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Getting into debt and exporting: considerations on 'growth models' from the study of the Swedish economy

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Abstract
In the literature on financialised growth, two models are often presented as complementary but opposing: some countries drive their domestic demand through debt and others grow on the basis of exports. In this research we identify Sweden as a country that, in the midst of the financial euphoria before 2008, combines both models simultaneously. We identify two sets of elements that make this case possible. First, the improvement in price competitiveness and export sophistication, accompanied by a commensurate economic policy and in a context of strong international demand. Second, the form taken by financialisation in the country, with a record increase in private debt that does not feed demand but rather investment in risky financial assets. In terms of international political economy, the Swedish case shows the need to associate growth patterns with the interaction of national and international socio-economic and institutional factors. It also poses challenges for identifying forms of growth associated with financial and economic instability.

Key words: growth models, Sweden, debt, trade balance
JEL Codes: E51, F43, P51,

Introduction

The literature on financialised growth regimes was consolidated in the recent 2010s from the observation of macroeconomic dynamics observed in (and across) countries - mainly developed ones - in the 2000s. The number of 'financialised' models identified varies from research to research. But there does seem to be a consensus around the existence of two 'extreme' and opposing growth models. On the one hand, debt-led countries (United States, Spain, Greece, Italy...) took advantage of financial expansion to capture foreign inflows to finance domestic consumption and investment. Countries with an export-led growth models (Germany, the Netherlands, Austria...), on the other hand, based their growth on foreign demand (e.g. Stockhammer, 2009; Oatley, 2011; Hein & Dodig 2012, Stockhammer & Onaran, 2012)

While these models are opposites - one is based on credit-driven domestic demand and the other on external demand - several papers have stressed that, at the same time, there is a complementary relationship between them: debt-led growth-model countries feed the demand for the output of the group of exporting countries. Meanwhile, this second group of countries invests in the debt-led countries (Hein & Dodig, 2012; Stockhammer, 2009; Stockhammer & Onaran, 2012)

Later, based on other research and empirical observations, Barredo-Zuriarrain (2019) reformulated the relationship of financial complementarity between countries with debt-led and export-led growth models. First, the increase in debt levels in the former group was essentially a phenomenon internal to domestic financial systems, made possible mainly by endogenous credit creation. Besides, the author does not present the imbalances as an indicator of international capital flows, but as a very likely, but not automatic, effect of the interaction of countries with unequal evolutions of aggregate demand, cost structure and productive structure, among other factors. In fact, in line with what Hume and Sentance (2009) and Borio and Disyatat (2011) point out, Barredo-Zuriarrain (ibid, p.14-16) notes the possibility of a country simultaneously combining the characteristics of the export-led and debt-led models: rising debt levels that boost domestic demand and large and even growing trade surpluses.

In this research we identify Sweden as a country with a 'debt&export-led' growth model between, at least, the financial expansionary phase of 2002 and 2008. The final

purpose is to study what differential elements have made possible the combination of the two demand drivers of extreme financialised models: domestic and foreign debt.

We find two main complementary explanations for the Swedish ‘debt&export-led' case. Firstly, a price-competitive and export-complex industry driven by a commensurate regulatory framework and in a context of strong international demand. Secondly, the way financialization unfolds in the country: the leveraging process has not replaced wages and profits as the main source of demand. It has boosted demand and inflation in the real estate sector but, in aggregate terms, it has mainly been oriented towards financial investment, especially in risky assets.

The existence of heterogeneous cases of countries with 'debt&export-led' growth models would have at least two clear implications in terms of international political economy. The first leads us to underline the need to reinforce macroeconomic analyses with the study of the institutional characteristics and modes of regulation of each state. The financial euphoria not only allows for the complementarity of two extreme models at the international level, but also within the same country. The fact that a country whose domestic demand is driven by debt does not accumulate growing trade deficits, but vigorous surpluses, means that the institutional factors specific to that country, the economic policies adopted or the international context (or a combination thereof) must be taken into account when understanding this particular behaviour of its trade balance.

Secondly, for the same reason, the development of an export-led growth pattern in a country is compatible with the internal development of a financial exuberance of booms and speculation. In terms of instability, it should not therefore be ruled out that future financial crises may be epicentred in exporting countries.

The article will be structured in five sections, followed by our concluding remarks. First, we will review the main contributions on financialised growth models as well as on the categorisation of the Swedish economy. Second, we apply several filters on credit, net exports and GDP between 2002 and 2008 to find a country that could have experienced 'debt&export-led' growth in the financial expansionary phase of 2002-2008. The different criteria lead us to select Sweden. Subsequently, we will analyze the macroeconomic factors that lie behind this combination of the two main drivers of growth in financialised models: domestic and foreign debt. In a fourth section, we delve deeper into the socioeconomic and institutional factors that explain the country's

particular macroeconomic performance in the period under study. The last section concludes.

1- Demand-side growth models and financialization

The crisis of the 1970s revived a historical debate in international political economy about the effects on economic growth caused by changes in the level of wages. From a classical/Marxist approach, it was noted that wage increases negatively affected the profit margin, which could lead to a fall in the level of capital accumulation. From a more Keynesian perspective, another set of papers claimed that wages are not only an operating cost for firms, but the main source of aggregate demand; a wage increase would therefore increase investment through the positive effect on the level of firms' sales and capacity utilisation.

Inspired by this controversy, Bhaduri and Marglin proposed in their seminal article of 1990 a classification that has come to be widely used in the following decades and even today by Kaleckians and post-Keynesians alike. According to this model, demand-side growth regimes can be divided into two types. On the one hand, in a stagnationist (or wage-led) economy, the positive effects of wage increases on aggregate consumption and investment outweigh the negative effects of a fall in the profitability and international competitiveness of the economy. In exhilarationist (or profit-led) economies, on the other hand, the negative effects of a wage cost increase on aggregate investment and the trade balance are larger than the positive effects on consumption.

This theoretical approach has served as a starting point for many econometric studies to classify countries and regions as wage-led or profit-led. Although the variety in econometric instruments, periods and variables leads to a huge diversity in the results between research studies, the empirical evidence shows that, in general, developed countries are wage-led. Without wishing to develop a theoretical review of the literature on demand-regimes (for that purpose see, e.g.; Taylor, 1991; Nikiforos & Foley, 2012; Pérez, Caldentey, & Vernengo, 2013; Blecker, 2016), it is worth highlighting the emergence of a number of works, especially since the 2008 crisis, which point out that private debt has proved to be a variable perhaps as important as factor distribution in the understanding of aggregate demand behavior and its effect on economic growth

(Leamer, 2007; Fiebiger, 2018; Kapeller & Schütz, 2015; Stockhammer & Wildauer, 2016). The question underlying much of this research was the following: if the application of the Bhaduri Marglin's framework to many developed economies showed that most of them were wage-led, what was the reason for the consolidated growth phase since the late 1990s and into the 2000s, while the wage share was falling? The answer lies in financial liberalisation and its effects on aggregate demand patterns, of which we want to point to two. First, the growing role of - mainly private - debt as a driver of aggregate demand. Secondly, a high mobility of capital that allows for the temporary widening of trade imbalances between countries.

This led to the development of at least two opposing models that made possible relatively strong levels of growth in the economies concerned between 2002 and 2008. These models are the debt-led growth model and the export-led one. In the former, consumption and domestic investment are the economic engines; however, these are largely fuelled by increasing levels of credit (and other types of debt issuance). The paradigmatic cases of this regime are the US and Spanish economies, where private leverage was further reinforced by the wealth effect generated by asset price inflation (Stockhammer & Wildauer, 2016). In the second model, it is external demand - exports - that drives growth. Indeed, the countries with this regime - Germany and China, mainly - benefited in part from the strong demand coming from debt-led economies.

More than ten years later, substantial literature continues to try to describe the complex relationships between the countries of these two models and even the differences between countries classified within each growth model. Within the vast literature in this respect, in this research we want to focus on two points of discussion.

One of the debates has revolved around the possible reasons that have led the different countries involved to adopt one or the other financialised model. In this sense, and for the case of the Eurozone, for example, Flassbeck and Lapavitsas (2013) or Bibow (2013) among others, point to wage control policies as key aspects that allowed countries in the core of the monetary union to accumulate gains in price competitiveness in the first decade of the 2000s and, ultimately, to improve their trade balance, mainly vis-à-vis the Eurozone periphery (Spain, Greece, italy, Portugal…). For other authors (see for instance, Simonazzi et al. 2013, Storm & Naastepad, 2016; Grabner et al 2017, Kohler & Stockhammer, 2021; Stockhammer & Kohler, 2022) the evolution of non-price competitiveness is also key. Regarding the debt-led model, financial deregulation, the creation of a market and monetary union in the case of the

Eurozone and the wealth effect of asset-price inflation are often cited as drivers of the credit boom.

The second point we want to focus on are the links between the financial and trade dimensions of the countries with these two models. The demand-side approach to growth models integrates national economies and their trade imbalances into a systemic analysis, in which national realities interplay with global economic dynamics (Oatley 2011, Blyth & Matthijs 2017). That said, although establishing causal relationships is complex and depends on casuistry, it is worth clarifying certain aspects of the relationship between financial expansion and rising debt levels in debt-led countries, international flows and surplus trade-balances in export-led countries.

In Hein and Dodig (2012), Stockhammer (2009) and Stockhammer and Onaran (2012), it is suggested that there is a complementary relationship: demand from debt-led countries fuels trade surpluses of export-led countries, while capital from that surplus drives financial expansion in debt-led countries.

