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Pontusson, Harry Jonas; Baccaro, Lucio

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European Growth Models Before and After the Great Recession

Lucio Baccaro (MPIfG) and Jonas Pontusson (University of Geneva)

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Lucio Baccaro is Director of the Max Planck Institute for the Study of Societies in Cologne. His research focuses on the political economy of labor markets and growth models, and, more recently, on the politics of macroeconomic policy. He was published *Trajectories of Neoliberal Transformation* (with Chris Howell, CUP 2017).

Jonas Pontusson is Professor of Comparative Politics at the University of Geneva. He is currently engaged in two streams of research, one on the politics of growth models and the other on political inequality in liberal democracies. The latter research is supported by a five-year Advanced Grant from the European Research Council.

This chapter is part of our ongoing effort to develop a new approach to comparative political economy centered on the notion of “growth models.” Baccaro and Pontusson (2016) spelled out why comparative political economy needs to go beyond “Varieties of Capitalism” and other analytical paradigms that treat supply-side institutions as the main source of cross-national variation among advanced capitalist political economies, and pay more attention to the politics of aggregate demand. Drawing on Post-Keynesian macroeconomics, our previous paper sketched elements of a new analytical framework in which the level and composition of aggregate demand played a key role (to the detriment of “supply-side” institutions), and illustrated how that framework might be put to use by looking at divergent patterns of economic growth in Germany, Italy, Sweden and the UK over the period 1994-2007.

The current paper contributes to the further development of the growth model framework, in particular by beginning to tackle the relationship between growth models and macroeconomic policy and by extending the analysis to the early post-crisis period (2010-2014). Focusing on Germany, Italy, Sweden, and the UK (as in Baccaro and Pontusson 2016), we identify four ideal typical “growth regimes” (in the sense of Hassel and Palier's definition in chapter 1). In Germany, net exports became over this period the main driver of demand thanks to the combination of domestic demand repression, institutionalized wage moderation, and the European single currency, which ensured an undervalued real exchange rate.¹ In the UK, a demand boost was engineered by easing the conditions for access to credit, while accepting a systematic deterioration of the current account. The Swedish case stands in-between the other two: unlike the German case, there was no wage repression and domestic demand was stimulated by both higher wage growth and easier access to credit. The presence of a dual driver was made possible by the greater diversification of the production and export structure in Sweden, which in turn was linked to the declining prominence of manufacturing and the rise of high-end services. Finally, the Italian case is a case of stagnation, which emerged from the combination of extremely difficult background conditions (such as high public debt and the decreased attractiveness of Italian exports, due to increased international competition), and the

choice to accept an overvalued exchange rate through membership in the single European currency.

Our empirical analysis remains descriptive and limited to the four countries featured in the previous paper, but we extend it to cover the period after the Great Recession. Skipping our critique of supply-side-institutionalist approaches to comparative political economy (for which we refer to Baccaro and Pontusson 2016; 2018), the paper is organized in two parts: first, we provide a stylized account of the crisis of the wage-led growth model. We then analyze the growth trajectories of our four countries in the 10-15 years before the onset of the Great Recession and afterwards.

2. The Crisis of Wage-Led Growth

In Baccaro and Pontusson (2016), we argued that export-led growth epitomized by the recent trajectory of Germany, consumption-led growth epitomized by the UK, and the balancing of export-led growth with growth of household consumption in the case of Sweden, represented three different responses to the crisis of wage-led Fordist growth, while Italy's stagnation was a consequence of the inability to find a viable post-Fordist growth driver.

In sketching the basic features of the wage-led model and its post-Fordist successors, we relied on Regulation School and on Post-Keynesian economics, particularly of the Neo-Kaleckian kind (Boyer 1990, Boyer 2015, Lavoie and Stockhammer 2013, Storm and Naastepad 2012). In a wage-led growth model, growth is pushed by real wage gains, specifically by the tendency (at the margin) of real wages to increase faster than productivity, which implies an increase in the wage share of GDP. Since it is generally the case that when labor income increases, controlling for labor productivity, a lower proportion of income is saved and a greater proportion spent, a real wage increase has at the margin an expansionary effect on GDP in a wage-led growth model because it stimulates household consumption. Furthermore, if investments respond positively to the prospect of expanding demand and are not too sensitive to the profit share, they will be stimulated too. At the same time, an increase in the wage share (equivalent to an increase in real

unit labor costs) will likely produce a loss of competitiveness and a decline of net exports. However, if the economy is sufficiently closed, or if net exports are not strongly sensitive to price competitiveness,² the recessionary impact associated with the decline of net external demand will be more than compensated by the expansionary effect on other components of aggregate demand (consumption and investments).

Econometric analyses suggest that all four countries examined in this chapter – Germany, Italy, Sweden, and the UK – were wage-led for most of the post-war period (see Onaran and Obst 2015 and the literature cited therein, Onaran and Galanis 2014). Although it is difficult to identify a clear turning point, the facilitating conditions ensuring the viability of wage-led growth began to unravel with the internationalization of the economy. While wage moderation has a deflationary impulse in wage-led economies, with the rise of international trade the effect may turn around. As trade openness increases, wage moderation stimulates net exports and thus has an expansionary effect, which may counterbalance the depressing impact on domestic demand. At some point, when the export sector becomes sufficiently large, the growth model may switch from wage-led to export-led (Bhaduri and Marglin 1990).

In addition, the lifting of restrictions on capital movements rendered investments more sensitive to the rate of profit. Attempts at financial repression – i.e. remunerating capital at a lower rate than the rate prevailing in international markets – became unfeasible as they would unleash capital flight. By the early 1990s, restrictions of capital movements were eliminated everywhere and capital markets were fully liberalized (Chwiero 2010, Frieden 2006), thus removing another facilitating conditions for wage-led growth.

Finally, the generalized transition to inflation-targeting central banks further undermined the viability of a growth model based on real wage growth (Storm and Naastepad 2012). Post-Keynesian macroeconomics tends to underestimate the inflationary consequence of demand expansion since it assumes that there is idle capacity in the economy, and that faced with increasing demand firms will respond by increasing supply rather than prices (Lavoie 2014). In reality, wage-led growth was marred by an endemic inflation problem, which in turn

was the manifestation of underlying distributive conflict. Unions stepped up demands for nominal wage increases, but firms in oligopolistic markets protected their margins by raising prices. Monetary policy accommodation helped produce a wage-price spiral (Armstrong, Glyn and Harrison 1991).

With the transition to central bank independence, reigning in inflation became the overarching goal of macroeconomic policy. Independent central banks use interest rates to reduce demand every time wage bargaining produced wage settlements which central banks deem incompatible with their estimates of equilibrium output, corresponding to the “non-accelerating inflation unemployment rate” (NAIRU). NAIRU-based macroeconomics assumes that equilibrium output and employment are determined by supply-side forces in the labor market. Specifically, institutional rigidities increase the NAIRU and the corresponding equilibrium level of output (by pushing up the workers’ reservation wage) (Carlin and Soskice 2015, Storm and Naastepad 2012), while the reduction of rigidities or institutionalized wage moderation through centralized or coordinated collective bargaining has the opposite effect. If workers and unions insist on demanding a real wage incompatible with the employers’ mark-up expectations, ever faster inflation ensues (because the Phillips curve is vertical in the long run). To pre-empt inflation acceleration, the central bank intervenes to depress aggregate demand by increasing the interest rate. This pushes up unemployment and moderate the unions' nominal wage demands.

In a standard New Keynesian framework, aggregate demand has no impact on productivity. Instead, in a post-Keynesian framework there are feedback effects between demand-stimulating wage growth and the production potential of the economy. For example, Storm and Naastepad (2012) argue that an expanding demand favors economies of scale and stimulates investments. Investments, in turn, incorporate the latest generation of technical change. Furthermore, they argue that wage increases or the introduction of labor market protections affect labor productivity positively by stimulating capital deepening (i.e. the substitution of relatively expensive labor with relatively cheaper capital), and by eliciting loyalty

and workers' cooperation.³ In other words, in post-Keynesian macro models aggregate demand generates (at least partially) its own aggregate supply. When unions seek to alter the functional distribution of income in their favor, they set in motion a series of mechanisms (investment stimulation, productivity growth) which also increase the denominator of the wage share ratio, i.e. GDP. The level of inflation may be higher as a result, but in post-Keynesian macro there is no infinitely accelerating inflation as predicted by NAIRU-models.

We would argue that NAIRU-based macroeconomics has had “performative” effects, i.e. it has contributed to bring about the reality it aimed to analyze.⁴ Before the crisis, central banks around the world fully bought into the NAIRU framework (Carlin and Soskice 2015). This means that they would raise interest rates and unemployment every time they saw signs of inflationary wage settlements, particularly when their mandate solely emphasized price stability (as in the case of the Bundesbank before and the ECB later). This made wage militancy for all purposes self-defeating, and unions (German unions before anybody else) eventually learned that wage moderation was the most effective strategy (Scharpf 1991, Streeck 1994). For wage-led growth model, this shift posed a problem of potentially insufficient demand, and spurred the search for alternative (“post-Fordist”) drivers of growth. Interestingly, according to the the pre-crisis consensus, the central bank should not try to deflate an asset bubble (such as a house price bubble), since asset prices are much less sluggish than wages and other prices, and better regulated by market forces (Goodfriend 2007, Woodford 2003).

3. Post-Fordist growth models: a framework

In this section, we provide a stylized reconstruction of the post-Fordist trajectories of our four countries. Our point of departure is that once any positive feedback effect from the labor market to the productive potential of the economy has been pre-empted by the the central bank, the macroeconomy can be described by three sets of relationships (Carlin and Soskice 2015, Temin and Vines 2014: Ch. 8).⁵ The first relationship, known as Aggregate Demand (AD) curve, expresses a positive link between real exchange rate devaluation and output and vice

versa. As domestic prices (expressed in foreign currency) grow more slowly than the price of trade competitors, the competitiveness of the country exports augments (i.e. the real exchange rate depreciates), and this increases exports and reduces imports.⁶ It is assumed that in a world of perfect capital mobility the domestic real interest rate cannot deviate from the real interest rate determined by global markets, and that any deviation is immediately compensated by forward-looking financial markets through nominal exchange rate adjustment (i.e. appreciation if the domestic interest rate exceeds the world interest rate, depreciation otherwise). In brief, the AD curve depicts the combinations of real exchange rate and output which obtain when the interest rate is equal to the international rate.

The second relationship, known as the Equilibrium Rate of Unemployment (ERU) curve, represents the set of combinations between real exchange rate and output, which keep inflation constant. It captures the labor market equilibrium and has the opposite sign from the AD curve: as the real exchange rate depreciates, output shrinks; vice versa, as the real exchange rate appreciates, output expands. The intuition behind this relationship is that as the real exchange rate appreciates, the price of imports goes down and it is thus possible to pay workers a higher real consumption wage (nominal wage normalized by the consumer price index which includes the price of imports) while preserving the profit margins of firms and keeping inflation stable; vice versa for a real exchange rate depreciation.

The third relationship, known as the Balance of Trade curve (BT), expresses, like the AD curve, a positive link between real exchange rate devaluation and output, but differently from the AD curve, each point of BT curve is associated with balanced trade, i.e. with exports equal to imports. One noticeable feature of the BT curve is that its slope is greater than the AD curve's.⁷ Essentially, when the economy expands as a result of a real exchange devaluation, the expansion is not sufficient to generate the level of imports needed to bring the trade account back to balance. This implies that for given values of real exchange rate devaluation, the level of output associated with balanced trade is, all other things being equal, greater than the corresponding level of output on the aggregated demand curve, i.e. the economy could grow faster, for example

by increasing government expenditures, while remaining in external balance. Whether or not it decides to do so is a matter for growth strategy, as argued in this volume.

Figure 1 provides a graphic representation of the AD-ERU-BT relationships. The point of intersection of the three curves is one in which the economy is simultaneously in internal and external equilibrium and inflation is constant. When values are to the right of the ERU curve, aggregate demand is too high for price stability: workers will step up their wage demands threatening a wage-price spiral and forcing the central bank to intervene to raise interest rates and reduce aggregate demand and employment to levels compatible with price stability.

[Figure 1]

The three curves provide a useful framework to understand the problem involved in finding a suitable alternative to wage-led growth. As argued above, in a world of inflation-targeting independent central bank, trying to alter the functional distribution of income (i.e. to obtain a higher real wage for a given level of labor productivity) is inane: fearing the beginning of a wage-price spiral, the central bank will respond by forcing a return to the ERU curve by reducing demand and increasing unemployment.

In these circumstances, any viable growth strategy has to dodge the central bank's punishment, and to do so it has to be perceived as non-inflationary by the central bank. Since independent central banks, while targeting inflation, do not monitor developments in competitiveness and the external account (at least until the Great Recession and the Euro crisis), the new level of equilibrium output may well be associated with a trade surplus (in which case the new equilibrium will be on the part of the AD curve above the BT curve) or a trade deficit (in which case it will be below the BT curve) (Carlin and Soskice 2015, Iversen and Soskice 2012).

The German export-led growth model can be seen as an attempt to promote growth by pushing out the NAIRU/ERU curve through wage moderation (see Figure 2). Wage moderation leads to real exchange rate devaluation, which stimulates external demand. The devaluation is magnified by Germany's membership in the Euro zone, which allows the nominal exchange rate applied to Germany to be lower than a solely German nominal exchange rate would be (as the

Euro's exchange rate depends on the general conditions of the currency area, including the Southern countries). The economy moves up the AD curve to a higher equilibrium output. As shown in Figure 2, the economy ends up above the BT curve, in trade surplus. In theory, it could expand output and employment further while keeping inflationary expectations in check and inflation at target, but this would lead to an appreciation of the real exchange rate, and would have negative repercussions for a real exchange rate sensitive sector like manufacturing.

To understand why a country like Germany may refuse to rebalance, the politics of the export-led growth model needs to be considered. The burden of wage moderation is unequally distributed across sectors. While German manufacturing wages grew in line with labor productivity, at least until 2005, service sector wages remained flat (Baccaro and Benassi 2016). It may be argued that manufacturing wages cannot decline too much below productivity in order not to compromise the collaborative relationships between managers and core workers – arguably a key determinant of German manufacturing success. There is also some evidence that German net exports have become more sensitive to price differences over time (Baccaro and Benassi 2016). Faster growth, e.g. through a more expansionary fiscal policy, would strengthen the labor market conditions of service sector workers and undermine wage moderation, which depends heavily on wage restraint in “non-exposed” sectors (Johnston, Hancké and Pant 2014). Furthermore, if exports are strongly price sensitive, they are likely to shrink as a result of the real exchange rate appreciation resulting from higher internal demand. All in all, expanding the economy to balance the trade account would weaken the manufacturing sector and strengthen the domestic sector. If policy makers regard the manufacturing sector as the country's main source of productivity and innovation, their reluctance to rebalance becomes understandable.

[Figure 2]

The Swedish growth trajectory is different from the German one. The Swedish service sector is much better organized than the German one (Pontusson 2013), and this rules out wage repression, while the large public sector improves the job prospects of service workers (Martin and Thelen 2007). In the account we sketched in Baccaro and Pontusson (2016), the Swedish

economy was seen as seeking to strengthen the non-price competitiveness of its exports by moving out of manufacturing into ICT and high value-added services. In terms of the AD-BT-ERU diagram depicted in Figure 3, this corresponds to a shift of both the AD curve and the BT curve to the right through the autonomous component of foreign demand, which does not depend on relative prices. In other words, because Swedish exports become more attractive, internal and external balance are compatible with a stronger real exchange rate (which moves from q to q'). Figure 3 shows that while the economy grows from y to y' , it remains in trade surplus and thus could expand faster by reaching the point of intersection between the ERU curve and the BT' curve. Furthermore, if one accepts the post-Keynesian argument about expanding demand feeding into productivity gains, the ERU curve may even have shifted out, thus contributing to increasing equilibrium output even further.

In reality the Swedish trajectory is more complicated than implied by this stylized account. As discussed later in the paper, aggregate demand was also stimulated by facilitating household access to debt, both before and after the financial crisis.

