

The data will be collected for the timespan selected for my analysis, 1999-2019. 1999 is the given year to start the analysis as that was the year Finland adopted the euro and thus diverged from Sweden. Within this period, moreover, the GFC and the subsequent eurozone crisis unfolded. An economic shock of this severe magnitude provides an excellent case for comparing the difference in reactions of the two countries, which to a significant degree is influenced by the actions of the central banks. Furthermore, the reason for ending the analysis in 2019 is because of the Covid-19 pandemic and the recency of the data. The data from the

period 2020-2022 is still fresh, and many sources do not contain the necessary information. Thus, it will be difficult to draw any significant conclusions from these years.

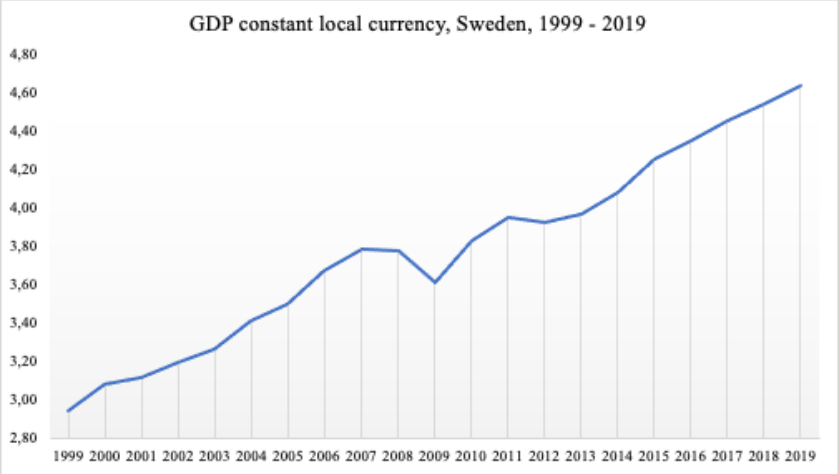
5. Analysis

This chapter will analyse the economic impact on Sweden by not adopting the euro and is divided into three sections. First, the economic growth of the countries is compared by examining GDP growth. The chapter then proceeds by analysing the first mechanism, trade, by investigating the exports and export partners of Sweden and Finland. Lastly, the monetary policy of the two central banks will be scrutinized by analysing the interest rate paths, in particular in response to the GFC, as well as the exchange rates of the two currencies.

5.1 - Economic growth

In the following section, economic growth will be analysed. Figures 1 and 2 display the GDP in constant local currency (LCU) of Sweden and Finland, respectively. Both countries have experienced impressive economic growth in the two decades since 1999. In these years, Sweden grew its GDP by almost 2.8 trillion SEK, or 123%. In 2009, the year after the GFC, the Swedish GDP contracted by 4.34% because of the global recession. The recovery, however, was fast, and already by 2010, Sweden had returned to a pre-crisis output level. As explored in detail below, this was in large part due to the increase in exports which managed to cushion the adverse impact of the crisis. After some years of neutral growth, the Swedish GDP recovered and grew every year following 2012.

Figure 1. *Sweden's GDP, constant local currency*



Note: Data derived from "GDP (constant LCU) - Sweden", World Bank (https://data.worldbank.org/indicator/NY.GDP.MKTP.KN?locations=SE).

The Finnish economy followed a similar growth path as its counterpart. From 1999 to 2019, Finland's GDP grew by €112.94 billion, or 89%. From the peak in 2008 to the low in 2009, the Finnish GDP contracted by 8.07%, almost twice as much as Sweden's. This was in part due to the halt in demand for Finland's main exports; paper, wood, mobile phones, and industrial equipment (The Economic Times, 2010). In contrast to Sweden, which recovered remarkably fast, Finland only managed to return to pre-crisis output levels in 2017. The sluggish growth was the consequence of the weak EMU economy following the sovereign debt crisis, the EU sanctions on Russia, which hit Finland particularly hard, and the fall of Nokia. When the sanctions were enacted, Russia accounted for 8% of Finland's exports, and the trade restrictions reduced exports by as much as 35% (Lyyttikä, 2015). Moreover, the fall of Nokia contributed to the slow recovery. By 2000, at the height of the dot-com bubble, Nokia alone accounted for 4% of Finnish GDP and 21 % of Finnish exports (Linka, 2020), but by 2012, the same share had shrunk to merely 1% of GDP (Ando, 2012).