Barredo-Zuriarrain (2019) reframes the relationship by recalling that modern credit systems can trigger financial expansions without the need for external capital. Therefore, the issuance of credit in debt-led countries at high rates is a fundamentally endogenous phenomenon of their financial systems. Admittedly, the arrival of short-term profits-seeking foreign capital can reinforce the expansion and possible speculative bubbles that emerge, as was the case with the capital inflows to Spain and the United States before 2008. In any case, the volume of this financial capital flowing into debt-led countries is more significant than the value of simple trade - or even current account - imbalances. In this sense, the trade imbalances that emerge are not the indicators of cross-border capital flows, but the likely result of the interaction between countries with very heterogeneous levels of demand, wage and price changes and productive sectors.

According to this reinterpretation, there is still a trade-off between debt-led aggregate demand and the trade balance outcome. However, it is a *likely* trade-off, not an *automatic* one. In other words, along with other authors (Hume & Sentence, 2009; Borio & Disyatat, 2011), Barredo-Zuriarrain (2019) stresses the possibility that a country or region may have a strong debt-driven demand at the same time as a significant surplus or even a growing trade balance. This is the case of Sweden in the phase of financial expansion preceding the Great Financial Crisis.

The Swedish model has already been repeatedly analyzed in recent literature as a particular case of growth in recent decades. Under profound changes since at least the 1970s, there is no consensus on what makes Swedish national growth particular. However, it appears frequently in debates as a country that, in contrast to others, has been able to adapt a competitive domestic industry while private consumption levels increased and a generous welfare state developed (see, e.g., Bergh, 2014; Steinmo, 2010).

Baccaro and Pontusson (2016), for their part, point out that, unlike Germany, Sweden has been able to combine since 1994 the boom in domestic consumption with growing surpluses in its trade balance thanks to the lower price sensitivity of its exports. This has been countered by Hein et al (2020) and earlier by Hope and Soskice (2016), who locate the country closer to Germany's 'simple' export-led model (see also Stenfors, 2016). Buendía and Rey-Araujo (2021), for their part, qualify that the export-led aspect has become more acute since the 1990s to the detriment of domestic demand; they attribute this to institutional changes that affect at the root the post-Fordist symbiosis between the Welfare State and capital accumulation in the country. For their part, Belfrage and Kallifatides (2018) warn that said country is moving towards a debt-led model, especially since the 2008 crisis, within the framework of a finance-dominated accumulation regime. Erixon and Pontusson (2022) question the 'financialization' identified by Belfrage and Kallifatides (2018); however, they also highlight the rise of debt in what they call a shift from the 1994-2007 "export-led balanced growth model" towards the 2010s "consumption-led balanced growth model."

Following the line of research set out by Hein and Stockhammer, we have limited ourselves to studying the early years of the 21st century, the period of greatest global financial expansion in recent decades. However, when it comes to understanding the reasons for the singular 'debt&export-led' path in Sweden during this period, we understand that it is due to a combination of historic factors directly related to the structure of the country's economy. These factors affect the specific form taken by financialization in the country, the macroeconomic dimension as well as the national industrial policy.

2- . Criteria for filtering countries with a ‘debt&export-led’ growth model

In general terms, it can be assumed that a country is likely to worsen its trade balance to the extent that credit increases its demand above that of other partners. At least three reasons can explain this trade-off. First, part of the new demand is oriented to the purchase of foreign goods and services. Second, increases in aggregate demand levels are usually associated with rising price and wage inflation; therefore, credit-driven demand can lead to a gradual loss of price competitiveness. A third reason, perhaps less intuitive, has to do with the speculative bubbles that sometimes drive a country's growing indebtedness; the orientation of speculative investments towards financial assets or non-tradable goods can divert funds away from the development or maintenance of non-price competitive industries and, ultimately, negatively affects the exporting complexity of countries.

Barredo-Zuriarrain (2019) proposes a first preliminary empirical approach to observe this general negative relationship between debt levels and the external position in many countries. Thirty countries, accounting for more than 80% of world GDP, are taken over the period 2002-2020. For each country, a scatter plot is made relating the current account and the total credit to the non-financial sector over GDP, as a proxy for the evolution of private debt. The 2002-2016 frame includes the phase of financial expansion and growth (until 2008) and the subsequent recession that many of these economies experienced. Moreover, during this expansionary phase and up to 2008, the largest external imbalances in recent history took place.

We make a similar contrast as Barredo-Zuriarrain (2019) but introduce three relevant changes. First, we extend the time to the 2000-2020 period. More important, on the horizontal axis, since we want to focus on debt-driven private demand, we exclude public institutions and show the quarterly increase in the 'Credit to Private Non-Financial-Sector/ Gross Domestic Product' ratio (hereafter, CPNFS-GDP). Finally, on the vertical axis, the values of the trade balance in relation to GDP are shown for each quarter.

A glance at the results allows us to observe that, in general, larger increases in the CPNFS-GDP ratio are associated with worse net export performance. But this is not the case in all the economies studied: in developed countries such as Austria, Ireland,

Sweden, Norway, Switzerland... the dispersion of the points does not show a clear and negative relationship between credit growth and trade balance.

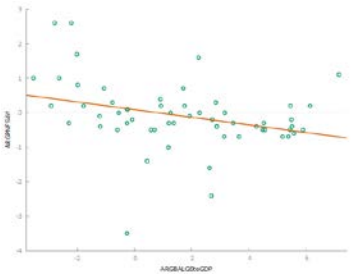
However, from this country-by-country observation we can neither confirm a general trend in the relationship between the variables nor even identify 'rare' countries in which debt and net exports evolve in the same direction. And this is because the previous contrast raises several problems.

First, changes in the trade balance have been analyzed on the basis of the value of a single variable – annual changes in CPNFS-GDP ratio – and over the same year, excluding, among other things, the possible lags of the latter variable on the former. In other words: increase in liquidity due to access to growing credit may not have an immediate effect on imports.

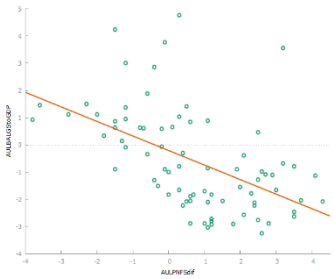
Regarding the credit-to-GDP ratio, we consider it a limited but adequate proxy to measure the indebtedness dynamics of the different sectors of a country. However, although the selection of the period 2002-2016 is a good choice for analyzing the results of the expansionary and recessionary phases, it has several drawbacks. First, it is a long period in which structural adjustments took place and affected the external position of countries perhaps to a greater extent than the financial crisis. On the other hand, the increase in the CPNFS-GDP ratio was prolonged in many countries beyond 2008 by countercyclical fiscal policy and unconventional monetary policies. However, much of this credit was probably not dedicated to finance consumption and investment as before 2008, but for serious liquidity and solvency problems. Therefore, we should rather focus on studying the relationship between private indebtedness and trade balances in the expansionary phase (2002-2008), a period in which the new debt made it possible to finance the high levels of consumption and investment of the economies involved.

Figure 1: Quarterly changes in the Credit toPrivate Agents-to-GDP ratio and trade balance, 2002–2020.

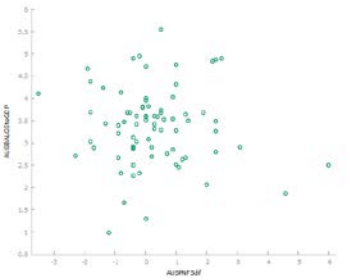
Argentina



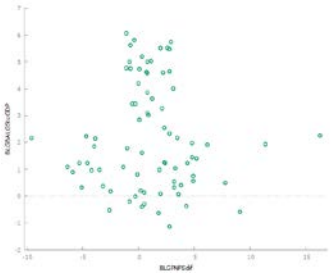
Australia



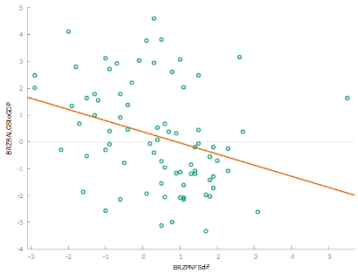
Austria



Belgium



Brazil



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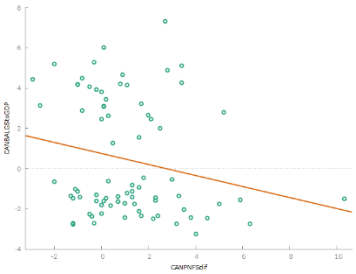

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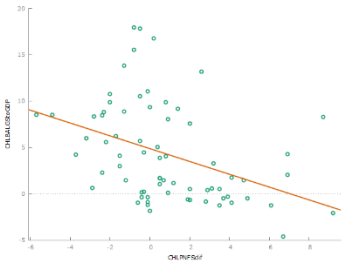

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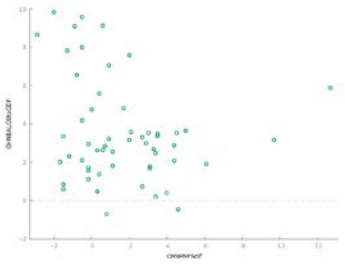

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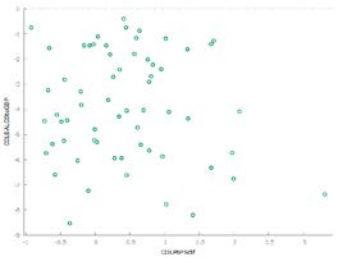

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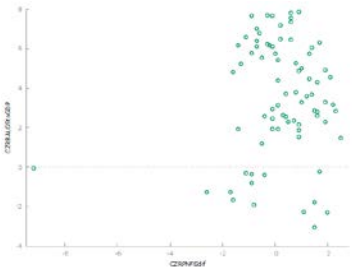