[Figure 3]

The British growth model of the pre-crisis period is analyzed in Figure 4. The AD-BT-ERU framework suggests that key for the British consumption-led model is an increase in the autonomous domestic component of aggregate demand resulting from a relaxation of criteria for access to credit. This shifts the AD out, leading to higher equilibrium output and an appreciated real interest rate. Since the BT curve stays put (the positive shock is only to the domestic component of demand), there is a trade deficit. As argued by Baccaro and Pontusson (2016), the presence of a large and highly liquid financial center like the City of London contributes to attracting the foreign capital needed to finance the current account deficit, thus making the deficit sustainable at least for some time. One may wonder why the demand shock does not produce inflation. Carlin and Soskice (2015: 202) provide an answer. "The measures of inflation targeted by central banks do not typically include house prices directly ... The elements of housing costs included do not influence the overall price indices that enter the inflation target to

a high degree.” In other words, the central bank does not pay a lot of attention to housing prices provided general inflation, and particularly wage inflation, remain subdued. The weakness of trade unions and collective bargaining contribute to keeping wage settlements in check. Nonetheless, the stimulation of domestic consumption creates favorable conditions for low and medium-skilled service workers. In fact, British service sector wages grow faster than the German (and Italian) ones until 2007 (Baccaro and Pontusson 2016).

[Figure 4]

The Italian case can be conceived of as a case of decline in equilibrium output, and as the specular opposite to the Swedish case (Figure 5). Arguable, there has been a decline in the attractiveness of Italian exports in international markets as a result of higher competition from low cost producers, especially Chinese exporters, operating in the same markets as Italian firms (Faini and Sapir 2005). This has led to an upward shift of both the AD and BT curves in the AD-BT-ERU diagram. Maintaining the same level of output now requires a weaker real exchange rate. Figure 5 shows a new equilibrium below the new BT' curve, indicating a trade deficit. A demand boost (e.g. easier access to credit or expansionary fiscal policy) would increase output but at the price of a further deterioration of the external position. In any case, fiscal expansion is precluded by the fiscal rules of the Eurozone. Furthermore, international bond markets have doubts about the solvency of the Italian government, and therefore ask (since the beginning of the European sovereign debt crisis) for hefty risk premia on Italian bonds, thus contributing to depressing aggregate demand further through higher real interest rates.

In these conditions, two responses are conceivable for the Italian economic authorities. First, they could engineer a nominal exchange rate devaluation. Given the depressed conditions of the economy, this is likely to turn into a real exchange rate devaluation and to boost external demand (Dornbusch 1996). However, this response is ruled out by membership in the Eurozone. The other policy move for this economy would be to try and shift out the ERU curve through labor market liberalization and institutionalized wage restraint, i.e. through a cut in real wages. This is exactly what the European authorities have been trying to accomplish in the

aftermath of the sovereign debt crisis through austerity policies, without much success in Italy or elsewhere. It seems that notwithstanding high levels of unemployment, nominal wage and price reductions are difficult to achieve because wages and prices are “downwardly rigid”. Furthermore, according to post-Keynesian theory, the depression of aggregate demand has a negative impact on labor productivity (through the mechanisms discussed above), shifting the ERU curve in and further reducing equilibrium output.

In other words, the Italian economy may be facing a choice between two unpalatable alternatives: either to leave the Eurozone or to stay in the Euro and implement (further) draconian liberalization reforms. Both alternatives have clear downside risks, and there is no guarantee that either one will succeed in relaunching a stagnating economy.

[Figure 5]

4. Post-Fordist growth models: illustrative evidence

In this section we present some macro-evidence about the four countries before the Great Recession. Our goal is to illustrate the plausibility of the framework introduced in the previous section or to identify inconsistencies.

The period between 1994 and 2007 can be characterized as the most sustained growth period that the advanced capitalist economies have experienced since the end of *trentes glorieuses*. In real terms, GDP in the OECD area as a whole grew at an annual rate of 2.8% over these fourteen years. With annual growth rates of 3.3%, the UK and Swedish economies outperformed the OECD average while the German and Italian economies, growing at 1.8% and 1.7% respectively, lagged behind the OECD average. The contrast between the UK and Sweden, on the one hand, and Germany and Italy, on the other, clearly has to do with Eurozone membership. As many scholars have noted, the launch of the Euro was accompanied by the adoption of restrictive macroeconomic policies, depressing growth rates in Germany, Italy and other countries that opted to join the Eurozone. However, the Eurozone can hardly be

considered an exogenous variable: the choice of whether or not to join the Eurozone must be seen as part and parcel of choosing among different post-Fordist growth models.

For our four illustrative cases, Table 1 shows the annual growth of exports and household consumption over the period 1994-2007. In all four countries, exports grew faster than household consumption, but the ratio of export growth to consumption growth varied greatly. In Germany and Sweden alike, exports grew at an annual rate of more than 7%. Germany stands out as the country in which exports grew fastest and household consumption grew slowest, suggesting that the German “export miracle” was, in this period, achieved by containing household consumption. Yet, Sweden experienced robust growth of household consumption along with strong growth of exports. A critical question emerges, could Germany also have achieved more balanced growth and, if so, why did Germany miss this opportunity?

[Table 1]

Taking into account the share of exports in GDP, the UK stands out in Table 1 as the clearest case of consumption-led growth. While exports grew faster than household consumption, consumption growth exceeded GDP growth in the UK. Italy, like Sweden, might be characterized as a case of balance growth, but stagnation is surely the outstanding characteristic of the Italian experience. Despite slower consumption growth, Italian exports grew more slowly than Swedish or UK exports.

In Sweden and the UK alike, the strong growth of household consumption was accompanied by growing household indebtedness. In Sweden, average household debt rose from ca. 90% of net disposable income in 1995 to ca. 160% in 2007. Starting at ca. 110%, average British household debt had reached nearly 180% at the start of the financial crisis. In marked contrast, average German household debt hovered around 100%, rising slightly in the second half of the 1990s and falling after 2000, and Italian household debt rose from about 40% to 80% of net disposable income over the period 1994-2007.

Financial deregulation and relatively expansionary macroeconomic policies—in

particular, low interest rates—must feature prominently in any account of the rise of credit-financed consumption in Sweden and the UK. However, it also deserves to be noted that the wage share (and average wage growth) held up much better in Sweden and the UK than in Germany and Italy from the mid-1990s onwards (see Figure 6). The rise of top income shares in the UK and, to a lesser extent, Sweden must be taken into account in this context, but income inequality also rose in Germany over this period. Indeed, the 50-10 earnings ratio and the incidence of low-wage employment rose sharply in Germany while these measures of low-end earnings inequality held up reasonably well in both Sweden and the UK (see Baccaro and Pontusson 2016). Crudely put, consumption-led growth creates labor market conditions favorable to low-skilled and poorly paid workers.

[Figure 6]

Our interpretation of the German case is that the combination of macroeconomic policies depressing domestic consumption and dualizing labor-market reforms served to decouple earnings developments in the export-oriented sectors and low-end private services, and that falling relative wages in low-end private services boosted the competitiveness of German exports. Why, then, didn't domestic consumption growth and relative earnings more favorable to workers in low-end private services inhibit Swedish export growth? The answer to this question, we believe, has to do with the fact that information technology and tradeable services played a key role in Sweden's export-led recovery from the crisis of the early 1990s. To a much greater extent, engineering and chemicals have retained their dominance as Germany's main export sectors. While high-end services – finance in particular – are, of course, also a key component of UK exports, Italy's main export sectors are similar to Germany's, though its exports are undoubtedly less sophisticated. Econometric evidence presented in Baccaro and Pontusson (2016) as well as later in the paper suggest that German and Italian exports were considerably more sensitive to real exchange-rate fluctuations (measured either by consumer prices or unit labor costs) than UK or Swedish in the period 1994-2007 and afterwards.

Did German policy-makers decide to join the Eurozone to repress domestic consumption and to introduce dualizing labor-market (and welfare-state) reforms because they recognized that domestic costs had become a problem for German exports? Or did these policy changes and institutional reforms, introduced for other reasons, incentivize German exporters to pursue more cost-based strategies? We are inclined towards the latter interpretation, but we shall not attempt to resolve this conundrum here. Instead, we turn now to explore the impact of the crisis on the growth models that we have briefly sketched above.

5. The impact of the crisis

Figure 7 tracks the evolution of real GDP over the period 2000-14. Italy, Sweden and the UK, but not Germany, experienced negative growth in 2008. In 2009, GDP contracted by about 5% in all four countries. With GDP returning to its 2008 level already by end of 2010, Sweden recovered most rapidly from this dramatic shock. By the 2011, German GDP had surpassed the 2008 level, and by the end of 2013, the UK economy had also recovered by this standard. The Italian story is, of course, entirely different: following a slight recovery in 2010-11, the Italian economy contracted further in 2012-14. Another noteworthy feature of Figure 7 is that the growth rate of the German economy since 2010 has been quite similar to the growth rate in 2000-2007 (about 1% per year), while UK and Swedish growth since 2010 has been much more sluggish than it was in the period leading up to the crisis.

[Figure 7]

As shown in Figure 6, the crises of the 1970s and early 1990s triggered sharp declines in the wage share in all four countries. The Great Recession stands out as quite as quite exceptional in this respect. In percent of the GDP, the wage share actually increased in all four countries over the period 2008-14. This partly reflects the fact that labor productivity fell more sharply than real (production) wages in all four countries between 2008 and 2009. Connected to that, the Great Recession appears to have been less “unemployment-intensive” than the recessions of the 1970s and early 1990s. By historic standards, we would have expected such a sharp contraction

of GDP to trigger bigger increases in unemployment than what we observe over the period 2008-12. However, the decline in labor productivity probably contributed to attenuate the employment effects of the recession. Related to this, it deserves to be noted, as shown in Table 2, that in Germany, Italy and Sweden pre-fisc income inequality among working-age households increased more during the crisis of the early 1990s than it did in the first phase of the current crisis (while taxes and transfers apparently did less to compensate for rising inequality).⁸ For our present purposes, the important point is that labor-market dynamics during and immediately following the Great Recession have been relatively favorable to household consumption growth.

[Table 2]

Using the same methodology as in Baccaro and Pontusson (2016), the graphs in Figures 8-11 display the results of a growth decomposition exercise that aims to quantify the extent to which annual growth of GDP is driven by different components of aggregate demand. The annual growth of each component ($\text{Component}[t]/\text{Component}[t-1]-1$) is multiplied by the component's share of GDP ($\text{Component}[t-1]/\text{GDP}[t-1]$). Interested in the medium-term impact of the crisis, we ignore what happened in 2008-09 and report results for two periods: 2001-07 and 2010-14.⁹

[Figures 8-11]

Over the period 2001-2007, net trade contributed more than any other demand component to German growth. All other components, and specifically household consumption, played a negligible role. During the crisis years of 2008-09, international trade contracted sharply and the contribution of trade to German growth turned negative. As shown in the second panel of Figure 8, German growth in 2010-14 relied less on exports, and more on household consumption and capital accumulation than it did prior to the Great Recession. In this sense, the crisis can be said to have rebalanced the German model. Nonetheless, the German current account surplus remains very high, which indicates that the country could

grow faster by expanding domestic demand. The trade surplus never went below 4 percent of GDP during the crisis and exceeded the 2007 level by 2012.

As shown in Figure 9, British growth in 2001-2007 was largely pulled by household consumption and to a more limited extent by government consumption. The contribution of net exports was negative. In 2008-09, household consumption declined sharply and net trade became positive. Since 2010, the UK has slowly moved back towards consumption-led growth, though with a more important contribution by gross capital formation (despite the housing market correction) and a smaller trade deficit. But consumption growth has clearly been much more sluggish than it was in the period prior to the Great Recession. The stagnation of wages in Britain after the crisis (discussed later in the paper) is also to blame for the sluggish consumption growth. As Figure 12 indicates, the crisis triggered a reduction of credit-financed consumption in the British case.

[Figure 12]

Sweden's healthy pace of growth in 2001-2007 was not only depended on buoyant domestic demand (household consumption and investments especially, with an increase in the housing share of investment), but also on trade surpluses (see Figure 10). In the post-crisis period, growth was somewhat faster than in other countries but entirely pulled by the domestic components: household consumption and government consumption and, to a limited extent, gross capital formation. Over the five years 2010-14, the contribution of net trade to GDP turned negative. Contrary to what one might have expected, the crisis seems to have pushed the Swedish model in the direction of greater consumption-led growth rather than export-led growth. In marked contrast to the UK, household indebtedness has continued to rise (see Figure 12), raising questions about the long-term sustainability of this shift.

Finally, with regard to the Italian case, most of the country's anemic growth in 2001-2007 was due to household consumption and capital accumulation (Figure 11). The contribution of net trade was negative. Things changed in the aftermath of the crisis: pressured by the sovereign debt crisis, the Italian economy responded by compressing domestic demand

in order to stimulate export-led growth. However, the small size of the export sector (26 percent of GDP at constant prices in 2008 compared with Germany's 4 percent) meant that export-led growth was unable to compensate for the decline in domestic demand.

Returning to the question of the price-sensitivity of exports, Table 3 presents the results of replicating our previous regression analysis with data for 2000-13. Over this period, we observe that German, Italian and especially Swedish exports were highly sensitive to world demand growth. The drop of exports in 2009, net of other determinants, led to an export decline in the order of 10-11% for Germany and in Italy (statistically significant) and 6% for Sweden and the UK (not significantly different from zero). Most importantly, the results with 2000-13 data indicate that German and Italian exports are significantly sensitive to changes in the real effective exchange rate while Swedish and UK exports are not. Indeed, the effect of the REER on the volume of German and Italian exports is bigger with 2000-13 data than with 1994-2007 data.¹⁰

[Table 3]

Table 4 in turn explores the effects of the crisis for export dependence and the composition of exports, measured in terms of goods and services. Comparing averages for 2010-13 with averages for 2004-07, the German, Italian and British economies have become more export dependent while the Swedish economy has become less export dependent. As a percentage of total exports, services have increased in Germany as well as Sweden and the UK, while they have declined in Italy. There is no evidence that Germany has caught up with Sweden with regard to service exports. For reasons that we intend to explore in future research, Swedish export services would appear to be more sensitive to economic growth abroad than UK export services (see Table 3).

[Table 4]

6. Policy responses to the crisis

In this section, we explore policy responses during the Great Recession and its aftermath and their relevance for the adjustment of the growth models. We examine monetary and fiscal policies as well as exchange rate policies, as these are the main policy tools governments deployed in response to the contraction of the economy. Setting aside bailouts of financial institutions, industrial policy interventions have been rare, at least by comparison to the 1970s and early 1980s (Pontusson and Raess 2012). In the next section, we discuss wage trends and shifts in the sectoral composition of the economies.

With respect to welfare provisions and labor-market regulation, governments in Germany, Sweden and the UK have not taken any major new initiatives. As Pontusson and Raess (2012) have argued, this itself represents an important contrast with the 1970s, when governments responded to rising unemployment by enacting new employment protection provisions and by increasing the coverage and generosity of unemployment compensation. The story of the Great Recession is instead, at least in Germany and Sweden, a story of governments resisting pressures to retreat from liberalizing or dualizing reforms introduced in the decade before the onset of the crisis.

As shown in Figure 13, all four countries responded to the collapse of aggregate demand in 2008-2009 by sharply reducing short-term interest rates. Over the two years of the Great Recession, short-term rate was cut by 3.4% in Germany and Italy, by 3.8% in Sweden, and by 4.3% in the UK. In response to a sharp decline of the exchange rate and signs of rising inflation, the Swedish Central Bank increased the short-term interest rate in 2011. Short-term Eurozone interest rates also increased in 2011, but this policy correction proved short-lived as it became clear that the recovery was less robust than expected. By 2014, short-term interest rates in all four countries were close to the "zero lower bound" – the level at which it is no longer possible to stimulate aggregate demand through traditional monetary policy. Following the US Fed, the Bank of England engaged in a series of 'quantitative easing' programs from March 2009 onwards and, in 2015, the ECB and the Swedish Central Bank both followed suit with their own quantitative easing programs.

[Figure 13]

Reported in Figure 14, long-term interest rates on government bonds also fell in Germany, Sweden, and the UK between 2008 and 2012, but they increased in Italy over the same period. Uncertain about the continued viability of the common currency, international financial markets began to demand higher risk premia on the sovereign bonds of peripheral Eurozone countries, including Italy, thus further compromising their economic prospects (Armingeon and Baccaro 2012). The panic stopped after Mario Draghi's "whatever it takes" speech of July 2012, in which he vouched to act as a lender of last resort for embattled peripheral governments. Since 2012, long-term interest rates on Italian government bonds have fallen (but still remain above nominal growth rates, thus imparting an inertial tendency for the Italian public debt to grow).