Overall, the growth trajectories of the two countries were similar between 1999 and 2007, a period of "great moderation" and global economic prosperity (Hakkio, 2013). Both countries went into recession in 2009, but from there, the trajectories diverged. Sweden, with its floating exchange rate and position outside the EMU, recovered much faster than Finland, which faced not only the aftermath of the European sovereign debt crisis and sanctions against Russia, but also experienced structural problems in the decade after the GFC. The overall picture is that Sweden, which grew its GDP by 123%, benefitted from remaining outside the EMU if compared to Finland, which experienced a relatively modest 89% GDP increase in the same period. One needs to be careful with drawing definite conclusions, though, as parts of the Finnish underperformance were caused by domestic variables, e.g. Nokia, and not factors related to the euro. Nonetheless, Sweden clearly outperformed Finland, suggesting that EMU membership would not have been a spotless solution. In the sections that follow, some factors attributed to this development will be examined in more detail.

Figure 2. *Finland's GDP, constant local currency*

Note: Data derived from "GDP (constant LCU) - Finland", World Bank (https://data.worldbank.org/indicator/NY.GDP.MKTP.KN?locations=FI).

5.2 - Trade

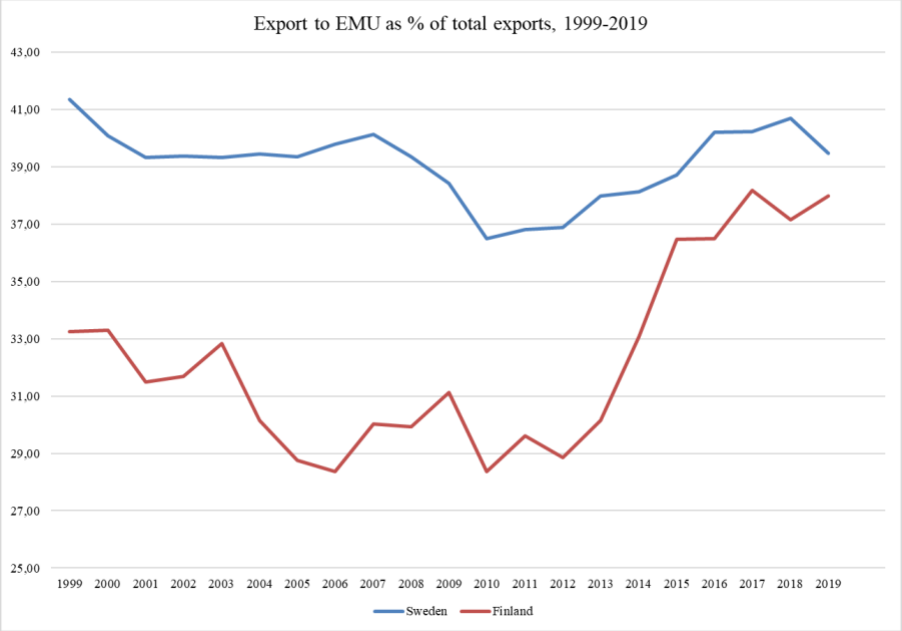
The most cited benefit of adopting the euro is the expected increase in trade. Accordingly, this section will evaluate the export from Finland and Sweden to the Eurozone in the period 1999-2019. First, it will analyse the share of total exports that go to the EMU. This is interesting as it shows the relative importance of the euro area as an export partner for both countries. The expectation is that the share of Finnish exports to the EMU has increased since adopting the euro, while the Swedish equivalent remains the same or decreased. As a second measure, the export to the EMU in absolute numbers, measured in current US$, will be analysed. Due to the different sizes of the two neighbours, the absolute numbers are not comparable. However, the data in figure 4 provides insights through a within-analysis of both countries, as it displays the evolution of export sizes.