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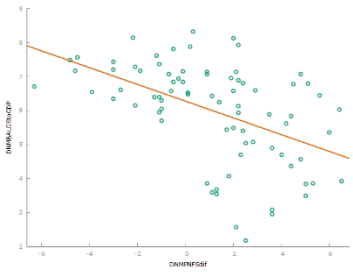
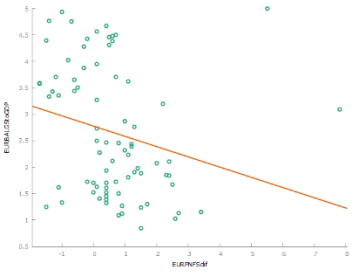


Euro Area



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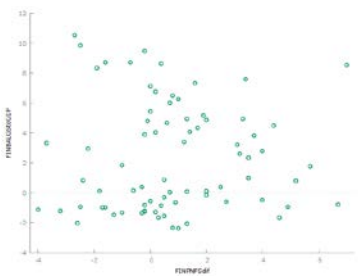

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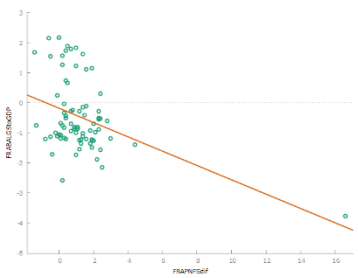

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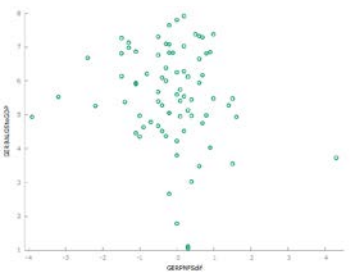

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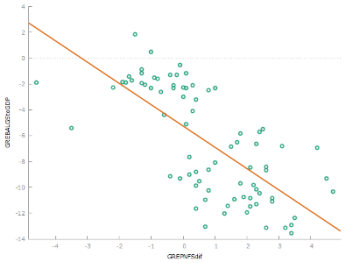
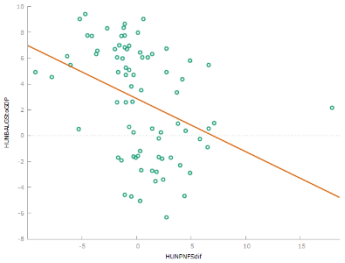


Hungary



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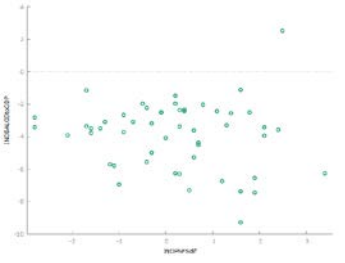

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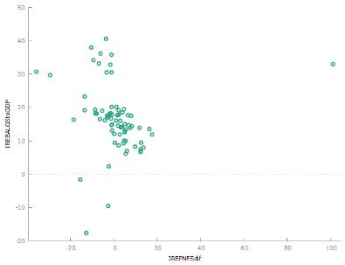

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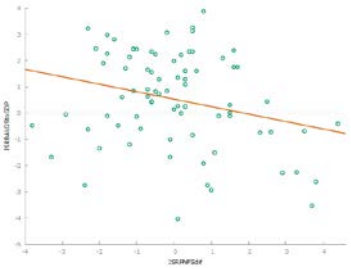

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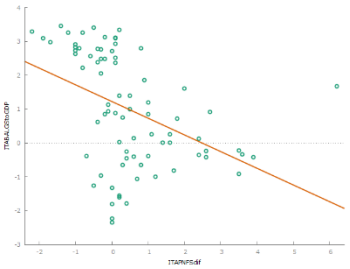
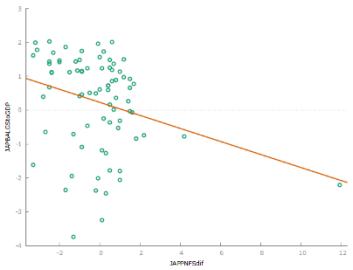


Japan



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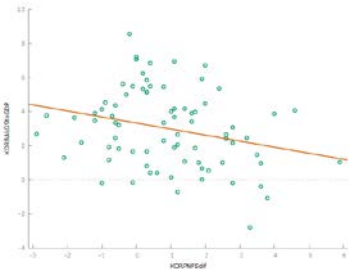
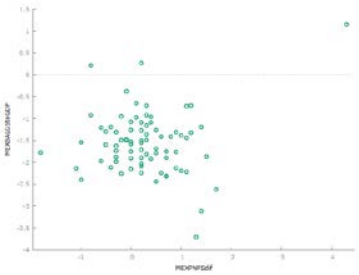
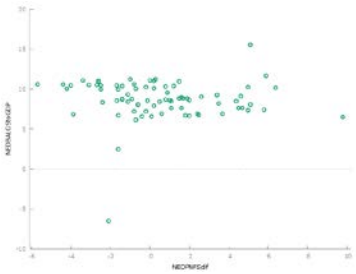


Mexico



Netherlands



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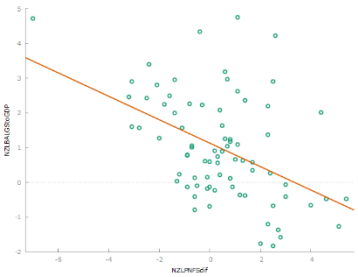

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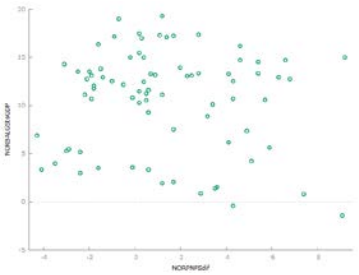

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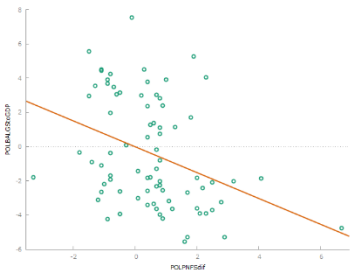
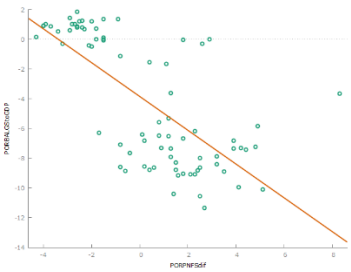
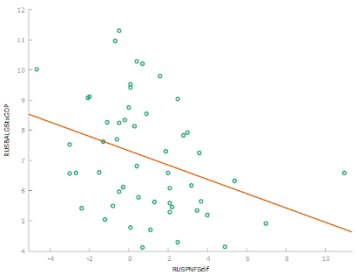


Portugal



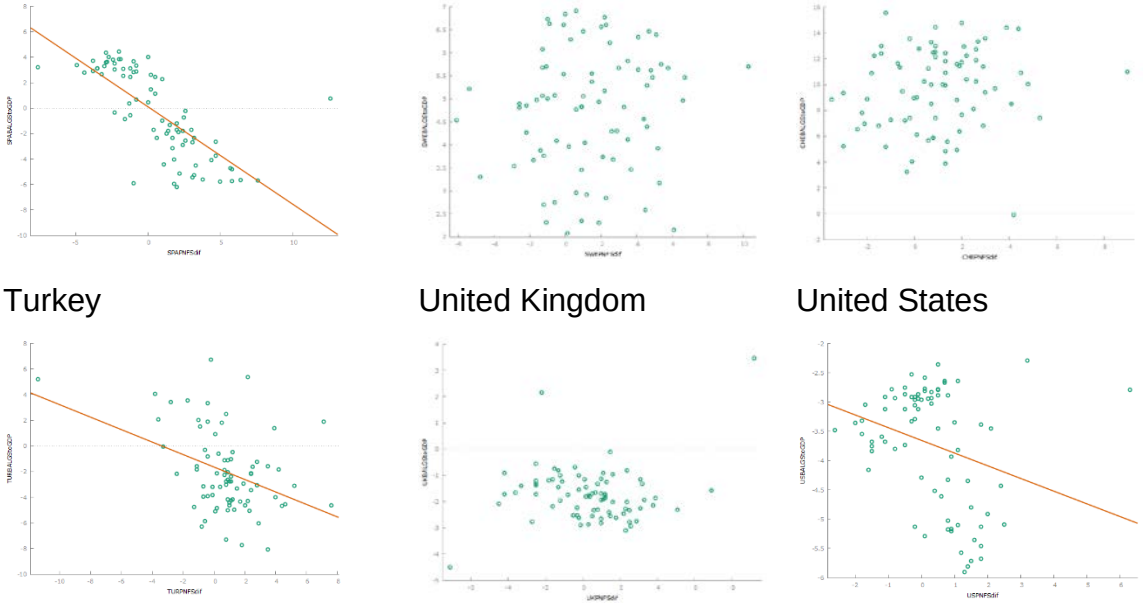
Russia



Spain

Sweden

Switzerland



Turkey United Kingdom United States

Source: Own elaboration from Bank of International Settlements (BIS) and OECD online data.

Finally, perhaps the most important point is that the country-by-country analysis prevents us from understanding the interrelationship between the different national trade balances and demands. Many of the countries integrated in this analysis are relatively synchronized in the same phenomena of expansion (2002-2008) and recession (2009-2016) over the last two decades. However, given that one country's deficit is another's surplus, it is impossible to see a simultaneous deterioration of national trade balances until 2008 and a subsequent collective improvement from 2009 onwards.

For all these reasons, in order to verify that credit expansion generally affects the trade balance negatively, and also trying to find countries where this trend has not been observed, it is useful to analyze the countries together, in the financial and economic expansionary phase (2002q1-2008q4). This is what we show in Figure 2. Again, a similar contrast we find in Barredo-Zuriarrain (2019). However, in addition to the differences mentioned above, we add here another one in relation to the vertical axis: instead of directly taking data from two concrete quarterly data, in order to avoid distortions derived from the volatility of the trade balance from one quarter to the next, we take the initial and final values from the average of the last four periods of each moment: 2001q2-2002q1 for the initial period and 2008q1-2008q4 for the last one. Each point represents a country.