[Figure 13]

Setting Italy aside, monetary policy and the evolution of interest rates have been similar across countries since the onset of the crisis. By contrast, we observe significant cross-national variation in fiscal policy responses to the crisis. Table 5 shows year-on-year changes in the cyclically-adjusted primary government balance, measured in percent of potential GDP. Positive values represent a discretionary fiscal stimulus of demand, i.e., discretionary spending increasing faster (or falling slower) than discretionary revenues. These figures show that the British Labour government of Gordon Brown responded more quickly to the Great Recession than continental governments and engaged in a massive fiscal stimulus in 2007-09 (corresponding to 4.78% of potential GDP). All four governments engaged in fiscal stimulus in 2008. The Swedish government retreated from fiscal stimulus in 2009, but again stimulated domestic demand by fiscal means in 2010, as did the German government. Italy and the UK embarked on multi-year budget consolidation in 2010, with Germany following suit in 2011. In the period since the end of the Great Recession, Sweden stands out as the one country with an expansionary fiscal policy stance. Summing over the period since the onset of the crisis (2007 for the UK, 2008 for the other countries), the cumulative fiscal stimulus in Sweden amounted to

2.74% of GDP by the end of 2014, as compared to 1.45% for the UK, -.04% for Germany and a mind-boggling -3.4% for Italy.

[Table 5]

Table 6 in turn reports on changes in government revenues and taxes (in percent of GDP) over 2006-10 and 2010-14. In Germany and Italy, the fiscal stimulus undertaken in the first phase of the crisis was all about increased spending. By contrast, the UK and Sweden alike relied on tax cuts as well as spending increases to stimulate demand in this phase. While the Italian government has relied entirely on tax increases to consolidate its overall budget position since 2010, the German and British governments have deployed a combination of tax increases and spending cuts, with spending cuts being more important in Germany than the UK. Sweden's heavy reliance on tax cuts to stimulate domestic demand over the entire period 2008-14 provides at least some insight into the Swedish puzzle: while Sweden has engaged in more fiscal stimulus, it has also experienced a larger increase in disposable income inequality than the other three countries covered by our analysis (see Table 2).

[Table 6]

Unlike Germany and Italy, where the real exchange rate did not decline much in 2008-09, the British pound and the Swedish krona depreciated sharply in nominal and real terms during the Great Recession (Figure 14). However, the Swedish krona appreciated quickly as the economy began to recover in 2010, preempting an export-led recovery based on an improvement in cost competitiveness.

[Figure 14]

7. Wage and sectoral trends

In order to appreciate the impact of real exchange rates on living standards it is helpful to compare the price index based on consumer prices (CPI), which includes the price of imports, with the deflator of GDP, which only includes domestically produced goods and services, excluding imports. If the CPI grows more slowly than the GDP deflator, real consumption wage

of workers is growing even though the real production wage (nominal wage deflated with the GDP deflator) may not be growing, thanks to real exchange rate appreciation, i.e. cheaper imports. According to the AD-ERU-BT framework presented above, the resulting real wage increase is not inflationary and is thus compatible with higher equilibrium output and employment (in the sense that an inflation-targeting central bank will see no need to intervene to deflate the economy).

Figure 15 reports the CPI and GDP deflator for the four countries between 1994 and 2016. While the two series move more or less in lockstep in Italy and the UK (specifically: producer prices tend to grow faster than consumer prices in the 2000s in both countries, but the trends invert after the crisis), Germany and Sweden move in opposite directions from one another: German producer prices grow more slowly than consumer prices throughout the period, a sign of real exchange rate depreciation. The opposite happens in Sweden, where particularly after the crisis a gap opens between producer prices (which continue to rise) and consumer prices (which remain flat).

[Figure 15]

Based on OECD STAN data, Figure 16 compares consumption and production wages (nominal wages deflated with the consumer price index and the GDP deflator, respectively) between 1994 and 2015 for five industries: total economy, manufacturing, construction, food & accommodation, and finance & insurance. For comparison purposes, the graphs also report the trend of labor productivity for the total economy (defined as value-added at constant prices per hour worked). The sectors are chosen to ensure variation in average worker skills: high skills (finance & insurance); medium-high skills (manufacturing), medium-low skills (construction), and low skills (food & accommodation).

German consumption wages grow more slowly than production wages as a consequence of real exchange rate depreciation. To the extent that they are unable to substitute imports with domestically produced goods and services, German workers become poorer as a result. Overall, German production wages have grown more slowly than productivity – which

has translated into a decline of the wage share. However, the gap between real wages and productivity has been shrinking after the crisis, which is another sign of rebalancing of the German growth model. Of the various industries, only the production wages of manufacturing workers and finance workers have – almost – kept pace with labor productivity. By contrast, the consumption wage gains of food and accommodation workers have been negative until 2014, and those of construction workers have been negative until 2008. Overall, the wage trends confirm that the German growth model has relied on wage compression, especially of low-skilled workers, even though low-skilled workers have been catching up a bit after the crisis.

Wage trends have been very different in Sweden. In this country consumption wages have been higher than production wages as a result of real exchange rate appreciation. While overall production wages have grown more slowly than productivity before the crisis, they have exceeded productivity afterwards, thus leading to a loss of competitiveness. The inter-sectoral distribution of wage increases is also very different from Germany, and the wages of low-skilled accommodation & food workers have increased at almost the same rate as manufacturing wages. These trends confirm that the Swedish growth model is characterized by much greater real wage growth than the German one, and that Swedish wage growth is less inegalitarian than the German one. After the crisis, however, wage growth may have begun to erode the cost competitiveness of Swedish exports, tilting the growth model towards consumption-led.

In the British case, real wages (both consumption and production-based) have grown faster than productivity until 2014. The wage rates of accommodation & food workers have stagnated relative to other categories of workers, although (unlike in Germany) even for these workers there have been real wage gains relative to the mid-1990s. The real wages of workers in the finance & insurance sector have grown much faster than average until 2007 and then have declined. Perhaps the most notable British trend is the stagnation of both real wages and productivity from 2007 on. Average consumption wages have declined in real terms in the years of austerity after growing faster than in Germany and Italy before.

The same phenomenon of stagnating labor productivity is even more clearly visible in the Italian case, where labor productivity has been practically flat for the past 20 years. Italy's manufacturing productivity growth has been much more disappointing than Germany, the UK, and especially Sweden's. The productivity performance of business services has been particularly disappointing. With very limited productivity growth, real wage growth (both consumption and production-based) has remained subdued in Italy. Italian manufacturing wages have grown faster than national productivity, but in line with sectoral productivity (not shown). As in Germany, the intersectoral distribution has been fanning out, with workers in the business service sector experiencing negative real wage increases (not shown). However, the decline of business service productivity has been even greater than the decline of real wages. It is not clear what explains the stagnation of productivity. Several authors point to the combination of demand stagnation and labor market liberalization as the culprit (Daveri and Parisi 2015, Jona Lasinio and Vallanti 2013, Tridico and Pariboni 2018, Tronti 2009).

[Figure 16]

Different growth models rest on different dominant sectors (Baccaro and Pontusson 2016). It is therefore helpful to examine how the sectoral composition of GDP has changed before and after the crisis. Based again on OECD STAN data, Figure 17 examines the distribution of value-added (VA) (share at constant prices) and employment (share of hours worked) shares across the following sectors between 1994 and 2015: manufacturing, construction, retail & hospitality, information & communication, finance & insurance, and professional, business, and technical services.

In Germany manufacturing is larger than in the other countries. In fact, it has a higher share of value-added than retail & hospitality. This share has remained constant throughout the period, unlike in the other three countries where it has declined (in Sweden the decline has begun in the early 2010s). The German manufacturing share of employment, instead, has declined a bit, but remains around 20%, slightly below the employment share of the retail & hospitality sector. Overall, the German economy has remained firmly centered on

manufacturing. Interestingly, the German construction sector has shrunk between the mid-1990s and the mid-2000s.

The Swedish trajectory is *sui generis* and confirms that a structural shift may be occurring in Sweden in the post-crisis period. The Swedish manufacturing sector has been declining in importance, certainly in terms of employment share and, since the early 2010s, in terms of value-added as well (after growing in the pre-crisis period). In 2015 the Swedish manufacturing sector had a share of working hours of around 14% of the total, while the share of the retail & hospitality sector was more than 20%. The information and communication sector and the professional services sector have been expanding their shares of value-added, and, albeit to a more limited extent, their employment shares, too. Overall, the Swedish economy seems to be less centered on manufacturing and more on high-value added services than the German economy.

Manufacturing employment has been declining in Italy throughout the period, and the crisis seems to have accelerated the decline. However, with an employment share of just below 20%, the manufacturing sector remains an important employer in Italy. The decline of manufacturing has not been compensated by the expansion of high-value added service sectors like information & communication, professional services, and finance & insurance.

This type of substitution is instead present in the UK, where the manufacturing sector has been declining dramatically to less than 10% of both VA and employment in 2015. The high-value added services have been growing in the same periods, and together represent a greater share of the British economy than manufacturing.

[Figure 17]

8. Some final remarks

In this paper, we have sought to extend the analysis of post-Fordist growth models in Baccaro and Pontusson (2016) to the post-crisis period as well. Germany has emerged as an export-led economy which has been enabled by institutionalized wage moderation, specifically

in the low-skilled service sectors, and an inflexible nominal exchange rate. Exports are the most important growth driver, and being more price-sensitive than in other countries, and possibly more price-sensitive than in the past (Baccaro and Benassi 2017), wage moderation and the ensuing real exchange rate devaluation are of utmost importance. Politically, the manufacturing sector is the dominant sector and has probably increased its influence on policy over time.

Our interpretation of the Swedish growth model in the 15 years before the crisis is that, differently from Germany, it was based on an increase the non-cost competitiveness of Swedish exports. This enabled a growth model in which there was no pressing need for wage and demand repression for export stimulation. In fact, the evidence has shown that in comparison with the German model the Swedish growth model is characterized by greater household consumption, faster and more equitable wage growth, and a tendency for real exchange rate appreciation.

The British growth model appears the mirror image of the German model: household consumption is the sole driver of growth, supported not just by household debt but also by real wages (which grew at a healthy pace at least until 2007), even though the growth is unequally distributed across sector. In addition, there is a tendency for competitiveness to deteriorate and for the current account to show persistent deficits. The latter did not precipitate any rebalancing because, at least until the crisis, the rest of the world was willing to finance the British current account by purchasing British assets.

The Italian case stands out for its inability to find a viable growth driver in the post-Fordist period. Consumption growth has been limited due to meagre wage growth and restrictive fiscal policies for most of the period. The export sector is too small and price sensitive to play the role of growth driver. Two factors feature prominently in the Italian stagnation: the inability to stimulate external demand through an exchange rate devaluation, which is precluded by membership in the Eurozone, and the dismal performance of labor productivity, whose roots are not clear, but may be associated to the combination of insufficient demand and labor market liberalization.

To what extent have the growth models change in response to the crisis? In Germany, the UK and Sweden, domestic consumption stimulated by fiscal means played an important role in cushioning the impact of the contraction of world trade in 2008-09. The massive stimulus undertaken by the British Labour government is exactly what we would expect from a government managing a consumption-led economy. It must be noted, however, that the export of financial services was an important component of the British growth model in the pre-2007 period. While international finance arguably became even more important once the real-estate bubble burst and households had to reduce their indebtedness, the currency depreciation generated by expansionary government policies posed a major threat to Britain's comparative advantage in this sector. The reorientation of fiscal policy by the first Cameron government can thus be seen as an effort to rebalance the British growth model by scaling back its dependence on household consumption and relying more on high-end service exports. This effort appears to have backfired. In fact, wage and consumption stagnation has limited the growth performance of the British economy in the post-crisis period.

While household consumption has contributed more to German economic growth in recent years than it did in the decade leading up to the Great Recession, there can be little doubt that German economic policies have been geared towards restoring the primacy of manufacturing exports within the German growth model. The crisis appears to have strengthened rather than fractured the dominant social coalition in Germany, centered on the export-oriented manufacturing sector. However, our analysis suggests that the viability the Germany's export-led model depends on factors the policy-making elite does not directly control, such as continuation of the international free trade regime and the continued existence of the Euro in its current form.

Sweden is arguably the country whose growth model has been most affected by the crisis. One might have expected that the crisis would have tipped the balance between consumption-led and export-led growth in favor of the latter, but the opposite seems to have happened. It is striking that Sweden's REER appreciated sharply while Germany's REER

declined over the recovery of 2010-14 (see Figure 15). Not surprisingly, Sweden's trade surplus turned negative while the German trade surplus recovered. As suggested above, Sweden's increased dependence on the domestic components of aggregate demand has been promoted by expansionary or, at least, relatively lax monetary and fiscal policies, combined with a quite dramatic retreat from redistribution ("bourgeois Keynesianism"). The continued rise of household indebtedness, signs of another real-estate bubble, and the deterioration of the trade balance raises questions about the economic rationale of this policy orientation.

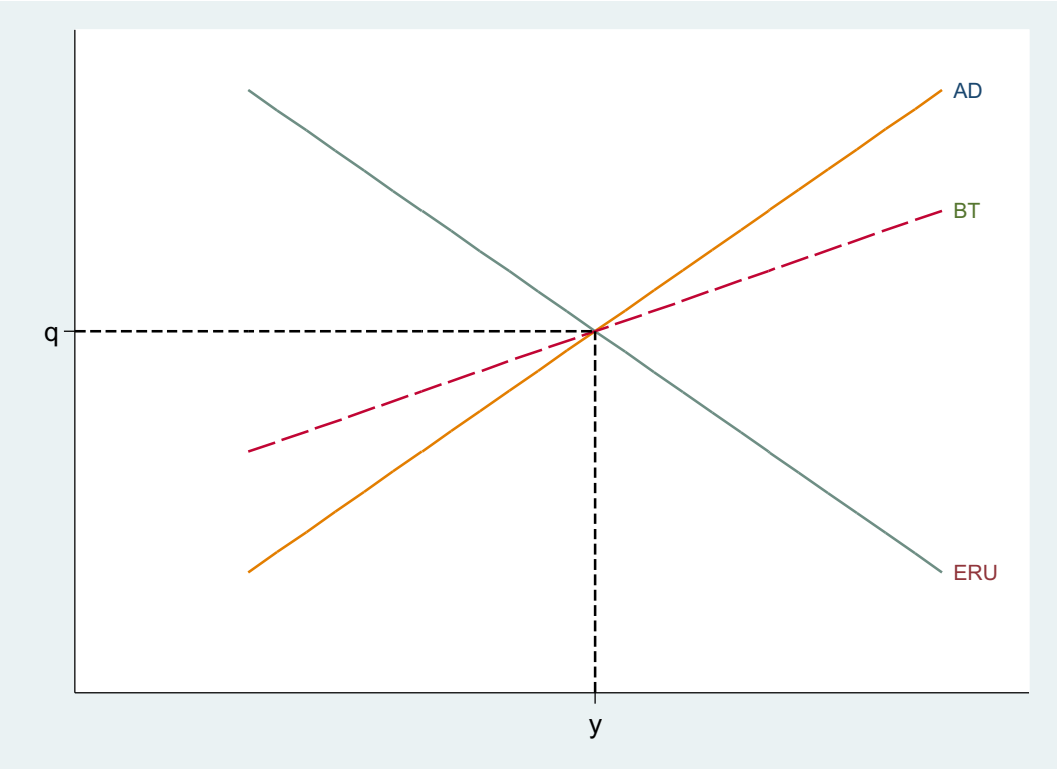
Domestic politics shed at least some light on the policy choices of Swedish governments in 2010-14. Headed by Fredrik Reinfeldt, the bourgeois coalition that came to power in 2006 included four parties with divergent priorities and lost its parliamentary majority in the election of 2010. While the Social Democrats lost more votes than the Alliance parties, the right-wing populists gained parliamentary representation for the first time in 2010. As a result, the government parties held only 173 out of 349 seats in the parliament of 2010-14. By contrast, David Cameron and Angela Merkel both had comfortable majorities with one coalition partner and, at least in the German case, the opposition was quite supportive of the turn to austerity. In other words, the Swedish government had strong political-electoral reasons to avoid the "tough decisions" that would have been required to pursue export-led growth. Our analysis suggests that the Swedish economy may be undergoing a structural shift away from manufacturing and towards a greater importance of services.