5.2.1 - Share of export to the EMU

Figure 3 displays the share of total exports that the EMU accounted for between 1999 and 2019. From the time of the Finnish euro adoption in 1999 until 2007, Sweden consistently exported a larger share of its exports to the EMU than Finland. Finland experienced a drop in exports from the high of 2003 but bounced back in 2006 and increased its share of exports to the euro area through 2007. With the advent of the GFC in 2008, Sweden's share of exports to the EMU shrank, while Finland actually increased its share. Sweden recovered to pre-crisis

levels in 2016, at which point the euro area's share of total Finnish exports surged 10 percentage units and remained at this higher level through 2019.

Figure 3: *Export to EMU, % of total exports*



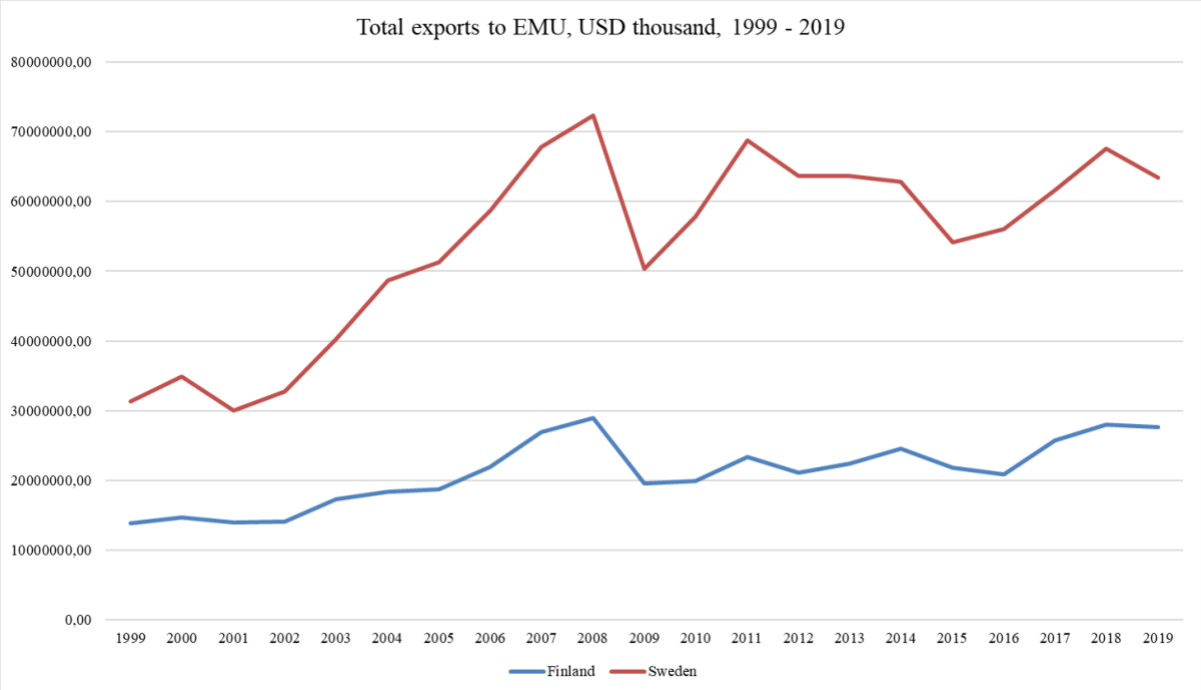
Note: Export data derived from "Trade Statistics", *WITS* (https://wits.worldbank.org/countrystats.aspx?lang=en). The share of exports to the EMU was manually calculated based on country-level data.