The results confirm the expected trend: countries with higher relative credit growth tend to suffer a greater deterioration in their trade balance. Thus, for example, we see Spain (with an increase of 85.3 points in credit relative to GDP and a deterioration of 2.56 points in the trade balance) and Greece (52.3 and -1.7 respectively) as paradigmatic cases of debt-led economies during that period. It is worth noting that these two economies were already starting out in 2002 with trade balances in clear deficit. The figure also shows Ireland as a country with a strong increase in debt (153.1 points) and a sharp deterioration in the trade balance (7.8) in the same period. However, in this case, the effect of particularly advantageous fiscal conditions on both variables compels us to be cautious in interpreting the data. The United States also shows this trend (28; -1.5), but with levels of indebtedness far from those previously discussed. At the other extreme, we see the cases of countries with more modest or negative evolution of credit like Israel (1; 1.9), Germany (-13.3; 3.6) and Switzerland (10.4; 5.4). Between these two extremes, we find several countries with intermediate developments in both variables. Among them, we find countries that Hein et al (2020) define as 'weakly export-led', such as the Czech Republic (12.5; 2.7) or 'domestic demand-led' such as Poland (26.3; -1.6) or France (21; -2.7).

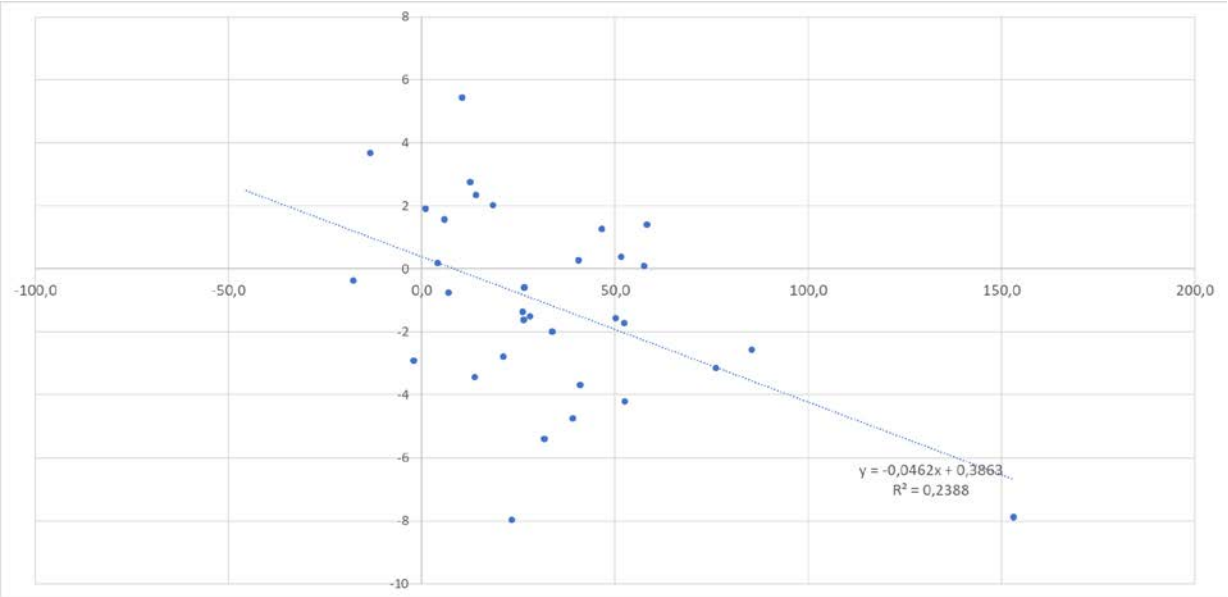
More 'rare' cases are those combining low (or negative) credit-to-GDP growth and trade balance deteriorations - such as Japan (-17.7; -0.37) or Colombia (-2.2; -2.9) - and those with a strong credit expansion but an improvement or maintenance of their positive trade balance. As we are interested in finding countries that can meet the main characteristics of the debt-led and export-led models, we will look at this second group of 'rare' countries.

To finally determine which countries can be classified as cases of an ‘export & debt’ growth model, four filters with their corresponding thresholds must be established. A financial one should set a minimum level of indebtedness; , two others would measure the level and evolution of the trade balance and, finally, a minimum level of economic growth has to be settled for both the internal and the external demand as well as for total aggregate demand.

Regarding the first, it is not easy to determine a threshold of credit-to-GDP growth over time at which a country can be considered as having a debt-led growth model. Since the United States - with a 28-point increase in the relative credit ratio in 2002-2008 – is the best-known example of such a model in the literature up to 2008, we have taken the modest 30-point increase as the lower limit. Countries that respect this condition

are: Australia, Denmark, Greece, Hungary, Ireland, New Zealand, Norway, Portugal Spain, Sweden, the United Kingdom and the United States. To that we must add two filters in relation to the trade balance. First, we must remove from the list those countries that have worsened their trade balance. But in addition, as we are looking for countries whose growth has been boosted by positive and significant net exports, we must also exclude countries that, although they have improved, had trade deficits in 2002-2008. With this triple condition - growing level of credit, favorable evolution of the trade balance, positive levels of net exports - we are left with two countries: Norway and Sweden.

Figure 2: Change in the Credit to Private Agents over GDP ratio and in the current-account balance for several countries, 2002–2008. Source: Bank of International Settlements (BIS) and OECD online data and own elaboration.

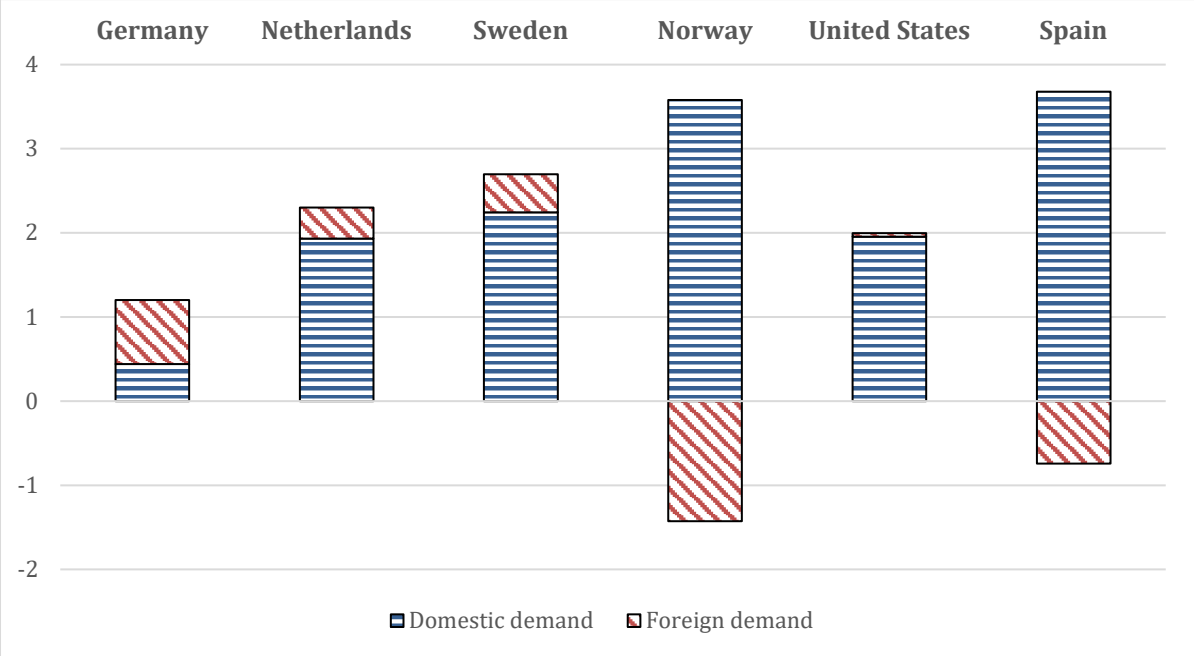


Source: Own elaboration from Bank of International Settlements (BIS) and OECD online data

However, if one tries to find countries with potential 'debt&export-led' growth patterns, one should not only pay attention to debt levels and the external balance, but also to whether these have actually driven a sufficiently high level of real growth. Sweden,

between 2002 and 2008, has not had significantly high growth levels. However, as seen in Figure 3, when comparing Sweden with countries typically classified as 'debt-led' and 'export-led', two things become apparent. First, with an average annual growth rate of 2.76%, Sweden has a higher growth rate than export-led countries such as Germany and the Netherlands, and than debt-led countries such as the United States. In terms of the composition of this growth, moreover, Sweden has a more dynamic domestic demand than the United States and a higher contribution from the external balance than even the Netherlands.