The Italian case serves as a reminder that "government weakness" does not necessarily lead to expansionary macroeconomic policies. The Italian story is first and foremost a story of government policy being severely constrained by the combination of public debt and Eurozone membership, with disastrous consequences for economic growth. The contraction of domestic consumption appears to have contributed to some improvement in export competitiveness as well as a decline in imports, but the Italian export sector is simply too small to act as growth driver for the economy. Burdened by an exchange rate which is too strong for its needs, highly price-sensitive Italian exports would need a more dramatic reduction of domestic wages and

prices relative to competitors than has been achieved in the post-crisis years. However, it is difficult to imagine Italian citizens putting up with another decade of austerity.

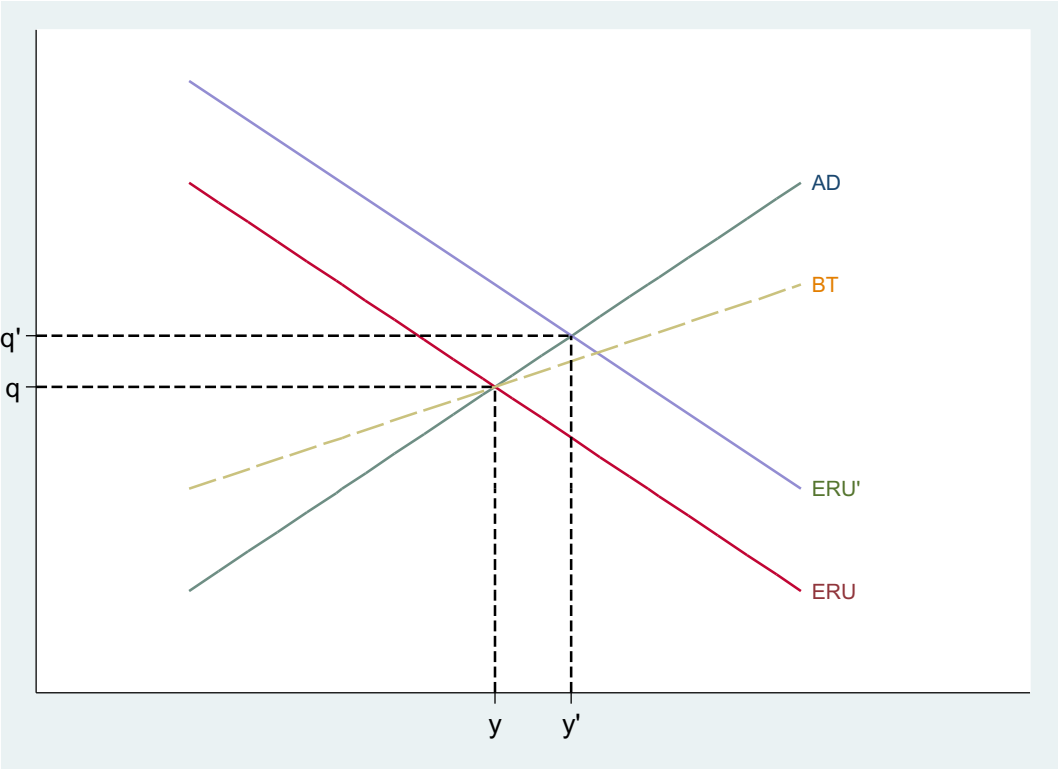
We close with the following paradox. Of the four countries discussed in this paper Germany has clearly fared best since the onset of the Great Recession in terms of growth and employment. Not surprisingly, its growth model and dominant social coalition remain intact. When all is said, however, it could be that the crisis will prove, for “external” reasons, to have been the beginning of the end of the export-led model that Germany adopted in the second half of the 1990s. Again, the long-term viability of this model would seem to depend critically on keeping peripheral economies in the Eurozone. As we are reminded daily, the crisis of the Eurozone periphery is far from over.

Figure 1: The AD-BT-ERU Diagram



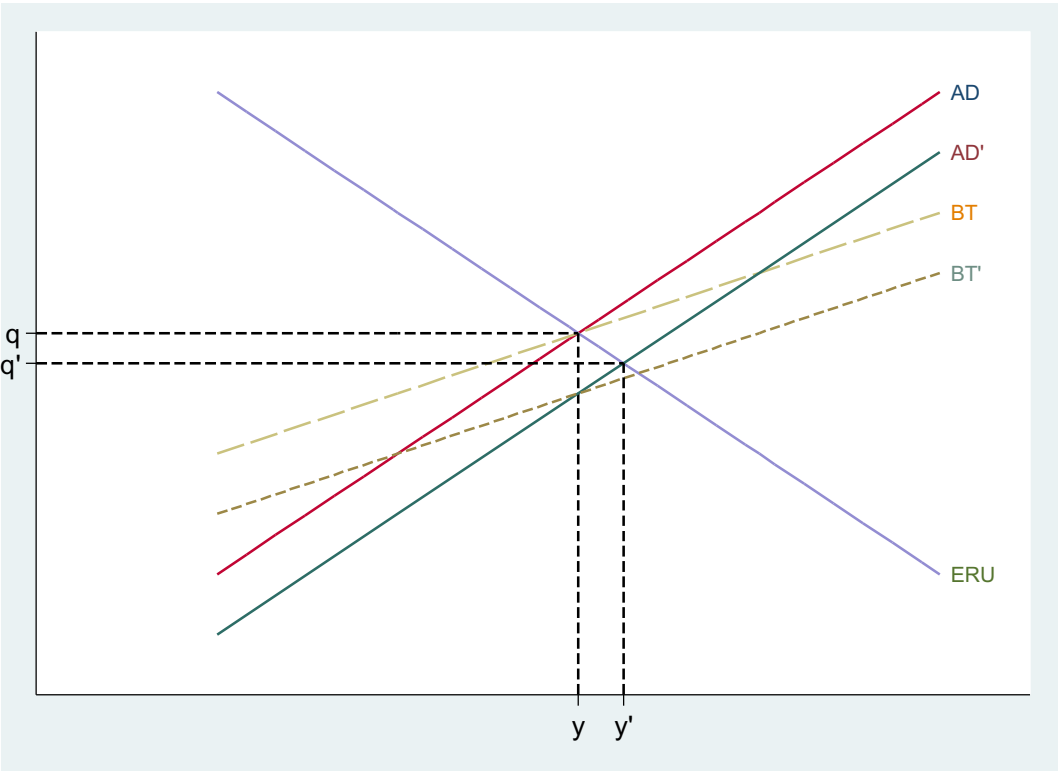
Higher values of q imply real exchange rate devaluation; higher values of y imply higher output.

Figure 2: The German Growth Model in AD-BT-ERU Diagram



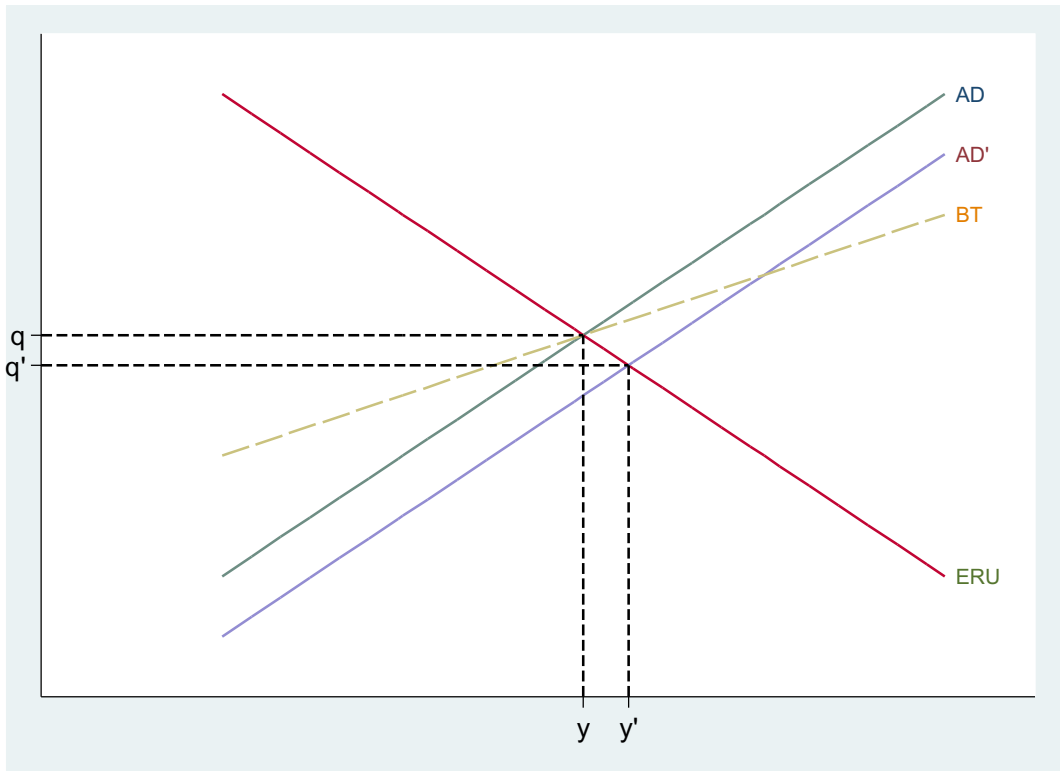
Higher values of q imply real exchange rate devaluation; higher values of y imply higher output.

Figure 3: The Swedish Growth Model in AD-BT-ERU Diagram



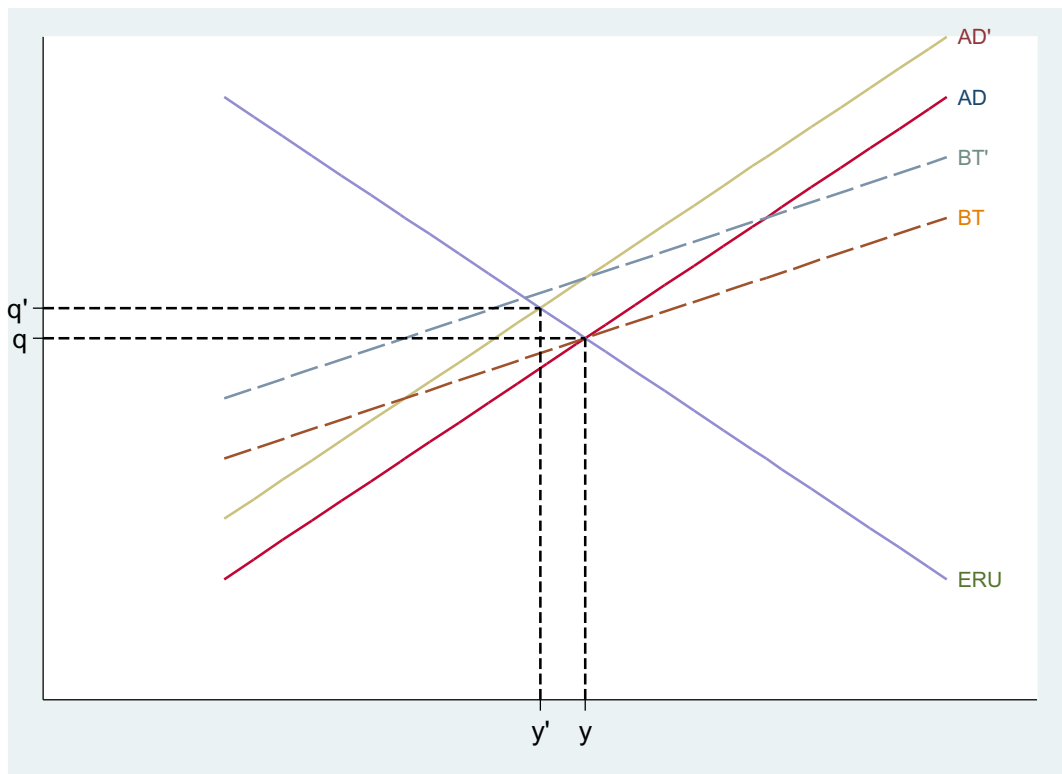
Higher values of q imply real exchange rate devaluation; higher values of y imply higher output.

Figure 4: The UK Growth Model in AD-BT-ERU Diagram



Higher values of q imply real exchange rate devaluation; higher values of y imply higher output.

Figure 5: The Italian Growth Model in AD-BT-ERU Diagram



Higher values of q imply real exchange rate devaluation; higher values of y imply higher output.