The trajectories of the two countries are rather consistent, but the Finnish development post-2014 should be seen in light of Russia's annexation of Crimea in 2014. Up until 2014, Russia was a major trading partner of Finland, receiving on average 8-9% of its exports (WITS). As a response to the annexation, the EU imposed harsh sanctions on Russia, which hit Finland particularly hard (Reuters Staff, 2014). In 2019, exports to Russia accounted only for 5,51% of total exports, a 33% reduction compared to pre-annexation numbers (WITS). Consequently, the share of exports to the EMU naturally increased, contributing to the steep increase that can be observed in figure 3. Sweden, on the contrary, was not remotely as reliant on Russia, which imported only 2% of Swedish exports at the time. Hence, the effect of the sanctions was not as visible. Overall, Finnish exports to the EMU have increased since adopting the euro, while Sweden's has decreased, both according to expectations.

5.2.2 - Total exports to the EMU

Figure 4 shows the value of Finnish and Swedish exports to the EMU between 1999 and 2019. From the outset, Sweden's exports to the EMU grew rapidly. In the years 1999 to 2008, the value of exports grew 131%. The same value for Finland in those years was 109%. In 2009, a year into the GFC, both countries experienced a sharp decrease in exports. After the crisis, however, Swedish export recovered fast and reached its pre-crisis levels already in 2011. This is related to the depreciation of the Swedish Krona as explained below. From the peak in 2011, exports fell slightly but then bounced back in 2019. Finland, on the other hand, did not manage to reach its pre-crisis levels until 2016. The dip in 2011, which was shared by Sweden, occurred in large part due to the eurozone crisis and its aftermath with sluggish growth and below-average demand. The decrease in Finnish exports from 2014 to 2015 is related to the Russian annexation of Crimea as explained, but also to plunging global commodity prices on which Finland relies (Bank of Finland, 2015).

Figure 4: *Exports to EMU, US$ thousands*



Note: Data derived from "Trade Statistics", *WITS* (https://wits.worldbank.org/countrystats.aspx?lang=en). The value of exports to the EMU was manually calculated based on country-level data.

5.2.3 - Discussion

In regard to trade, Sweden seems to have been unaffected by not adopting the euro. The expectation was that by adopting the euro, Finnish companies would face lower transaction costs, and hence trade would increase. On the contrary, by choosing to keep the Swedish Krona, Sweden would not accrue the same benefits. The results, however, paint a different picture. In the period from 1999 to 2019, the two countries performed equally in terms of the value of exports, with Sweden having a slightly better development. Over the two decades, Finland grew the value of its exports to the EMU by 99%, while for Sweden, the same number grew by 102%. In terms of the relative importance of the EMU as an export partner, however, Finland developed according to expectations. From 1999 to 2019, the EMU went from constituting 33% of Finnish exports to 38%. For Sweden, the share fell from 35% in 1999 to 32% in 2019. Still, this may not have been only positive for Finland since a larger reliance on the eurozone as an export partner also made it more exposed to the negativities of the eurozone crisis. Nonetheless, the comprehensive picture of the trade developments is inconclusive. Despite Finland exporting almost six percentage units more of its exports to the EMU than Sweden, both countries doubled the value of their exports to the region. This indicates that Sweden has not been worse off by not adopting the euro.

5.3 - Monetary policy

The loss of monetary policy as a stabilization tool in the face of economic crises was for many the main counter-argument to Sweden adopting the euro as a currency. A common line of thought was that by abdicating monetary policy to the ECB, the *Riksbanken* could no longer act in Sweden's best regards, but would be at the mercy of a central bank that also had to account for 12 other countries. Hence, this section will investigate the actions of the Swedish central bank compared to the European to assess whether independence has benefitted Sweden. The focus will be on the policy interest rate paths (henceforth policy rate), in particular from 2006 onwards, as the GFC created a situation where independence could be meaningful. Second, since Sweden opted out of the euro, the SEK remained a floating currency. In theory, this meant that it could depreciate in times of crisis, for instance during the GFC, to cushion the negative impact. Accordingly, the exchange rate movements of the two currencies will be evaluated to see if they moved according to expectations.