Figure 3: average annual contribution to real growth (2002-2008)



Source: Own elaboration from OECD database

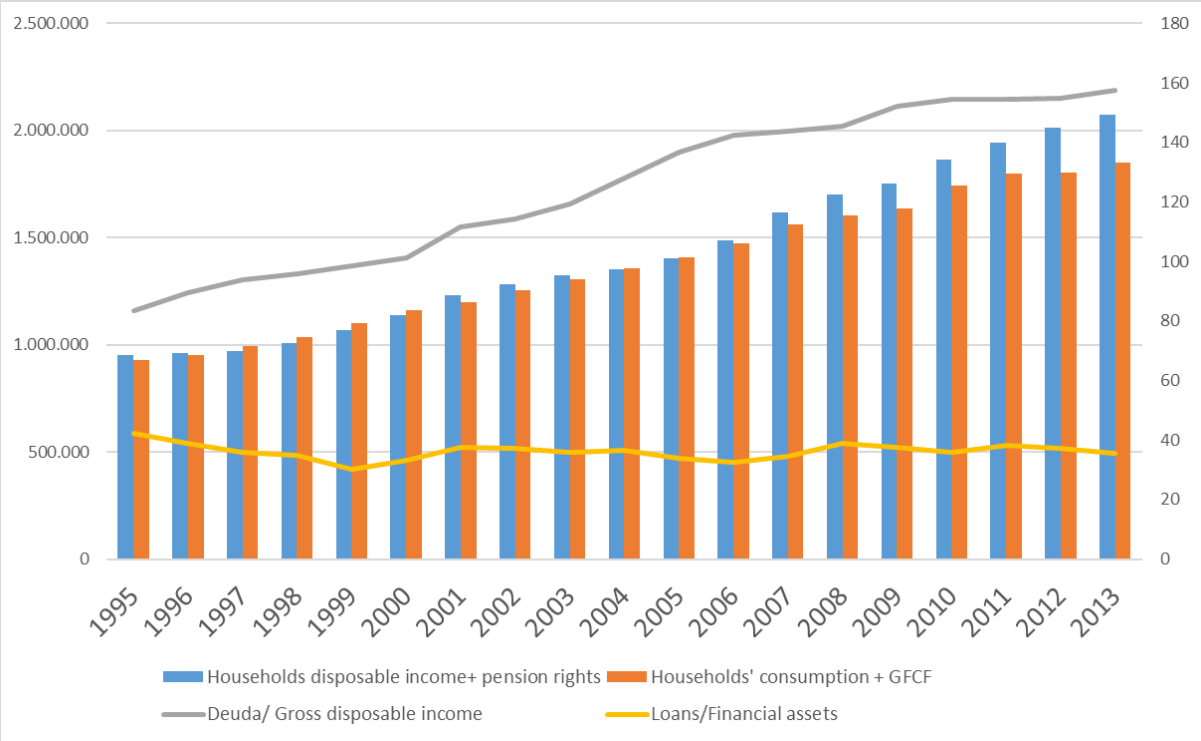
Norway, however, experiences, in real terms, a negative contribution of its external balance to total growth in the same period 2002-2008. Although we do not elaborate on this point, the difference between the nominal (favorable) and real (declining) evolution of its trade balance may be due to the increase in the price of oil during the period under study. In any case, after adding the ‘real’ growth filter, we discard Norway and stick with Sweden.

3. A macroeconomic approach to understand the Swedish 'export&debt' growth

The previous section began with three general assumptions about the negative impact of debt levels on the trade balance: rampant indebtedness can boost spending on imports for both households and firms, inflate prices, and divert investment away from tradable non-price competitive sectors.

Before any particular case, we must ask how Sweden has fared in these three respects. Let us start by assessing the extent to which, in aggregate terms, new debt of non-financial private agents has translated into booms in aggregate demand. To do so, we contrast in Figures 4 and 5 the income of households and non-financial firms with their use in final consumption and investment. In addition, we measure the evolution of the financial positions of both sectors.

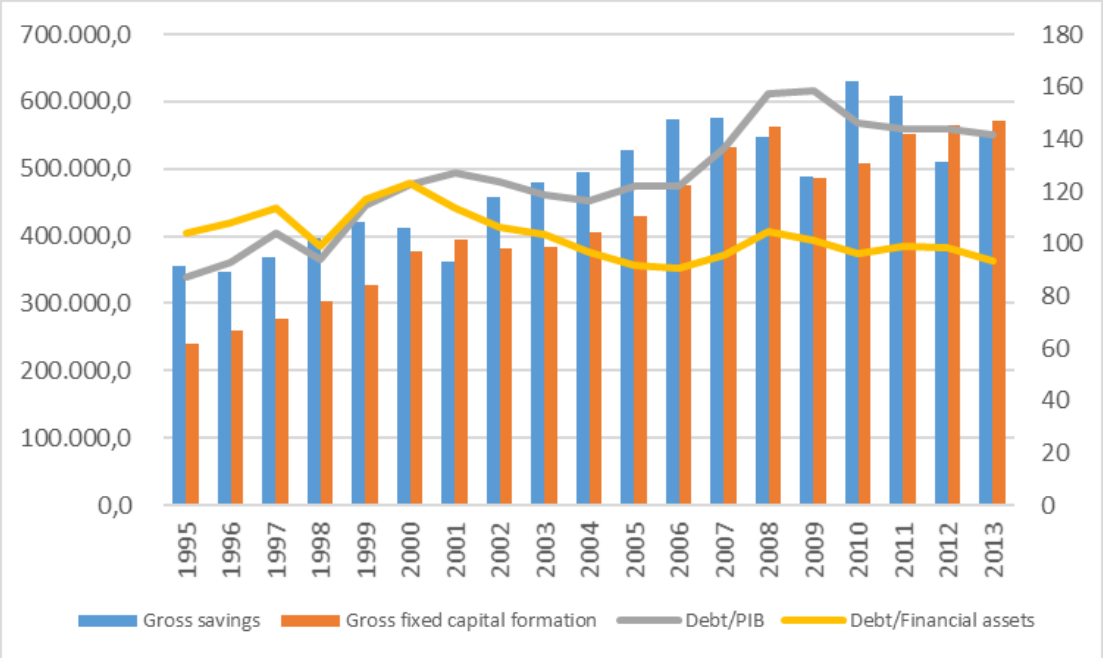
Figure 4: Financial positions, and use of revenue by households in Sweden (1995-2013)



Source: Own elaboration from OECD database

For both households and non-financial corporations (NFCs), there is a clear process of indebtedness with particular strength since 2005 in the case of NFCs. However, aggregate demand levels of households and non-financial corporations do not generally soar above disposable income. In the case of households, although in specific years consumption and investment add up to more than income, they generally record fairly balanced or even positive net lending positions. Non-financial corporations, on the other hand, maintain investment levels clearly below disposable income, which largely explains a solid surplus lending balance.

Figure 5: Financial positions, and use of revenue by non-financial corporations in Sweden (1995-2013)



Source: Own elaboration from OECD database

This coexistence of rising relative debt levels and positive net saving levels is reflected in the evolution of total financial assets. The ratio of debt to total financial assets is stable or even decreasing. In other words, in aggregate terms, it can be stated that the increasing level of debt does not drive aggregate demand but is largely oriented towards the acquisition of financial assets. If households were disaggregated by income level, however, we would likely observethat the pattern has not been homogeneous. In fact, as we will see in the next section, there is statistical evidence that shows for the Swedish case an unequal distribution among households in the ratio of mortgage debt to disposable income (Belfrage & Kalifatides, 2018, p.892). In any

case, integrating the gross dimensions of indebtedness and change in financial assets suggests that increasing levels of debt do not necessarily translate into strong boosts to aggregate demand. This is the case in Sweden.

The second reason mentioned to understand the negative relationship between indebtedness and the evolution of the external balance lies in the possible effect that this may have on the loss of price competitiveness, either due to the increase in domestic costs and prices or due to the appreciation of the nominal exchange rate derived from a strong inflow of foreign capital. To contrast this, Kohler and Stockhammer (2021), for example, compare the change in the real effective exchange rate of manufacturing and trade balances for the period 2000-2007 for several countries, most of them developed. As expected, they obtain a negative relationship, but it is not statistically representative.

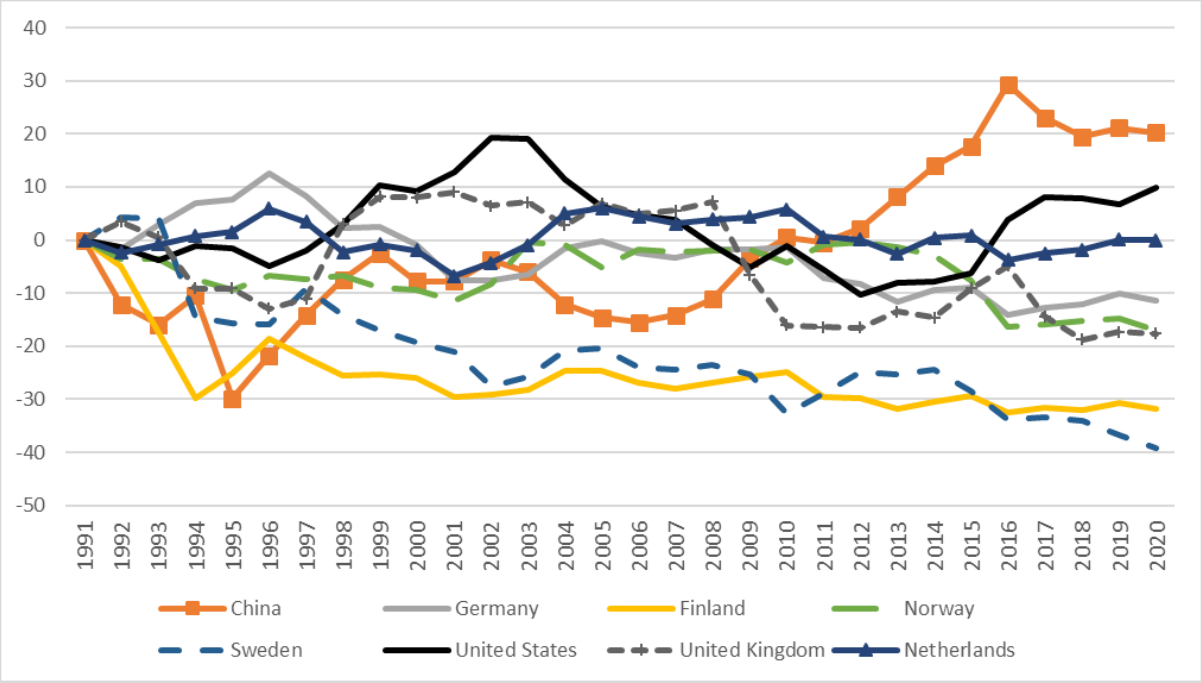
For our study, however, we must bear in mind that the evolution of the external balance of any country in the period 2002-2008 - the financial upswing on which we are focusing - is affected not only by the difference in the real rate between the final and the initial period of the years studied, but in general by the path of the national real rate already years before. Figure 6 shows, in this respect, a relative stability of the real exchange rate for the period under study. However, during the previous decade (1992-2002) the Swedish economy had experienced a clear cheapening not only vis-à-vis most of its exporting and importing partners, but in general in relation to the world economy. As stated by Erixon (2015: 582-583) the comparison between 1992 and 2007 in the effective real exchange rate shows a decrease by 26 per cent, explained by the depreciation of the SEK in 1993 and then in the following years, i.e., when it became a key tool to leave the 1990-1992 crisis behind.