Figure 6: Wage Shares

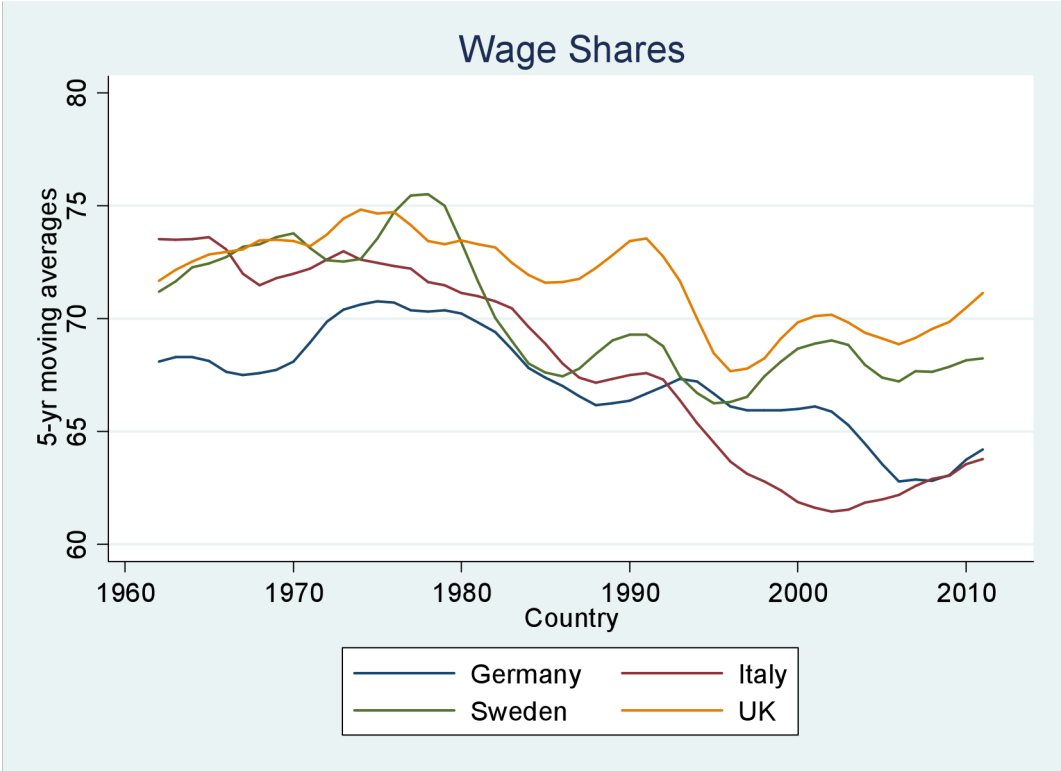


Figure 7: Real GDP, 2000-2014

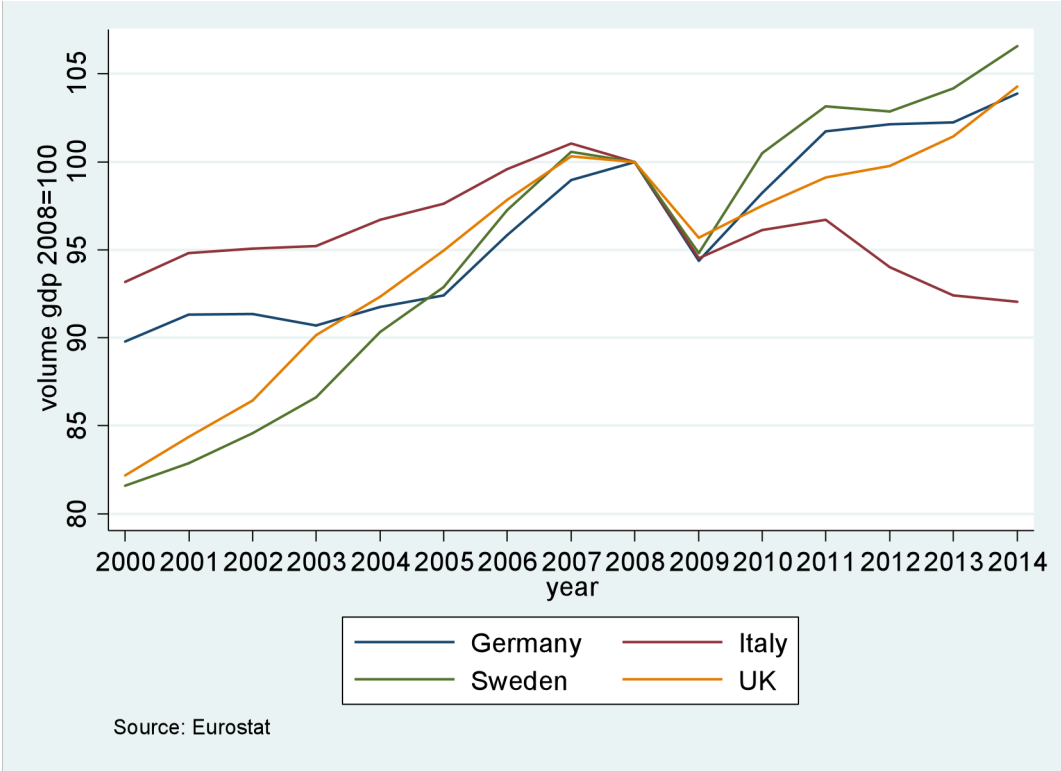


Figure 8: Contributions to annual GDP growth in Germany

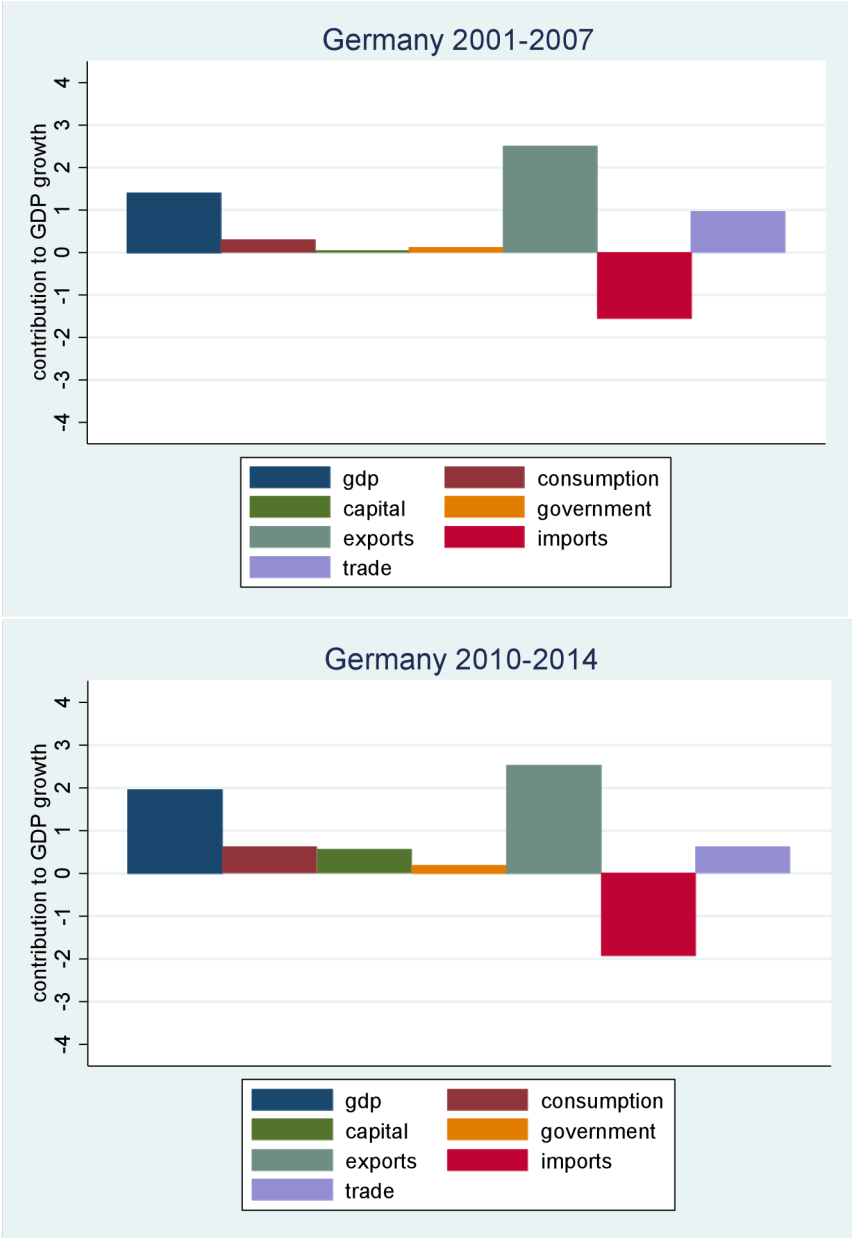


Figure 9: Contributions to annual GDP growth in the UK

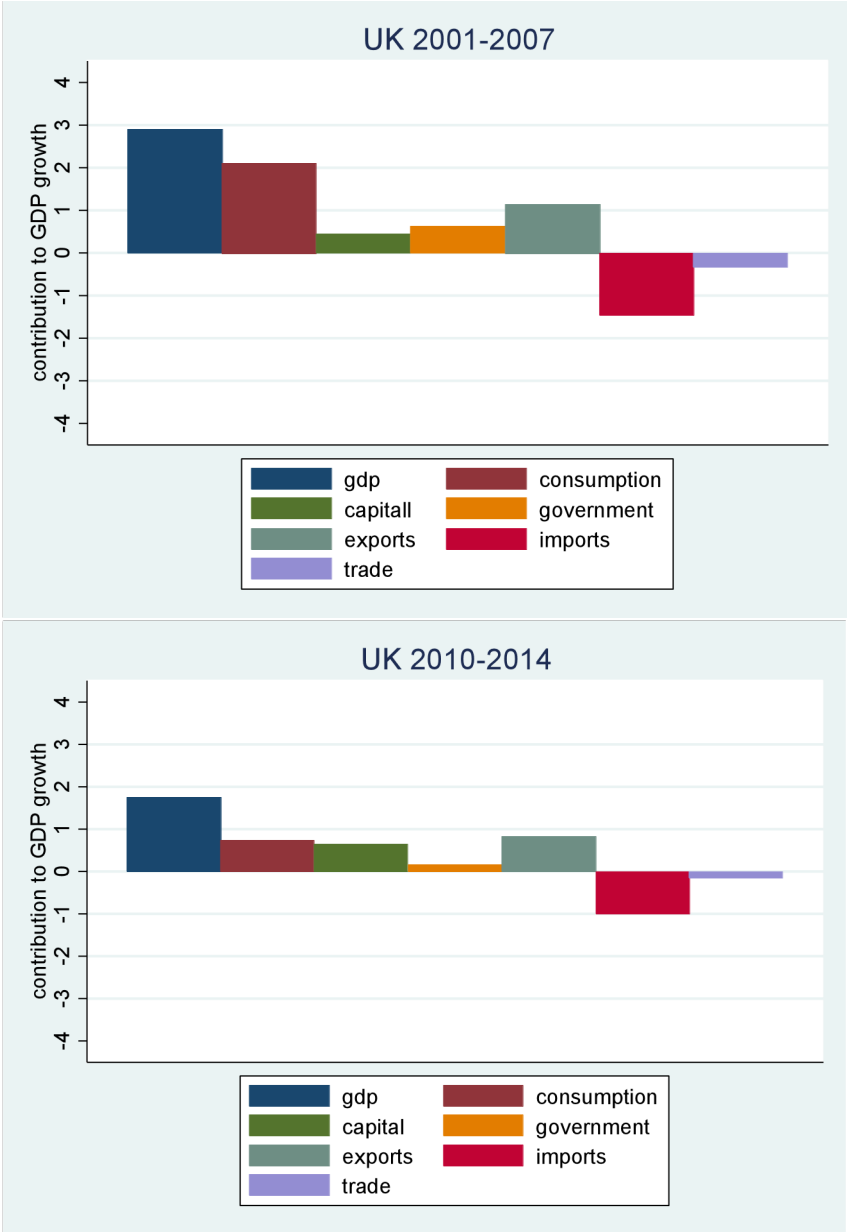


Figure 10: Contributions to annual GDP growth in Sweden

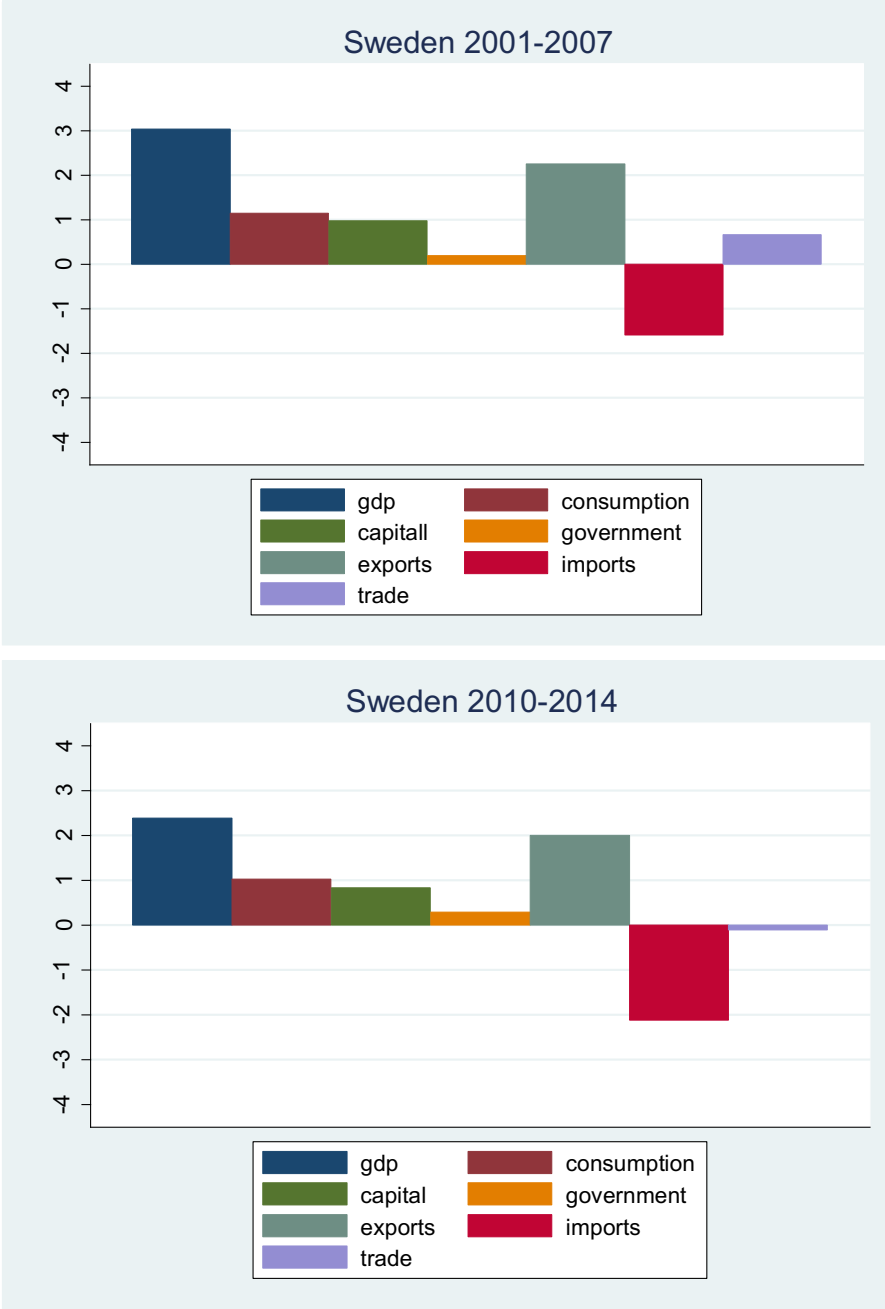


Figure 11: Contributions to annual GDP growth in Italy



Figure 12: Debt of Households and Non-Profit Institutions Serving Households (NPISHs) as % of Net Disposable Income