5.3.1 - Policy interest rate

Figure 5 and 6 displays the paths of the respective policy rates of the *Riksbank*, the "reporänta", and the ECB's MRO rate, between 1999 and 2019. The ECB's policy rate was raised to an all-time high of 4.75% in October of 2000 as an answer to the rapid economic expansion and risk of breaking price stability (Hartmann & Smets, 2018, p. 14). It was then lowered to 2% as a response to several global developments, such as the burst of the dot-com bubble, which caused the European economy to contract (p. 15). The interest rate was then gradually increased during a booming period for the global economy, but in response to the onset of the GFC in mid-2008, the interest dropped sharply to a bottom of 1% (p. 26). However, in the following years, Europe experienced a recession with sluggish growth and high unemployment, forcing the ECB to reduce the interest rate to zero percent in a desperate attempt to jump-start the European economy (Allen & Treanor, 2016).

Figure 5: *ECB's main refinancing operations (MRO) rate*

Note: Graph imported from "Euro Area Interest Rate", *TradingEconomics* (https://tradingeconomics.com/euro-area/interest-rate). The data was collected from the European Central Bank.

The Swedish policy rate seems to have moved in tandem with its European counterpart. Like the ECB, *Riksbanken* lowered the interest rate until 2004, only to raise it to 4.25% by mid-2008. With the advent of the GFC and the plummeting global demand, the interest dropped a massive 4% in a matter of six months to a low of 0,25% (Elmér et al., 2012, p. 4). Concurrently, the SEK depreciated greatly as seen in figure 7. Starting in 2010, *Riksbanken* raised the policy rate in response to heightened economic activity, but again had

to begin a cycle of lowering it in 2012 because of inflation being too low. Concerned about not reaching the goal of 2% inflation, the Swedish policy rate went into negative territory, where it remained through 2019 (Munkhammar, 2022).

Figure 6: *The Swedish Riksbank's policy rate ("styrränta")*

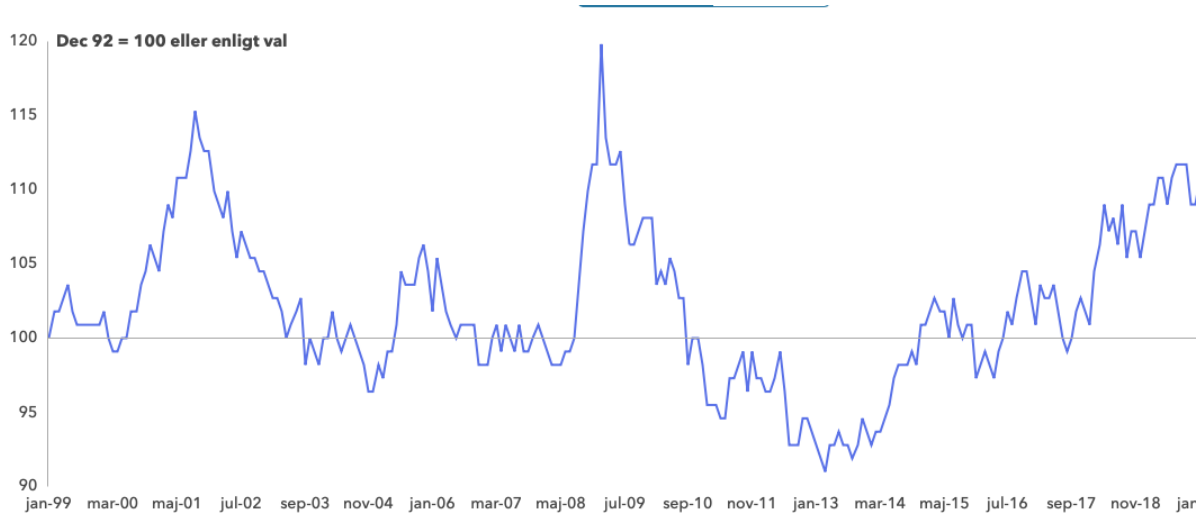
Note: Graph imported from "Sweden Interest Rate", *TradingEconomics* (https://tradingeconomics.com/sweden/interest-rate). The data was collected from the Swedish central bank, *Riksbanken*.