The evolution of the real exchange rate helps explain the favorable evolution of the Swedish external sector also, whose exports increased on average by 7.2% yearly during the period 1994-2008, which would make us reject also the idea that indebtedness would have inflated prices jeopardizing the external balance.

However, a country's competitiveness is not only measured by the relative evolution of its price level, but also by the type of exports it makes. If we observe the evolution of the export mix in Sweden during the last half-century, we can see that it has not changed so much in the last decades either (Figure 7). The export boom that allowed for a strong recovery of the economy after 1993, was led by almost the same sectors that were in leading positions before, with the electrical machinery going up to the

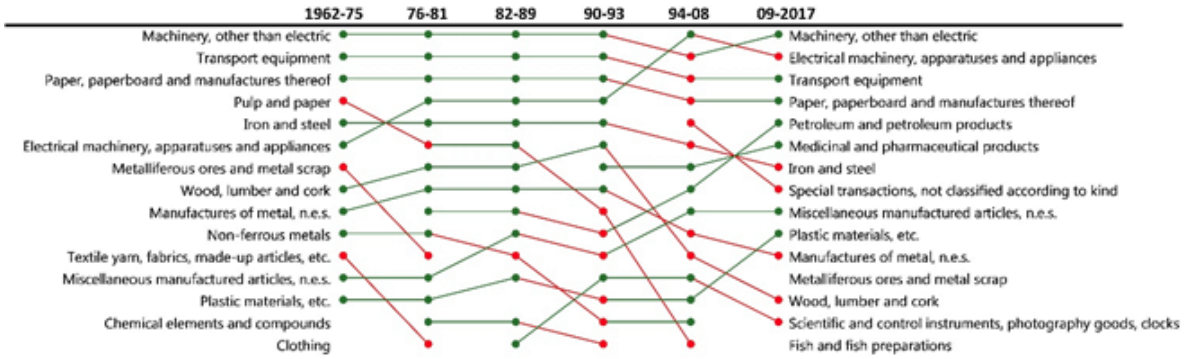
second position during those same years. There are other commodities that got into the top 15, including metalliferous ores, fish and fish preparation, and petroleum, as well as medicinal and pharmaceutical products. Besides, it is noteworthy how a traditional export commodity, as pulp and paper, stopped being among the main exports of the country, and that was the case also for metalliferous ores. It seems that the diversification of trading partners after the mid-1990s (with China in a prominent position of those new partners) helped Sweden to sell some basic goods, even if these were not so important then in their export mix. The depreciation of the SEK allowed for an export boom in this sector. When the Great Recession started, Sweden had the third highest trade surplus in the OECD, after Norway and Luxembourg (Erixon, 2015), to which the low imports also contributed.

Figure 6: Evolution of the relative real exchange rate since 1990 for Sweden and its trading partners relative to the world average.



Source: Own elaboration from World Development Indicators, World Bank

Figure 7: Ranking of main Swedish export goods (share over total exports)



Source: Own elaboration from UN ComTrade data.

It is when we focus on services that we appreciate relevant changes. As stated by several authors (Erixon, 2011; Baccaro & Pontusson, 2016), the explanation of the good performance of the export sector requires considering also services, namely, those related to the Information and Communication Technologies (hereafter, ICT) sector. Indeed, once considered both services and goods, ICT services is the main sector in the export mix since, at least, mid 1990s, and its share has grown from 6.78% in 1995 till 16% in 2019 (with a maximum of 21.83% in 2016; data from the Atlas of Complexity Index). In addition, according to the OECD (2015), about 70% of services incorporated in exports are produced locally, which, again, speaks volumes about the competitiveness of the country in this area. Furthermore, the current account surplus has moved from a surplus mainly on goods during the 1990s to a surplus on services from the 2000s (along with a rising contribution of foreign income which reflects the higher returns on Swedish multinationals' investment abroad than on foreign investment in Sweden), being ICT and engineering services the main contributors to the surplus. This sector is characterized by its relatively lower price elasticity, due to which, there was no need for wages to go down during that period to remain competitive. When the ICT sector demand declined with the crash in the early 2000s, low- and medium-tech industries became the export engine. Anyway, the current account surplus increased also due to the low import intensity of sectors like the raw materials industry (Erixon, 2015).

A different approach to this same information is provided by the Economic Complexity Index (ECI)[1]. Interestingly the position of Sweden in the world ranking of the ECI points

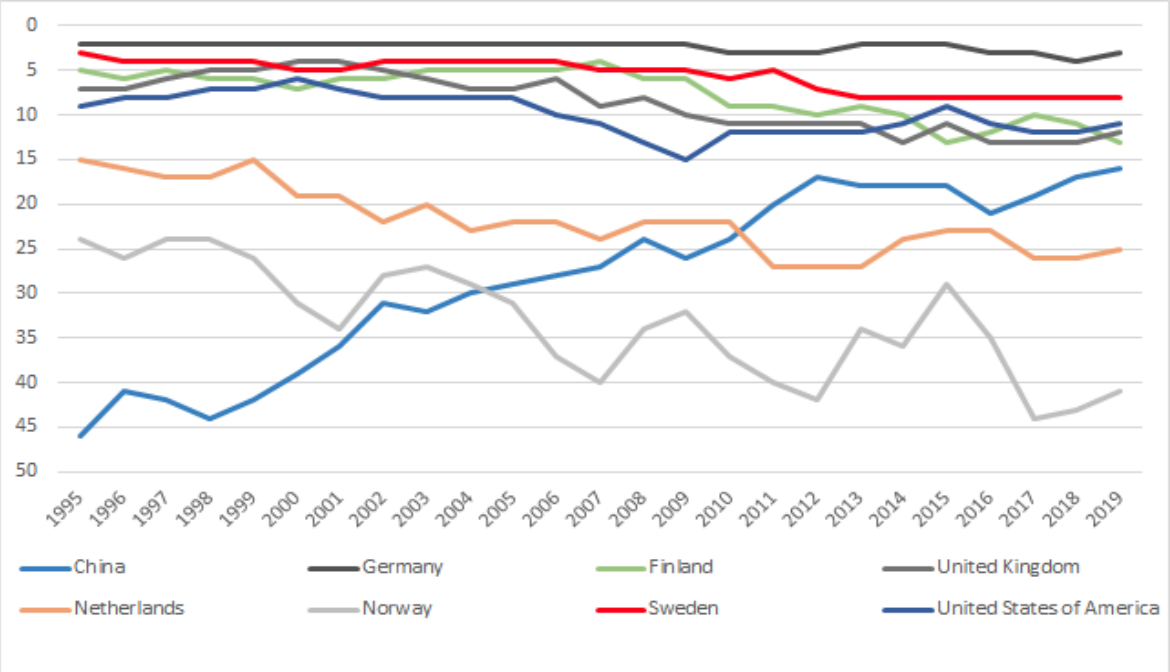
[1] The Economic Complexity Index (ECI) synthesizes the complexity of the economic structure of different countries through their exports. See Hausmann et al. (2013).

to a (very) slight decrease (Figure 8); indeed we could speak of a stabilization in a high position. It is only after 2011, i.e. after our period of study, that Sweden goes down in the ECI ranking in a more notable way (but again, to place itself in the relatively high 8th position in the world ECI ranking) (see also Tiemer, 2018).

That said, regardless of its position in the ranking, the absolute ECI value follows a downward trend, particularly from 2004 (Figure 9). This would point to a trend in which the Swedish export mix would become less competitive in absolute terms, measuring this through its complexity. For the whole period with available data (1995-2019), the ECI fell by 15%. This would be, thus, the only indicator for which we can deduce a worsening in the competitiveness of Sweden in the context of the increasing indebtedness of 2002-2008.