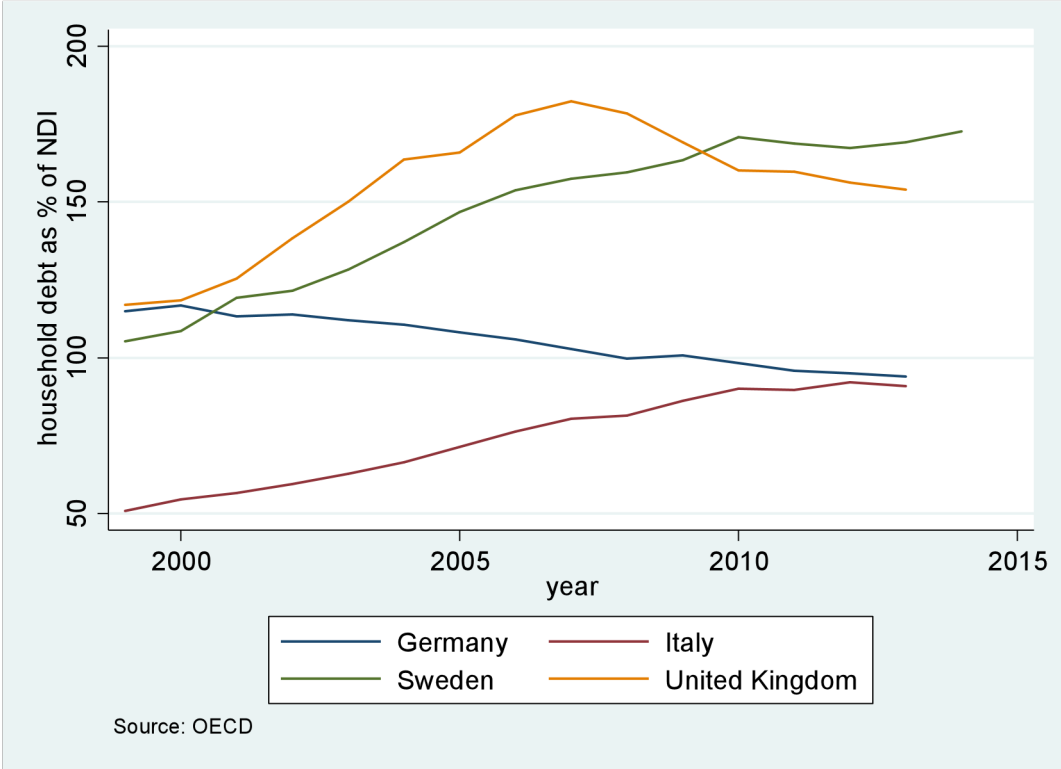


Figure 13: Short-term interest rates

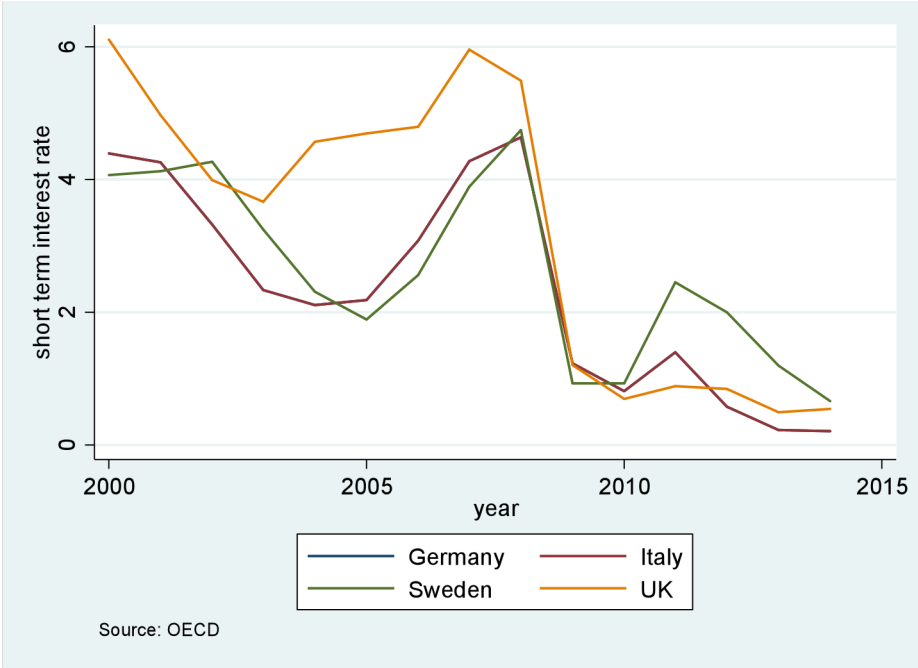


Figure 14: Long-term interest rates on government bonds

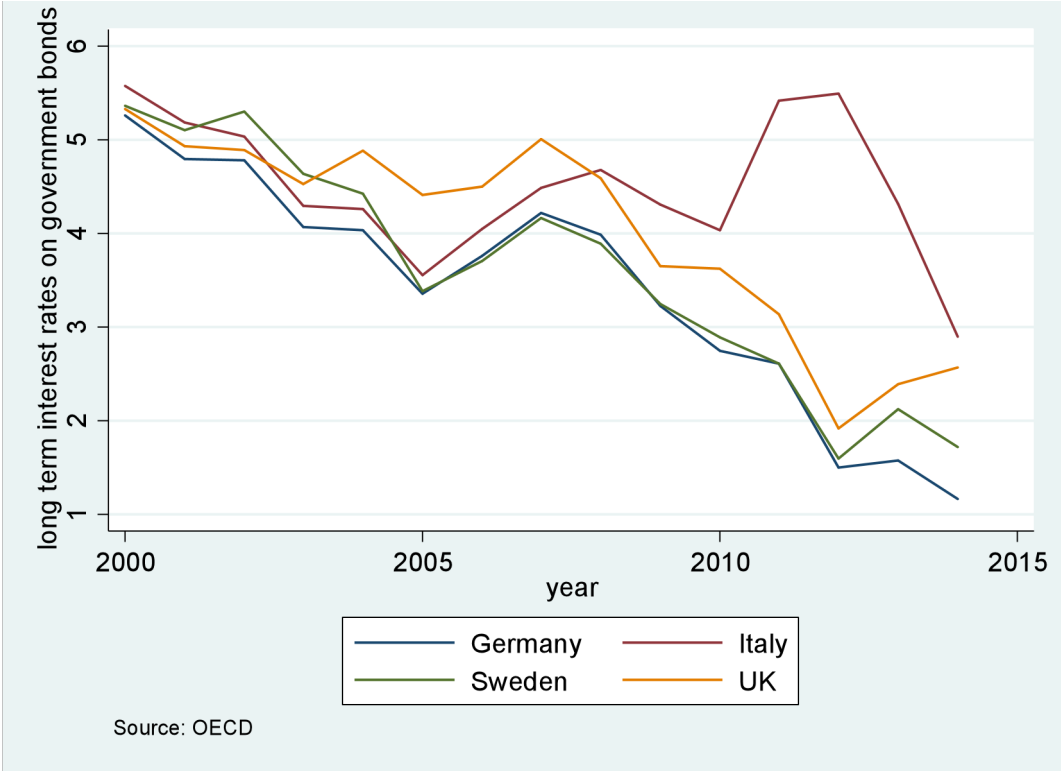
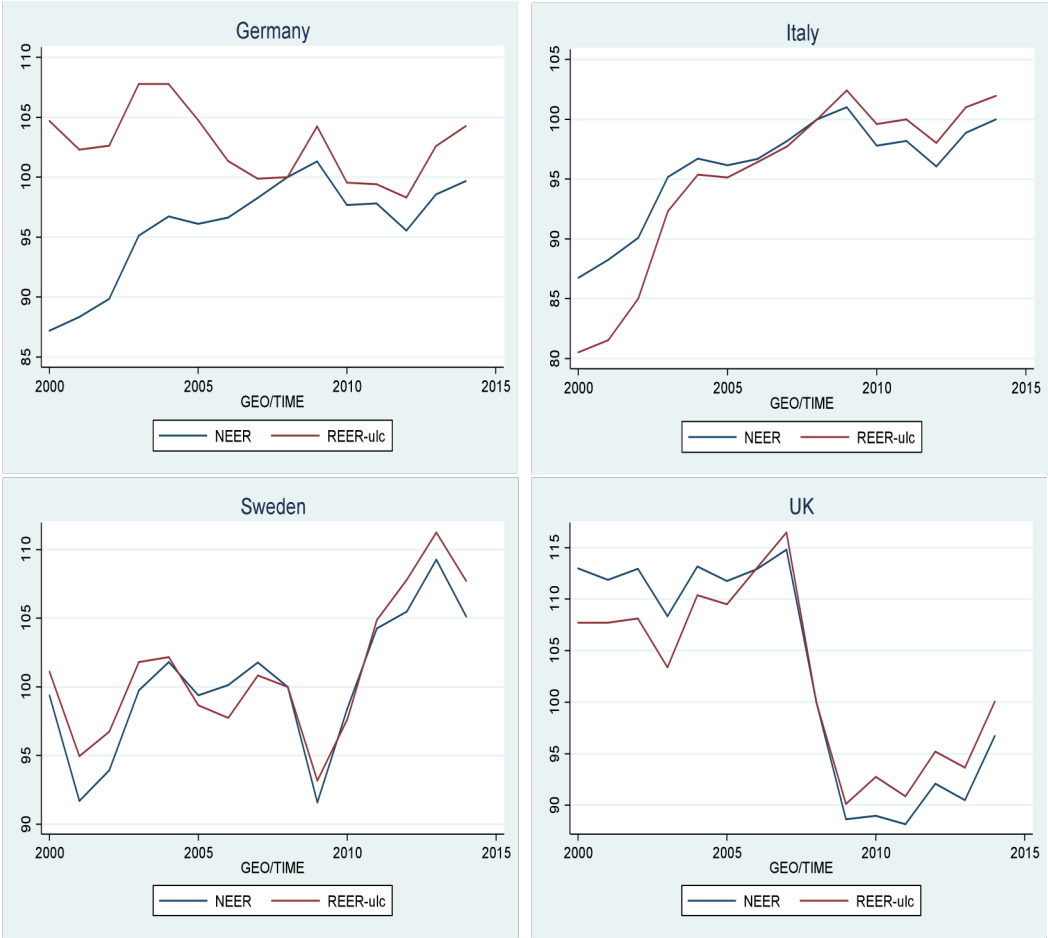
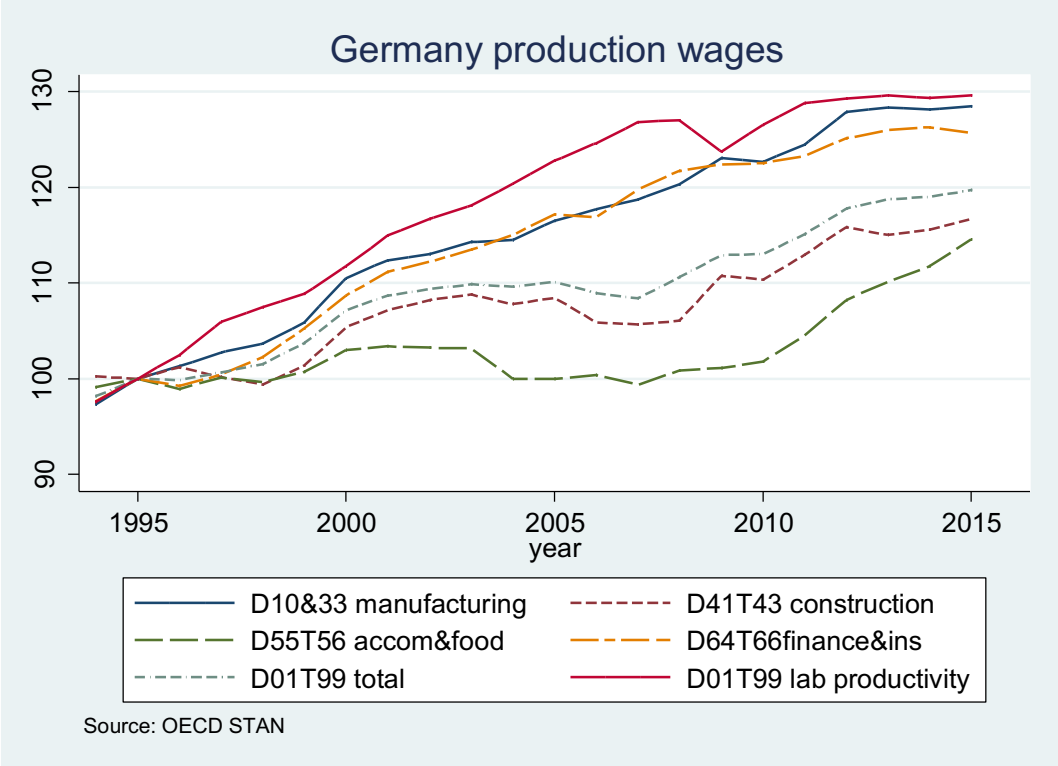
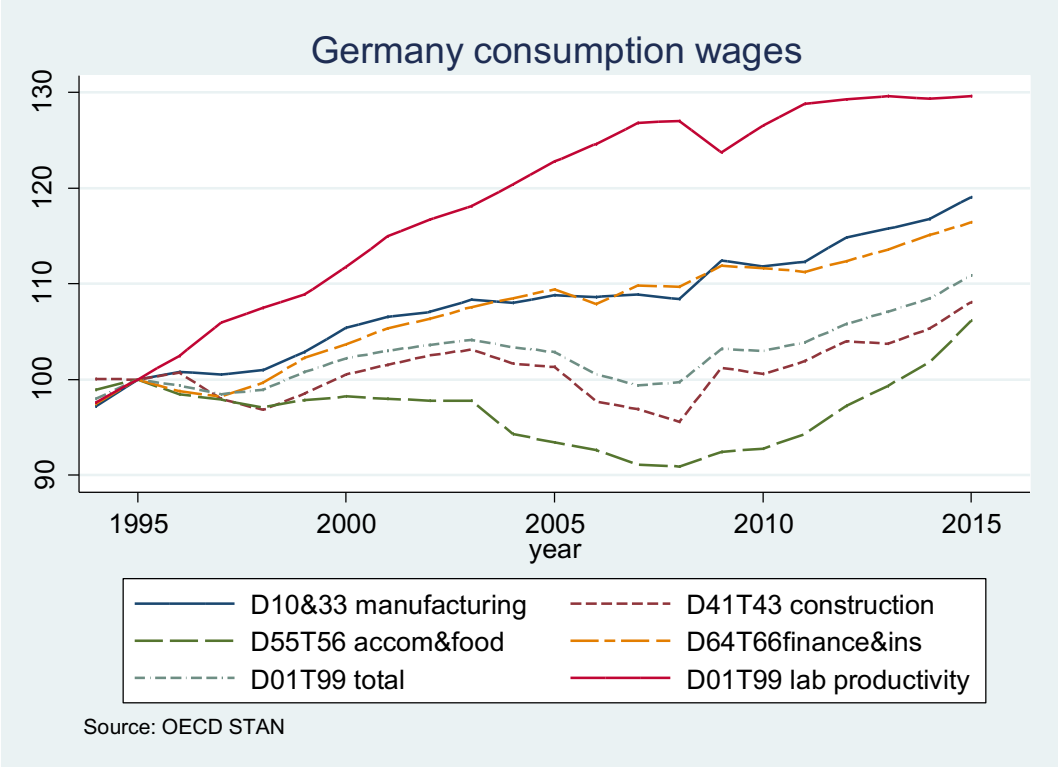


Figure 15: Nominal and Real (ULC-based) Effective Exchange Rates (2008=100)