5.3.2 - Exchange rates

Figure 7 displays the exchange rate of the SEK. It depreciated a lot between 2000 and 2001 as a result of economic disturbances in the aftermath of the dot-com bubble. After hovering around par for a few years, the SEK rapidly lost in value from August of 2008 in just 6 months as the world faced the GFC. This quickly reversed, though, and the SEK appreciated against the basket between 2009 and 2013. Since the low in 2013, the SEK has depreciated against the index. A major reason has been the consistently low interest rate policy pursued by *Riksbanken*, which in the long term affects the value of the SEK (SBP Nordic, 2019).

Figure 8 shows the NEER of the euro. After some initial weakness at the turn of the millennium, the euro steadily appreciated until its peak in 2010. A major reason was the depreciation of the US$ (the currency with the largest weight) following a prolonged bear market in the USA, the Iraq war, and doubts about the general state of the American economy (Reuters Staff, 2008). Since the advent of the eurozone crisis, the euro has bounced between 102 and 117 on the index, remaining overvalued against its basket of comparable currencies.

Figure 7: *KIX-index*



Note: Graph imported from "Växelkursutveckling (KIX-index)", *ekonomifakta* (https://www.ekonomifakta.se/Fakta/Ekonomi/Finansiell-utveckling/Vaxelkursutvecklingen-TCW-index/). The data was collected from the *Riksbank* through *Macrobond.*

Figure 8: *Nominal effective exchange rate (NEER) of euro, €*

Note: Graph and data imported from "Daily nominal effective exchange rate" of the European Central Bank (https://www.ecb.europa.eu/stats/balance_of_payments_and_external/eer/html/index.en.html#:~:text=The%20nominal%20effective%20exchange%20rate,selected%20euro%20area%27s%20trading%20partners.).

5.3.3 - Discussion

As expected, Sweden seems to have benefited greatly from having an independent monetary policy and a floating currency. *Riksbanken* has been able to set interest rates that suit domestic economic conditions, and the SEK depreciation certainly guided Sweden out of the financial crisis in 2008. There is, however, a case to be made that *Riksbanken's* monetary policy has *de facto* not been independent. This argument was raised by Reade and Volz (2009), who argued that Sweden's monetary policy was not independent despite remaining outside the EMU. Comparing the two interest rate paths, it seems that the ECB and *Riksbanken* barely differ in their actions. While the absolute values are slightly different, the trajectories mimic each other to a large extent. When the ECB lowers its interest rate, the SEK appreciates, making Swedish exports less attractive. Hence, as Schück (2014) explains, *Riksbanken* does not want a wide gap between the two rates, and thus often follows in the footsteps of the ECB despite having the mandate to decide by itself. The similarity in the actions of the two central banks is, however, not surprising when considering that a majority of Swedish trade is with the euro area, and thus the country is affected by developments on the continent.