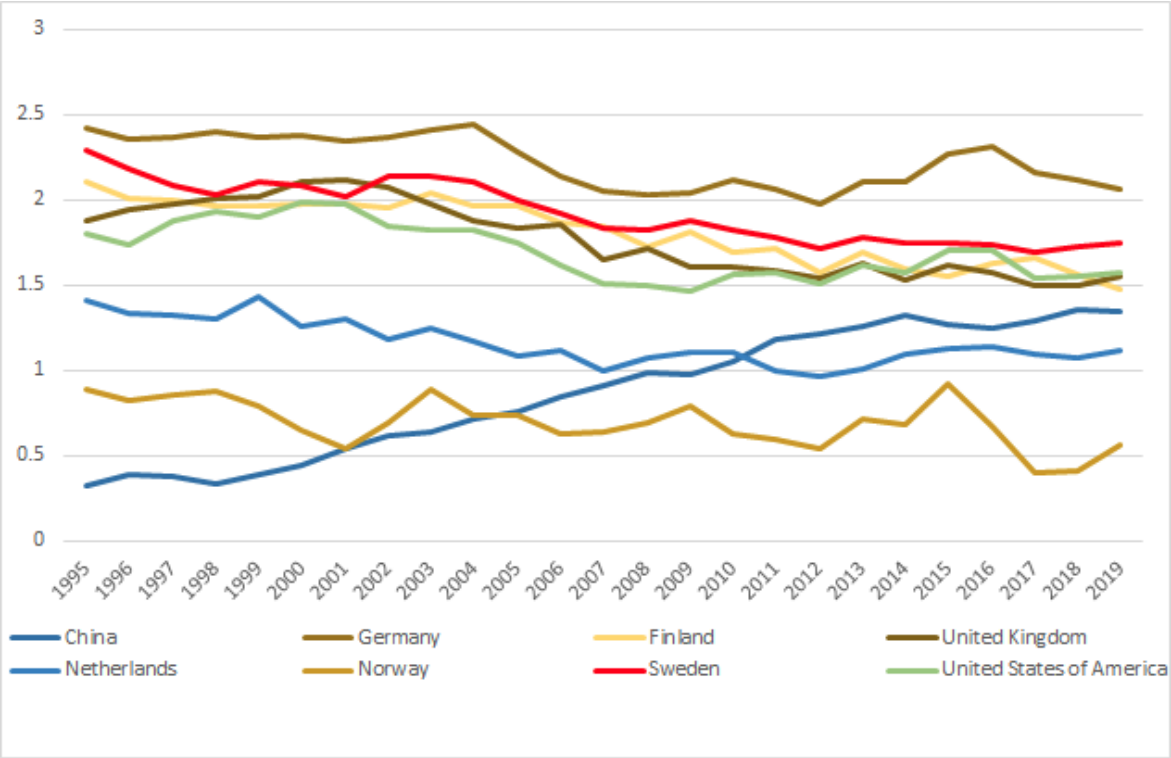
Despite this drop in Sweden's exports complexity, their share grew between 2002 and 2008 in important sectors, including services or, more significantly, in vehicles (although in this case, it had been bigger in the mid-1990s). It is interesting to note that, in most areas, we can see a decline in these shares after the Great Recession, but it is precisely in service exports where a better performance can be observed for the years under study.

Figure 8: Evolution of the ECI ranking of Sweden and its trading partners.



Source: Own elaboration from The Growth Lab at Harvard University. The Atlas of Economic Complexity. http://www.atlas.cid.harvard.edu.

Figure 9: Evolution of the ECI of Sweden and its trading partners.



Source: Own elaboration from The Growth Lab at Harvard University. The Atlas of Economic Complexity. http://www.atlas.cid.harvard.edu.

In sum, data seem to show that indebtedness did not make Sweden a less competitive country in, at least, some of the sectors where it showed a greater comparative advantage.

4. Indebtedness and financialization in a robust economy: institutional factors

Behind this 'debt&export-led' growth model of the Swedish economy during the global financial upswing preceding the GFC, there are key factors related to a progressive and structural change. Our arguments hinge upon the next elements: productivity, macroeconomic performance, and the use of credit in a context of financialization.

Although hourly earnings in the private sector grew on average at an annual rate of 3.1% from 1998 to 2007 (Erixon & Pontusson, 2022), the positive external balance data were not reversed. On the contrary, exports were more dynamic than imports and

accompanied the robust growth between 1994 and 2007. The crisis did not put a halt to these trends but slightly (Buendía & Rey-Araújo, 2021).

One explanation for this undoubtedly derives from strong international demand, particularly from countries whose indebtedness translated mostly into higher consumption levels. That said, this increasing surplus balance was also possible thanks to productivity gains. According to OECD statistics on multifactor productivity gains, after stagnating between the late 1980s and early 1990s, Sweden began to outperform most member countries in the mid-1990s. In the 2002-2006 period, it recorded an average increase only lower than that of South Korea. This translated into two effects - one quantitative and the other more qualitative - on the country's external position. First, it meant that wage increases did not translate into losses in price competitiveness. This explains the fact that the real exchange rate was still at similar or even lower levels than after the devaluation of the national currency in the early 1990s, which had been followed by a sudden improvement in the trade balance. In this respect, Erixon (2015) estimates that the effective exchange rate in 2007 was 26% lower than in 1992.

We should bear in mind that this matching of wages to productivity increases since the late 1990s derives from events in the realms of wage bargaining and in the monetary regime. First, the agreement between unions and employers in 1997 to re-coordinate wage setting made it possible to seek competitiveness in the tradable goods sectors (Anxo, 2017). Secondly, the rigid application of the inflation targeting strategy by the Central Bank since the early 1990s, played a disciplinary role by conveying social agents the idea that monetary policy would not accommodate generous wage agreements via devaluations (Lindberg et al. 1997).

Qualitatively, firms in the country were able to move towards a high value-added, non-price sensitive export mix (and thereby on wages) i.e., R&D or design, in the upstream, or marketing and customer services in the downstream (OECD, 2015). Of particular importance was the ICT sector, in which investment increased due to exports, a profit boom and competition in the ICT sector (Erixon, 2015).

Such a specialization upgrade cannot be understood without investment in intangible capital. In 2010, the only OECD country with higher intangible investment as a percentage of business output than Sweden is the United States. In the case of Sweden, this kind of investment has quantitatively been close to tangible investment

and has focused on computerized information, innovative property and economic competencies, as a result of which, patenting rates of management quality are considered to be among the highest in the OECD. This kind of investment has contributed to increase labor productivity, thanks also to the capacity of the country to reallocate resources (labor and tangible capital) to the most productive sectors of the economy, a trend in which Sweden is amongst the most effective in the OECD (OECD, 2015).

Far from being exclusively attributable to the free market, the dynamism of the country's private sector is associated with a public regulatory framework that has been evolving in recent decades. From the 1990s, the traditional policy oriented against SMEs was replaced by new measures and changes in the tax system have aimed at stimulating them. Those SMEs, active in the ICT and life sciences sectors, have become the growth engine.

Certainly, public investment in basic and adult education contributed to this (Buendía & Rey-Araújo, 2021), but other changes were even more crucial to this trend. These changes constituted the first interventionist industrial policy in the country (with the only exception of a brief period in the 1970s), given that until then, industrial policy was market-based and centered on indirect actions, apart from the corporation tax regime and the bank-based financial system. Among the new policies applied, we can mention financial aids to SMEs, administrative support and measures to promote management skills, but also the abolition of the obstacles to create and promote start-up companies, namely, those coming from the profit tax system and the financial system (leaning from its traditional bank-based stance to a market-oriented one). Concerning the latter, a new venture capital market developed since the changes in the 1980s promoting private equity. The deregulation process in the 1980s channeled foreign capital to Swedish private equity and venture capital markets, which benefitted also from the provision of public funds, counsel and services. All this has changed corporate governance in Sweden, increasing the number of firms owned by foreign MNC or controlled by private equity firms (Schnyder, 2012).

Figure 10. Swedish share of world market exports by sector

Sector	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Agriculture	2.11	2.05	1.96	2.05	1.63	1.94	1.84	1.90	1.97	1.94	1.87	1.87	1.81	1.68	1.64	1.63	1.51	1.45	1.43	1.41	1.33	1.33	1.31	1.32	1.29	1.36
Chemicals	1.36	1.42	1.39	1.46	1.43	1.29	1.29	1.31	1.42	1.33	1.22	1.24	1.18	1.14	1.17	1.09	0.99	0.95	0.96	0.93	0.92	0.93	0.92	0.87	0.94	1.01
Electronics	1.64	2.06	2.10	2.25	2.09	1.98	1.40	1.42	1.40	1.42	1.34	1.23	1.16	1.22	1.15	1.11	1.15	0.94	0.83	0.80	0.71	0.67	0.59	0.57	0.56	0.56
Machinery	1.68	1.70	1.54	1.57	1.34	1.28	1.29	1.39	1.48	1.44	1.34	1.36	1.45	1.39	1.28	1.24	1.32	1.24	1.20	1.15	1.07	1.07	1.07	1.04	1.03	1.05
Metals	2.24	2.35	2.15	2.22	2.14	1.95	1.94	2.00	2.02	1.91	1.78	1.63	1.67	1.57	1.40	1.52	1.52	1.45	1.31	1.28	1.22	1.28	1.27	1.23	1.28	1.29
Minerals	0.79	0.71	0.69	0.73	0.63	0.50	0.45	0.44	0.48	0.51	0.51	0.52	0.47	0.51	0.48	0.51	0.47	0.53	0.42	0.47	0.50	0.56	0.60	0.56	0.51	0.64
Other	0.00	0.05	0.00	0.00	0.00	1.62	1.34	1.54	1.90	1.82	2.14	1.93	1.90	1.56	1.16	1.34	1.49	1.13	1.27	1.08	1.05	0.96	1.03	0.94	0.94	0.93
Services	1.45	1.39	1.36	1.28	1.32	1.31	1.38	1.31	1.43	1.51	1.47	1.48	1.54	1.52	1.43	1.42	1.50	1.45	1.58	1.49	1.47	1.43	1.35	1.26	1.32	
Stone	0.60	0.61	0.55	0.55	0.50	0.44	0.47	0.48	0.48	0.50	0.49	0.54	0.44	0.42	0.43	0.42	0.36	0.33	0.25	0.26	0.26	0.26	0.25	0.25	0.24	0.35
Textiles	0.63	0.67	0.63	0.68	0.69	0.60	0.56	0.61	0.64	0.66	0.61	0.63	0.66	0.67	0.62	0.59	0.59	0.57	0.54	0.52	0.48	0.50	0.51	0.50	0.52	0.60
Vehicles	1.97	1.88	1.71	1.75	1.18	1.51	1.43	1.42	1.63	1.75	1.65	1.61	1.61	1.45	1.07	1.12	1.27	1.06	1.10	1.01	1.01	1.12	1.21	1.33	1.34	1.41

Source: Own elaboration from The Growth Lab at Harvard University. The Atlas of Economic Complexity. http://www.atlas.cid.harvard.edu.