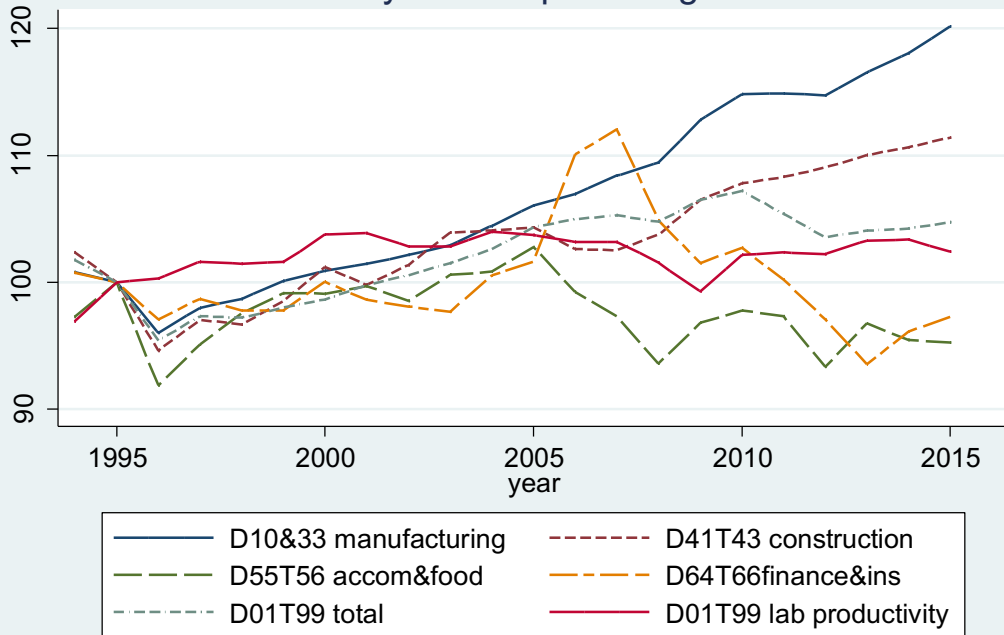


Source: Eurostat

Figure 16: Real wages and labor productivity

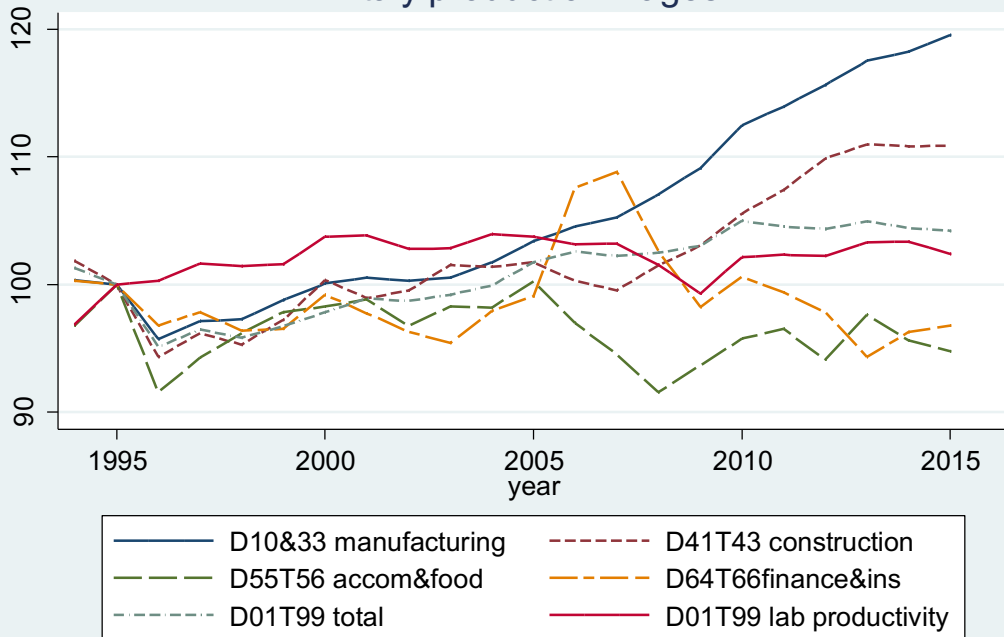


Italy consumption wages



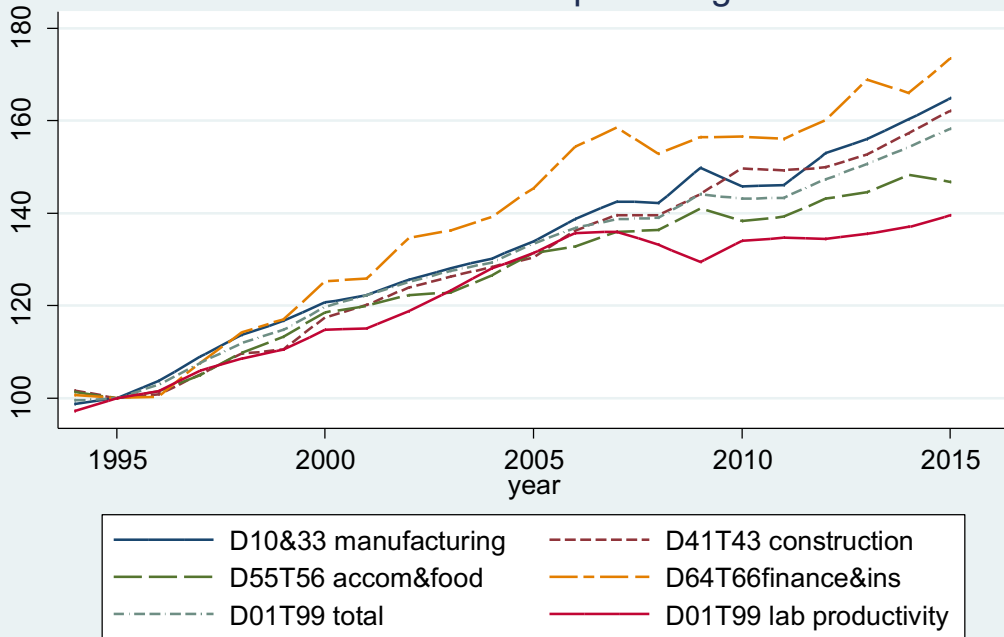
Source: OECD STAN

Italy production wages



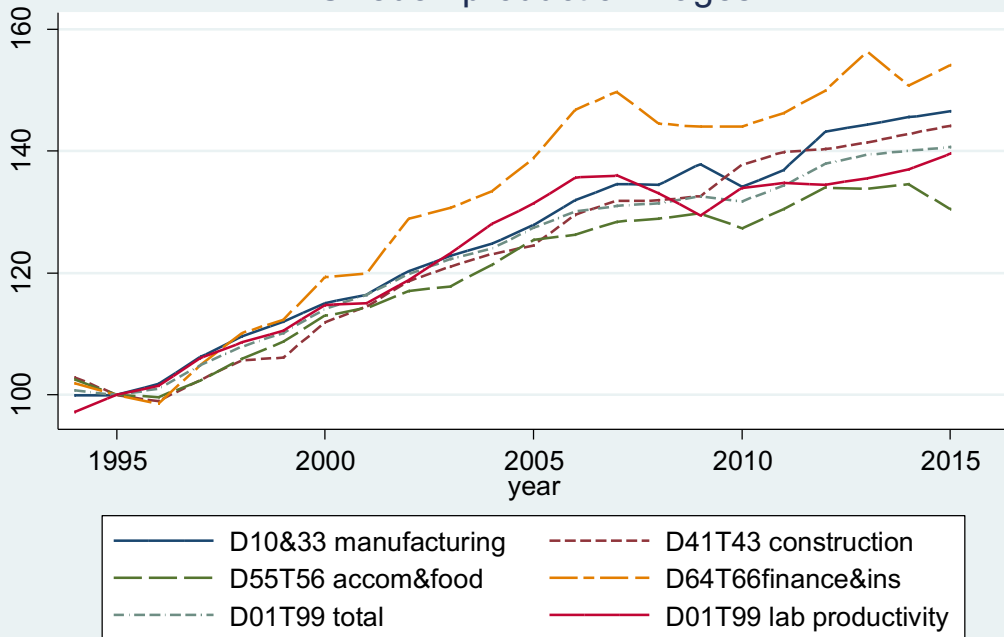
Source: OECD STAN

Sweden consumption wages



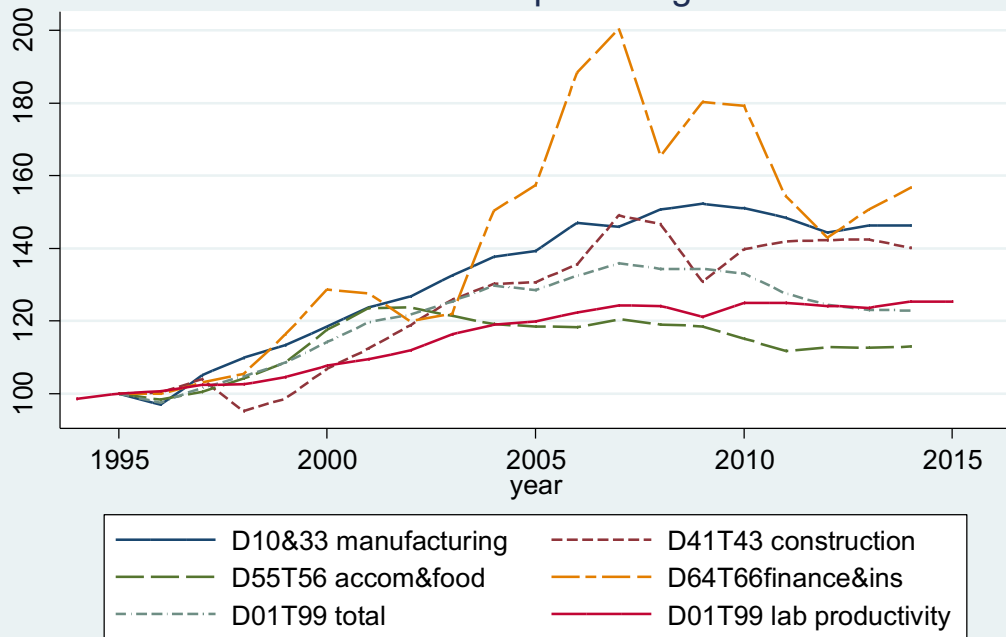
Source: OECD STAN

Sweden production wages



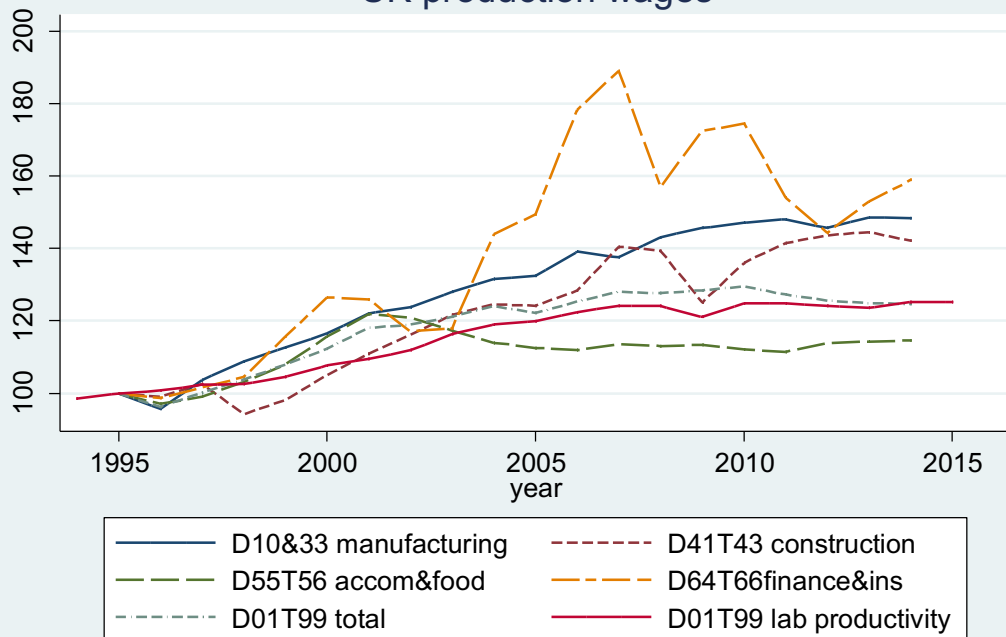
Source: OECD STAN

UK consumption wages



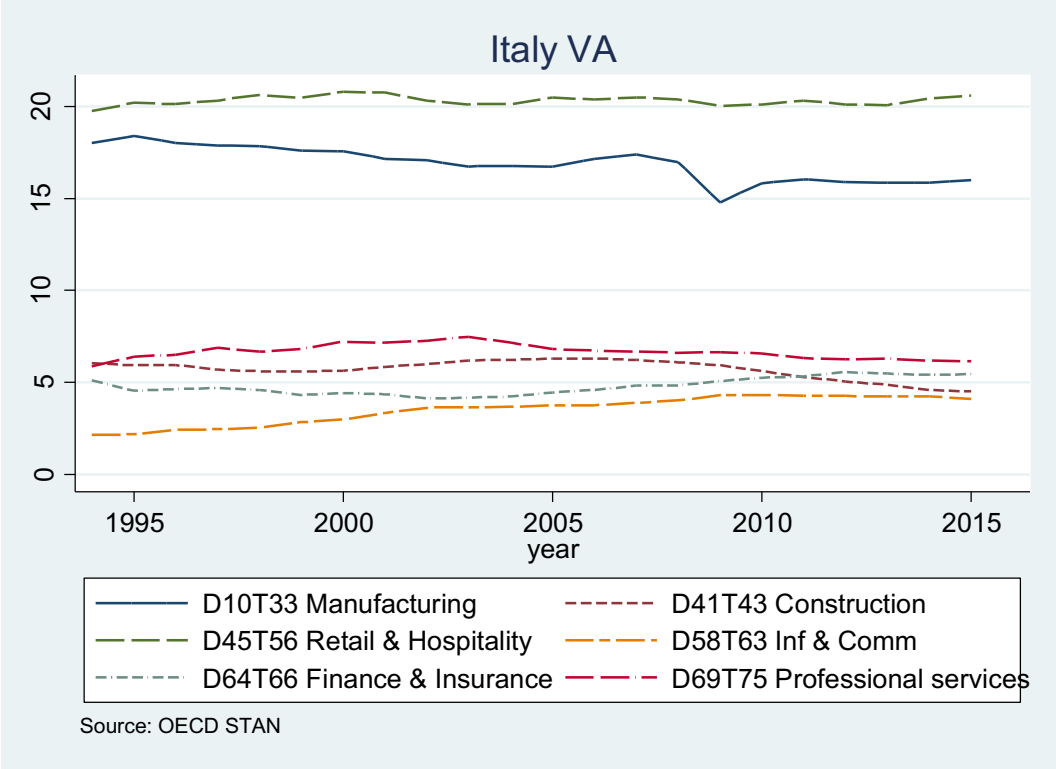
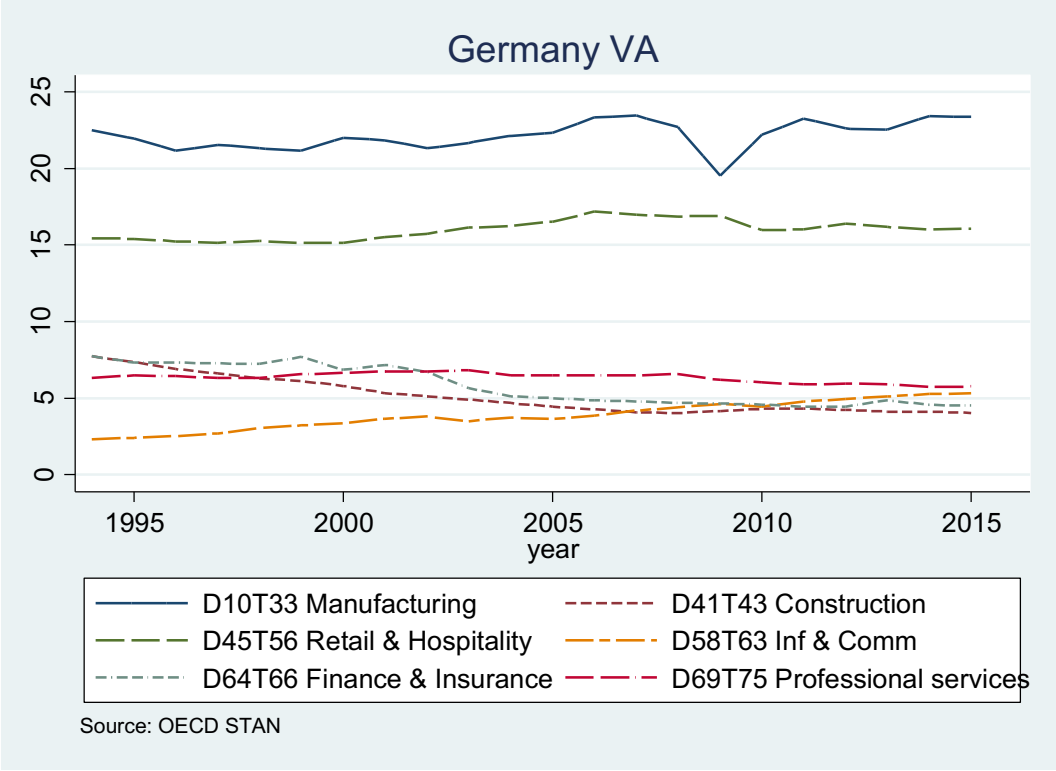
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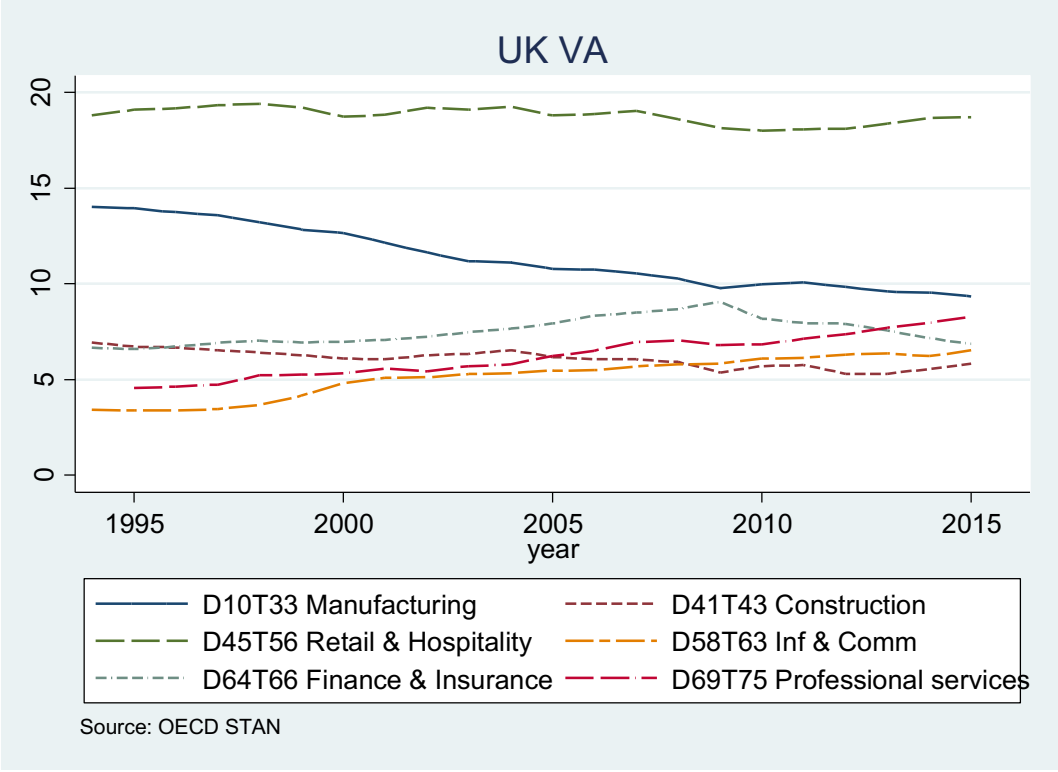
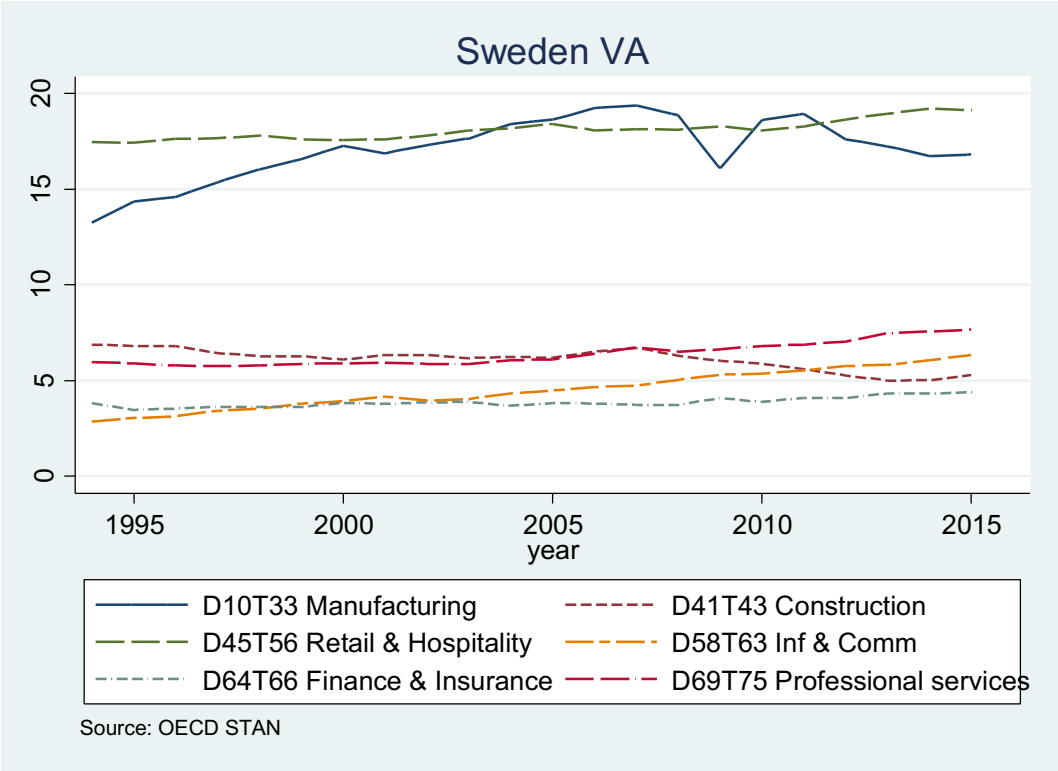
UK production wages