In terms of the SEK exchange rate, the analysis shows that it was very volatile during 2008-09, something which was only possible because of its floating nature. The fall of the SEK was what enabled Sweden's strong recovery from the crisis (Suni & Vihriälä, 2014, p. 280). On the contrary, the euro's value appreciated, making exports less attractive abroad. There are doubts, however, whether the exchange rate moved at the will of the Swedish central bank. Suni and Vihriälä (2014, p. 280) explain that the SEK most likely depreciated due to external factors and that it only explains Sweden's superior recovery to Finland until 2010, after which structural problems in Finland caused its lethargic recovery. This is echoed by *Riksbanken* itself, which explains that it has no target value for the SEK and that changes in the exchange rate are controlled by the financial markets in the short term (Sveriges Riksbank, 2011). It seems, then, that Sweden benefitted from not adopting the euro, but not in the way that was expected. The possibility of depreciation enabled the recovery from the GFC, but the actions of *Riksbanken* seem to not have been completely independent from the ECB.

6. Discussion

With the Swedish Krona rapidly depreciating against the euro, the debate on EMU membership has awoken again after being dormant since the 2003 referendum. Countless macroeconomic developments have occurred in both Sweden and Finland, but with the subject of the euro re-entering the front page, the results of the two respective decisions deserve renewed attention. Equipped with data from the past two decades, this thesis has analysed how the economic growth of Sweden has been impacted by not adopting the euro to shed new light on the debate that for most of the period has been under the radar.

Between 1999 and 2019, Sweden's GDP outgrew Finland's by 34 percentage units. The first hypothesis, that Finnish GDP would grow more due to the trade increase the euro affords, was not supported by the analysis. Exports from both countries doubled over the period, indicating that Finland has not outperformed Sweden. The EMU's share of Finnish exports, however, grew over the decades, as expected, while for Sweden, it decreased. Yet, as of 2019, Sweden still exported more of its exports to the EMU than Finland. The second hypothesis, that the Swedish economy benefited from being flexible when experiencing economic shocks, is supported by the analysis. The ability to control monetary policy and a floating exchange rate was a recipe of success that allowed Sweden to recover from the GFC and contributed to Swedish GDP growth outperforming Finland's. Overall, it can be concluded that Sweden seems has benefitted from remaining outside the EMU.

The two countries were analysed in an MSSD study, utilizing both descriptive analysis and process tracing, along three different variables: economic growth, trade, and monetary policy. A strength of combining the two approaches is the ability to describe the general development over 20 years while explaining country-specific developments through the detailed analysis of process tracing. By explaining in detail the data provided by the descriptive analysis, I have been able to discern the impacts of the euro on economic performance in contrast to country-specific developments. Moreover, because of the similarity of Finland and Sweden, the findings provide a viable foundation for a future debate on Swedish EMU-membership. Analysing the two neighbours allows for a comparison of how the euro mediates the impact of global phenomena that affect both countries. This provides insights into how Sweden might have been affected had it adopted the euro in a manner not possible by only examining nation-specific developments.

There are, however, limitations to using this approach. First, as with most qualitative studies, the results are not always applicable to other cases. While there are some countries

that share Sweden's position as an EU member, but not of the EMU, there are domestic differences that could alter the calculus for each individual country. For instance, Sweden has, since the 1990s financial crisis, had a credible monetary policy and a reliable inflation target. Other countries, such as Czechia and Hungary, have historically had higher inflation and could potentially benefit more from relinquishing monetary policy than Sweden would. If future research is to be done on the euro, one should be attentive to country-specific characteristics that might alter the effects of adopting the euro. Second, future research should expand the timespan to also include major crises like the Covid-19 pandemic and the Russian invasion of Ukraine. Both these events had major effects on the European and global economy and could offer additional instances to test the hypothesis on monetary policy in addition to the GFC. Financial crises often have different characteristics, and it is not certain that because of Sweden recovering from the GFC, it will happen again.

Ultimately, this study contributes to the debate on the potential EMU membership of Sweden. Putting old arguments under the light of recent data, this research has shown that Sweden has done well despite standing on the sidelines in the euro collaboration. While the European project has in many ways changed since the 2003 referendum and might change more in the future, Sweden so far has no reason to regret its decision. Whether Sweden will adopt the euro or not only time will tell, but based on this thesis, economic performance needs to be one of the considerations.

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