The good export performance at the industrial level, accompanied by public policy, occurred at the same time as both households and non-financial corporations increased their rate of indebtedness. In this respect, the debate arises in the literature as to whether Sweden is a country whose accumulation regime has been financialized. Erixon and Pontusson (2022) consider that there is no such financialization in Sweden, given the lower importance of finance in the national GDP than in the OECD.

However, Christophers (2013), Stenfors (2016), Andersson & Jonung (2015) and Belfrage and Kallifatides (2018) state that the intense deregulation in the 1980s was the starting point of a financialization process in the country, as can be seen in some of the indicators they use, including the growth of the financial sector, the introduction of the shareholder value as main corporate governance principle, the financialization of everyday life, making of every Swedish citizen an investor, or the landing of foreign venture capitalists, as we have mentioned above. Andersson and Jonung (2015) in turn place their argument in the debt/GDP ratios as well as in the debt/disposable income ratios, which increased notably since the deregulation in the 1980s (see also Jonung et al., 2009). Indeed, if we take as valid the threshold of 100% in the debt-to-GDP ratio, as proposed by them, as an indicator of the limit beyond which the financial sector starts damaging the whole economy - which is another of the usual criteria used to distinguish a financialized economy -, Sweden would have reached that level long ago. According to IMF data, private debt increased between the 1990s and 2007 from 180% to 257% of GDP, drastically accelerating since 2003/2004.

Related to the ways of evaluating the financialization of the country, we wonder about the use of debt by households and companies. If the new resources raised had been allocated mainly to consumption, it would have boosted imports and drastically reduced the external balance surplus. The data presented in the previous section showed a rising demand - consumption plus investment - in both sectors. Although smaller than consumption, investment has been more dynamic since the mid-1990s. In the case of households, for example, consumption in 2000 went from 22.5 times investment to only 12.9 in 2007. Presumably, much of this greater investment went to the real estate sector, whose prices were outperforming the average evolution of consumer prices and consolidating a circle between credit and the speculative real estate bubble. As Andersson and Jonung put it (2015), there was a circle between credit, the bubble and new credit, required for more and more expensive housing investments. This increase in housing prices has continued in the 2010s; but it led

already in the period 2002-2008 to an increase in the ratio of real assets over disposable income for households from 200% to 300%.

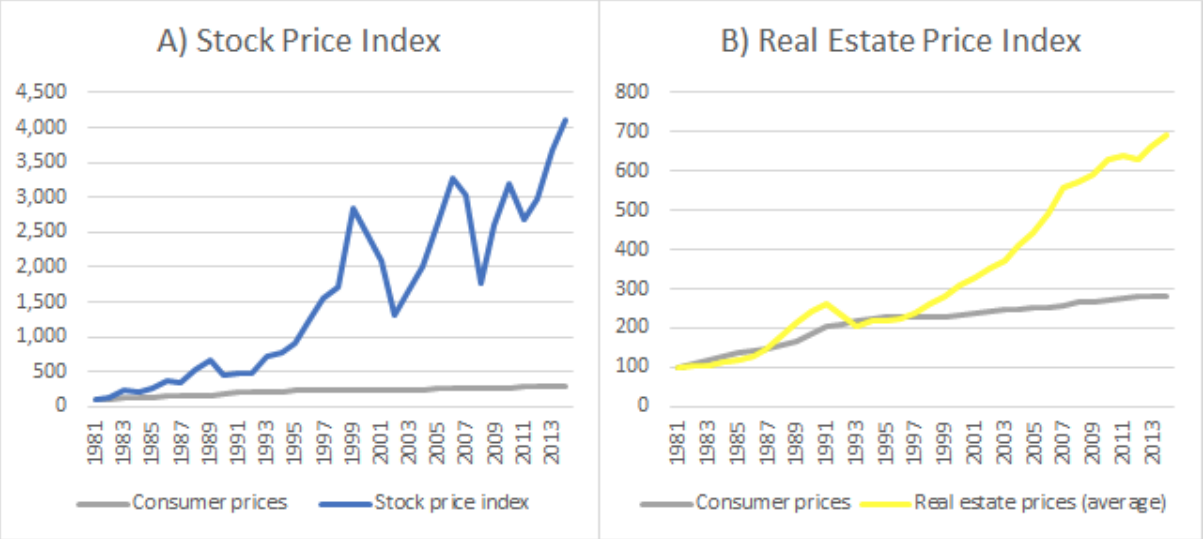
The other target of that increasing credit was the stock market (Figure 11), to which some changes in the Swedish welfare state also contributed. The 1994 pension reform was a key step in the proliferation of that culture of making each Swede a potential investor: on the one hand, the defined-benefit system was transformed into a defined-contribution one; on the other hand, a small compulsory capitalization component was introduced in the public pension (Belfrage & Ryner, 2009). As a consequence, it comes as no surprise that Sweden has joined the club of countries with a high coverage of privately funded pensions (Hort et al, 2016).

To this must be added the welfare state reforms started as part of the austerity measures that were introduced in the 1990s in order to reduce public debt. Apart from cutting down some of the income benefits of the system, the reduction of housing subsidies and of public housing has pushed lots of people to the private sector, where the above-mentioned increasing prices have increased household's debt related to housing. It is therefore not surprising to see that, at the same time as the state cut its debt to GDP ratio since the 1990s, the proportion of households in a vulnerable situation multiplied: according to Belfrage and Kalifatides (2018) 25% of households with mortgages owe more than 400% of their disposable income, a very high figure in international comparative terms.

All this said, as shown above, while aggregate household and NFC demand has risen during - but also before and after - the period under study, and while the housing market boom may have been accompanied by higher imports, the lending balances of both households and NFCs have remained positive. Therefore, we are not facing a typical case of 'debt for wage substitution among the working class' (Ahnland, 2017, pp. 19-20), or at least not in aggregate for the whole economy. In the case of Sweden, debt is accelerating as investment in financial-type assets is increasing. That said, the redirection of resources has not been homogeneous. After the financial deregulation, the ratio of financial assets to disposable income went from 1 to 2.5, while the share of low risk assets (cash and bank deposits) to total financial assets declined from two thirds of disposable income to one third as a result of the increase of the rest of assets (Stenfors, 2016, p.197). Along the same lines, a look at the disaggregated financial assets of the country shows that between the beginning of the 21st century and the

irruption of the GFC, shares and other equity went from representing 22% of the total to almost 50%.

Figure 11. Evolution of general and asset prices, 1981-2014 (1981=100)



Source: Own elaboration with data from SCB (A) and Waldenström (2014) (B).

5. Conclusions

Sweden has simultaneously experienced the essential features of two types of growth often presented as opposites: the debt-led and the export-led model. Two sets of factors make this 'debt&export-led' case possible, at least in the major period of recent global financial expansion between 2002 and 2008. First, a price-competitive and export-complex industry driven by a commensurate regulatory framework and in a context of strong international demand.

Second, financialization in Sweden has been experienced in the country, among other ways, by a historic increase in private debt levels while the welfare state has been shrinking. This increase in debt has been particularly strong in the period under study but has continued in recent years. This has fueled demand and price inflation in the real estate sector, which in turn has led to a wealth effect that encourages consumption and investment. The immediate consequence of all this is the expansion of the problem of financial vulnerability due to mortgage debt among the country's population.

However, at the aggregate level, debt has not come to replace wages and profits as the main sources of demand, as has been the case in typical debt-led countries such as Spain, the United States or Greece. Both average wages (at least in the private sector) and the level of profits grew vigorously, boosting aggregate demand. Rather, the debt boom has been accompanied by unprecedented investment in the financial sphere, especially in risky assets.

Cases such as the Swedish case highlight the need to relate, in the framework of International Political Economy, the growth patterns observed in one or several countries, on the one hand, to the interaction between national and international socio-economic and institutional factors specific to the country, on the other.

In addition, it allows highlighting the heterogeneity existing among the countries that have been able to experience processes of financial exuberance of booms and speculation. The importance of the source and destination of the debt makes it necessary to treat each case differently in order to understand how the financial euphoria may have affected the competitiveness of domestic industry, levels of inequality and long-term growth, among other things. But it also forces us to consider the option that future financial crises may be epicentred in exporting countries.

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A.I- Data table of Figure 2

	NFS	BALGStoGDP (4 months average)
Australia	50,1	-1,6
Austria	13,9	2,4
Belgium	41,0	-3,7
Canada	13,7	-3,4
Chile	4,1	0,2
Colombia	-2,2	-2,9
Czech Republic	12,5	2,8
Denmark	76,0	-3,1
Finland	31,7	-5,4
France	21,0	-2,8
Germany	-13,3	3,7
Greece	52,3	-1,7
Hungary	58,2	1,4
Ireland	153,1	-7,9
Israel	1,0	1,9
Italy	33,7	-2,0
Japan	-17,7	-0,4
Korea	26,0	-1,4
Mexico	6,8	-0,8
Netherlands	18,4	2,0
New Zealand	52,5	-4,2
Norway	46,5	1,3
Poland	26,3	-1,6
Portugal	51,6	0,4
Spain	85,3	-2,6
Sweden	57,4	0,1
Switzerland	10,4	5,4
Turkey	23,3	-8,0
United Kingdom	40,5	0,3
United States	28,0	-1,5
Euro area	26,5	-0,6
Brazil	5,8	1,6
India	39,0	-4,7