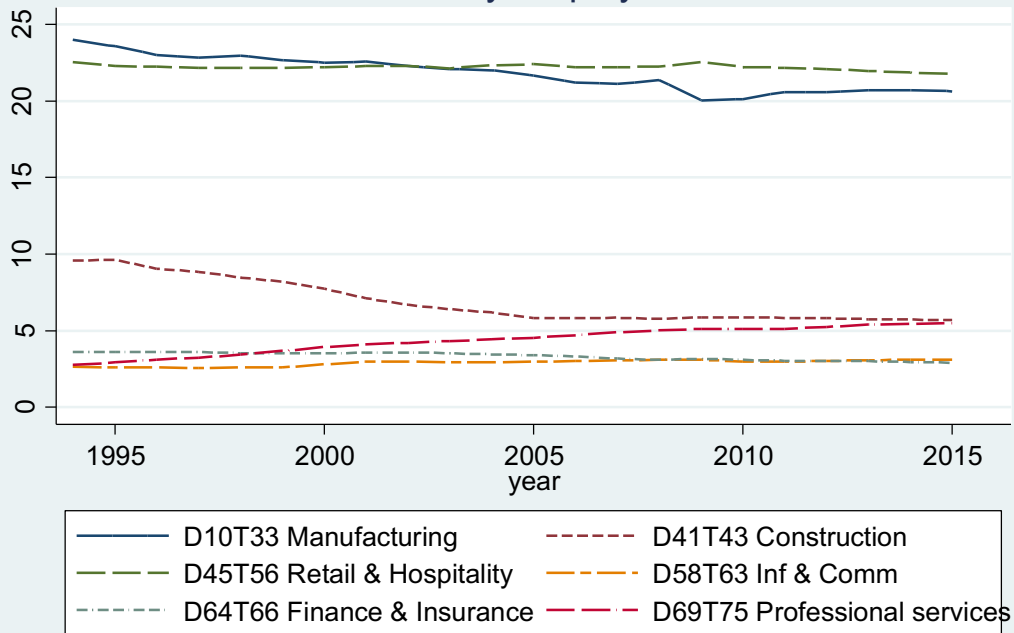
Source: OECD STAN

Figure 17: Value-added and employment shares of sectors



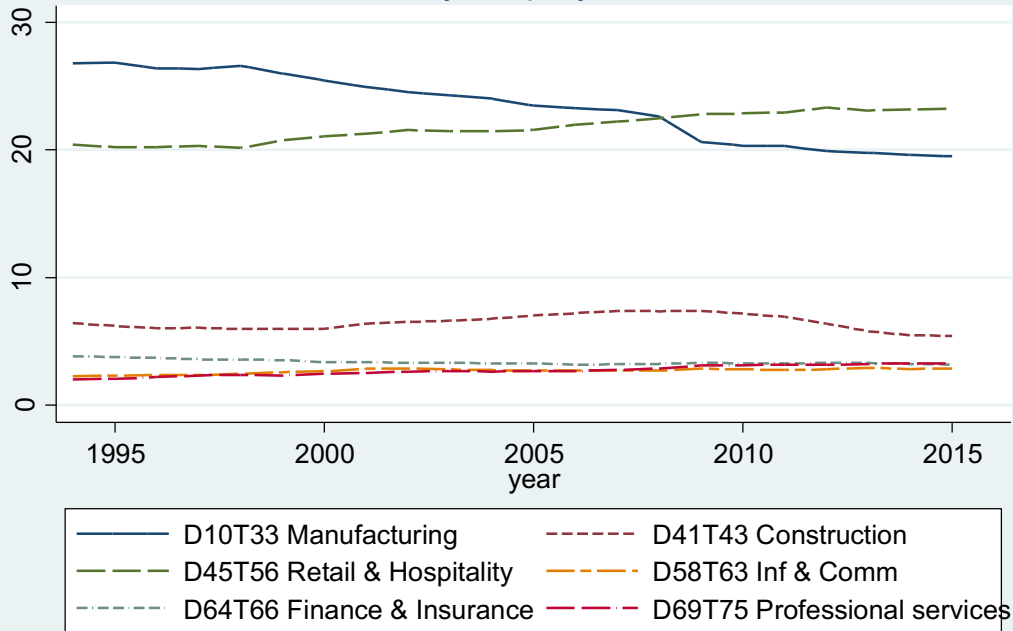


Germany Employment



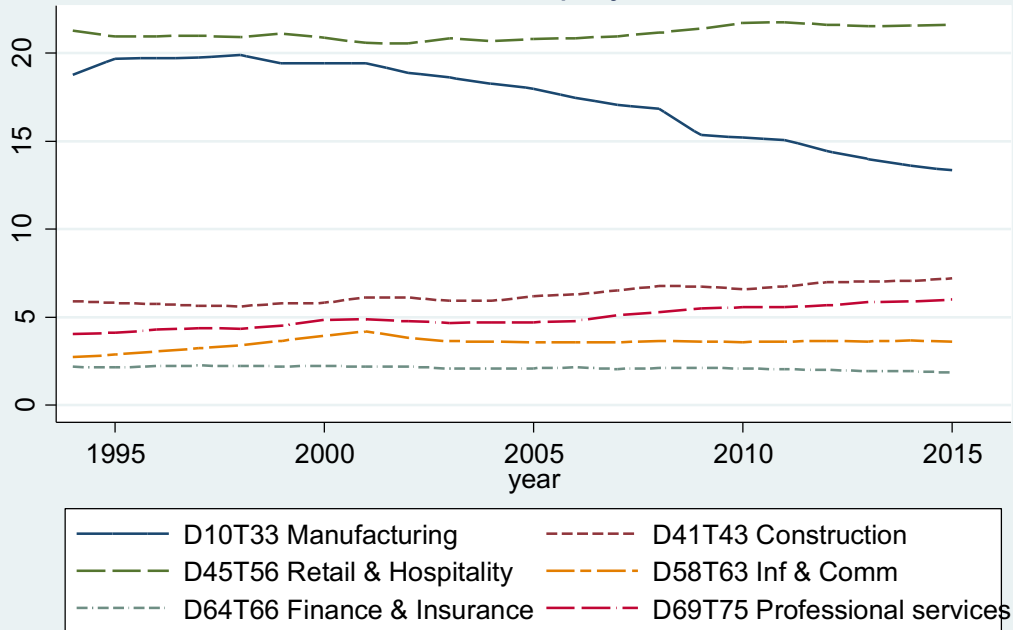
Source: OECD STAN

Italy Employment



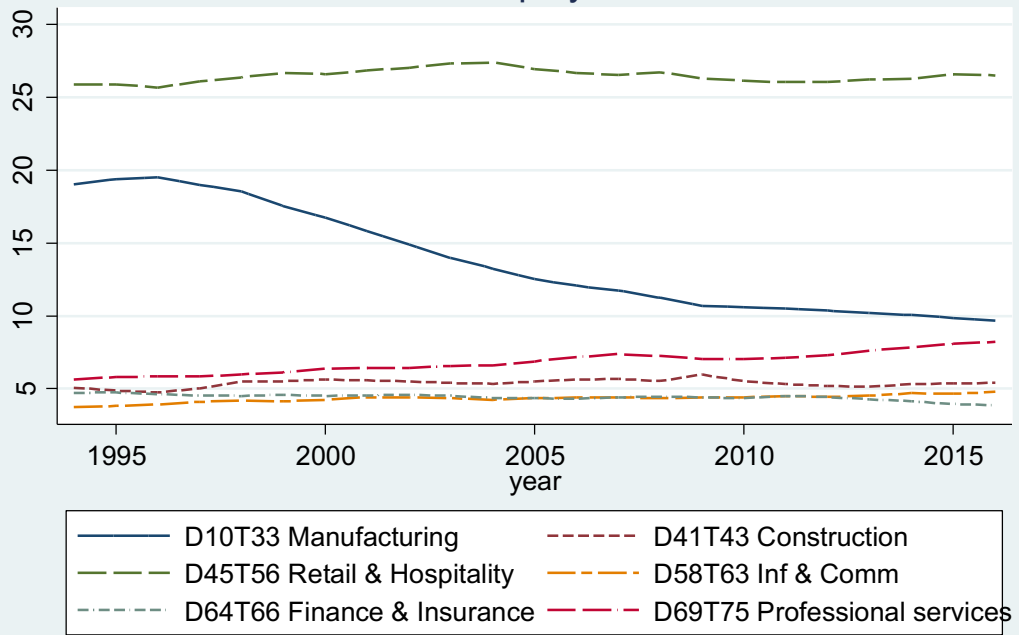
Source: OECD STAN

Sweden Employment



Source: OECD STAN

UK Employment



Source: OECD STAN

Table 1: Annual growth rates of exports and household consumption, 1994-2007

	GDP	(A)	(B)	A/B
		exports	household consumption	
Germany	1.7	7.7	0.9	8.6
Italy	1.6	4.2	1.6	2.7
Sweden	3.3	7.3	2.7	2.7
UK	3.3	5.2	3.6	1.4
OECD	2.8		2.9	

Annualized quarterly change in logged variables (volume series). Source: OECD Quarterly National Accounts.

Table 2: Change in Gini coefficients for working-age households

	1990-95		2007-12	
	pre-fisc	post-fisc	pre-fisc	post-fisc
Germany	0.035	0.017	0.003	-0.001
Italy	0.063	0.05	0.022	0.025
Sweden	0.05	0.011	0.003	0.034
UK	0.021	-0.013	0.025	-0.011

For the early 1990s UK figures refer to 1990-94, Italian and Swedish figures to 1991-95. For the Great Recession, pre-fisc UK figures refer to 2007-10, pre-fisc Swedish figures to 2008-12.

Source: Calculations based on data from the Luxembourg Income Study and European Union Statistics on Income and Living Conditions reported in Pontusson and Weisstanner (2017).

Table 3: Impact of Change in REER on Volume Export Growth (2000--2013): ULC-based

	(1)	(2)	(3)	(4)
VARIABLES	Germany	Italy	Sweden	UK
REER	-0.788***	-0.779***	-0.0205	0.0873
	(0.193)	(0.178)	(0.207)	(0.238)
World growth	1.946***	2.554***	3.217***	1.472
	(0.549)	(0.546)	(0.658)	(1.085)
Year 2009	-9.232***	-11.63***	-6.529	-6.095
	(2.911)	(3.095)	(3.718)	(5.623)
Constant	-1.995	-6.241**	-8.499**	-2.179
	(2.316)	(2.435)	(2.807)	(4.717)
Observations	14	14	14	14
R-squared	0.941	0.947	0.903	0.596
Durbin test	n.s.	n.s.	n.s.	n.s.

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Export dependence and the composition of exports

	in % of GDP				services in % of total exports	
	goods	services	goods	services		
	2004-07	2010-13	2004-07	2010-13	2004-07	2010-13
Germany	35.4	38.8	6.1	7.8	14.7	16.7
Italy	21	23.4	5.1	5.1	19.5	17.9
Sweden	33.9	31	12	13.4	26.1	30.2
UK	15.9	18.4	9.4	11.9	37.2	39.3

Source: Eurostat?

Table 5: Fiscal stimulus

	2007	2008	2009	2010	2011	2012	2013	2014
Germany	-0.86	0.05	0.71	0.96	-1	-0.66	-0.04	-0.06
Italy	-0.98	0.73	1	-1.11	-0.19	-2.84	-0.26	-0.43
Sweden	-0.49	0.45	-0.23	1.11	0.37	0.53	0.11	0.33
UK	0.5	1.14	3.14	-1.32	-1.64	0.54	-0.9	-0.01

Note: The table shows inverted year-on-year changes in the cyclically-adjusted primary government balance as % of potential GDP. Bolded (positive) values represent moves towards government deficit (or bigger deficit).

Source: OECD Economic Outlook statistics

(https://stats.oecd.org/viewhtml.aspx?datasetcode=EO105_INTERNET&lang=en#).

Table 6: Change in government revenues and disbursements (GDP percentage points)

	revenues		disbursements	
	2006-10	2010-14	2006-09	2010-14
Germany	0.18	1.29	2.71	-3.43
Italy	1.67	2.42	2.34	1.21
Sweden	-1.43	-1.11	0.79	0.74
UK	-2.6	3.02	5.56	-4.3

Source: OECD Economic Outlook statistics

(https://stats.oecd.org/viewhtml.aspx?datasetcode=EO105_INTERNET&lang=en#).

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¹ Differently from Avlijas, Palier, and Hassel (this volume), we do not think that Germany was always an export-led growth model. Until reunification, the coordinated bargaining system ensured that real wages grew in line with national labor productivity in both the manufacturing and the service sector, and thus contributed to feed domestic demand. Even then, the export sector was very important as a locus of innovation and productivity improvement for the German economy (see Baccaro and Pontusson 2016; Baccaro and Benassi 2016).

² Specifically, if the Marshall-Lerner condition does not hold; see Carlin and Soskice 2015: 385-6.

³ This mechanism is also emphasized by the literature on efficiency wages, see (Akerlof (1982), Shapiro and Stiglitz (1984)).

⁴ On performativity, see MacKenzie, Muniesa and Siu (2007); on the performativity of central banks, see Holmes (Forthcoming).

⁵ In this section, we use a three-equation, new Keynesian framework (Carlin and Soskice 2015) as opposed to a post-Keynesian framework. Our purpose is to illustrate how ideas about growth models are compatible with different theoretical perspectives.

⁶ This assumes that the Marshall-Lerner conditions holds.

⁷ For an extended explication, see Carlin and Soskice 2015: 371-3.

⁸ As the figures in Table 2 indicate, disposable income inequality has grown sharply in

Sweden, but this is due almost entirely to the effects of taxes and transfers.

⁹ It bears emphasizing that by subtracting the value added of imports solely from exports, and not from the other demand components as well, this simple growth decomposition exaggerates the contribution of domestic demand and downplays the contribution of exports. A better assessment of the growth contribution of different components of aggregate demand should take into account the direct and indirect uses of imports for private final consumption purposes, government consumption, investment, and exports, as opposed to simply subtracting them from exports. Following the approach of Bussière et al. (2013) and Auboin and Borino (2017), in Baccaro and Pontusson (2020) we perform such import-adjusted decomposition using Input-Output data. Results are overall in line with what we write in this section. Specifically: 1) Italy remains a clear case of stagnation, both before and after the crisis. 2) Germany remains a case of export-led growth in the pre-crisis period. It seems to have slightly rebalanced (in comparative perspective) in the post-crisis period. However, even in the post-crisis period the contribution of exports remains much greater than the contribution of consumption. 3) With the new operationalization, Sweden looks more like a case of export-led growth in the pre-crisis period, although the contribution of (import-adjusted) consumption is larger than in Germany. In the post-crisis period, it shifts decisively towards consumption and domestic demand-led growth. 4) The UK is a consumption-led economy both before and after the crisis. With the new data, the contribution of British exports to pre-crisis growth seems a bit larger than in the previous analysis.

¹⁰ The results presented in Table 3 are based on real effective exchange rates measured in terms of unit labor costs. The results are very similar with consumer price indices as the basis for measuring REERs.