The political and social economy of the Eurozone

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The Political and Social Economy of the Eurozone

by

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La Faculté des sciences de la société, sur préavis du jury, a autorisé l'impression de la présente thèse, sans entendre, par-là, émettre aucune opinion sur les propositions qui s'y trouvent énoncées et qui n'engagent que la responsabilité de leur auteur.

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Le doyen

Bernard DEBARBIEUX

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Abstract

The papers in this thesis explore the political and social economy of the Eurozone. The first part of the thesis examines the political economic effects of the Economic and Monetary Union (EMU). Here I ask why some countries fare better than others in the Eurozone (Chapter 1) and who the actors behind Germany's remarkable success are (Chapter 2). The second part of the thesis covers the socioeconomic effects of the EMU. This part studies how European integration in general and the EMU in particular affects the distribution of income (Chapter 3), and the link between social policy preferences and social policy output (Chapter 4). In the conclusion, I emphasize that any reform proposal for the Eurozone needs to rely on the insights of both parts of the thesis in order to be successful. Put differently, the political economy and the social economy of the Eurozone should always be considered jointly.

Résumé

Cette étude explore l'économie politique et sociale de la zone euro. La première partie de la thèse examine les effets économiques et politiques de l'Union économique et monétaire (UEM). Je pose la question de savoir pourquoi certains pays de la zone euro obtiennent de meilleurs résultats que d'autres (Chapitre 1) et quels sont les acteurs derrière le succès remarquable de l'Allemagne (Chapitre 2). La deuxième partie de la thèse porte sur les effets socio-économiques de l'UEM. Cette partie étudie l'impact de l'intégration européenne en général, et de l'UEM en particulier, sur la répartition du revenu (Chapitre 3) et sur le lien entre les préférences en matière de politique sociale et les résultats de la politique sociale (Chapitre 4). En conclusion, je mets l'accent sur le fait que toute proposition de réforme de la zone euro devrait s'appuyer sur les connaissances des deux parties de cette thèse pour aboutir. Autrement dit, l'économie politique et l'économie sociale de la zone euro devraient toujours être examinées conjointement.

Contents

To my family and friends,

they know me and love me anyway.

Introduction

> *"From the scientific point of view, the euro is the most interesting thing. I think it will be a miracle—well a miracle is a little strong. I think it's highly unlikely that it's going to be a great success."*
>
> – Milton Friedman in an interview on May 2, 2000.

How does the Economic and Monetary Union (EMU) affect European societies? Ever since the idea of a common currency gained political traction in the late 1980s and in particular in the aftermath of the Great Recession of 2007–2009, which triggered a multifaceted crisis in Europe that continues until today (Lane, 2012), this question has been a highly controversial issue of both public and scientific debate. In the political sphere, opinions are diametrically opposed. On the one hand, some declare that the euro is indispensable. The German chancellor Angela Merkel, for instance, stated in the midst of the Eurocrisis in May 2010: "The currency union is a community of destiny. Thus, what is at stake is no more and no less the preservation and validation of the European idea. This is our historical task; because if the euro fails, then Europe fails" (own translation, Merkel, 2010). On the other hand, the crisis has led to a surge of Eurosceptic parties (Hobolt and Tilley, 2016; Treib, 2014), which—as in the case of Germany's *Alternative für Deutschland* or Italy's *Movimento 5 Stelle*—frequently campaign for a withdrawal from the common currency. The scientific debate on the Eurozone is no less polarized, ranging from early praise as a surprising (Enderlein and Verdun, 2009), if not overwhelming success (Pisany-Ferry and Posen, 2009) to the scathing criticism of being an economic and political disaster that divides the European Union (e.g., Armingeon, Guthmann,

and Weisstanner, 2016; Mody, 2018; Stiglitz, 2016). The latter view has perhaps never more clearly been expressed than by the late economist Rudi Dornbusch, who wrote in 1996: "If there was ever a bad idea, EMU is it" (Dornbusch, 1996, 124).

My thesis takes these—often ideologically charged—debates as a starting point to empirically examine the impact of the EMU on the political and social economy of European Union (EU) countries. Instead of attempting to argue for the accuracy of either of the above viewpoints, this thesis builds on the assumption that the social, political, and economic effects of the EMU on European societies vary across and within countries. In other words, the question of whether European integration is beneficial or harmful (or perhaps irrelevant[1]) is conditional, and identifying the corresponding conditions is a central purpose of this study. In doing so, I hope to achieve one of the main tasks of the social sciences, which is to explain social phenomena like the Eurozone by not only looking at the behavior of the entire system, but by focusing on its component parts and the units below the level of the system like individual member states, their citizens, and other economic actors (see Coleman, 1994). Moreover, with this particular mode of explanation comes a variety of methodological approaches that are both quantitative and qualitative in nature.

The fundamental perspective of my thesis is twofold. First, I examine the political economic effects of the EMU. Here I focus on why some countries fare economically better than others in the Eurozone (Chapter 1) and who the actors behind this success are (Chapter 2). Second, I turn to the socioeconomic effects of the EMU. This part analyzes how European integration in general and the EMU in particular affects both the distribution of income (Chapter 3) as well as the link between social policy preferences and social policy output (Chapter 4). In principle, these two parts can stand on their own. However, in the remainder of the introduction I will argue that they are also connected in important ways. Furthermore, all four papers

[1]It is interesting to note in this context that political economists had for a long time shown very little interest in the effects of European integration, arguing that the topic is "boring" and has "nothing to say about big questions in the contemporary global economy" (these authors explicitly reject this point of view though, Copelovitch, Frieden, and Walter, 2016, 824). The Eurocrisis, in particular, has proven this perspective wrong by demonstrating that economic dynamics within the EU are related to overall global trends but also quite different from them. In addition to its political economic implications, empirical research has also shown that the socioeconomic effects of European integration are clearly distinct from globalization (e.g., Beckfield, 2006, 2019).

of the thesis have in common that they adopt a decidedly interdisciplinary approach, integrating insights from economics, political science, and sociology. Such an approach acknowledges the fact that "[s]ocial analysis [...] falls short if it simply holds [one of them] constant; it is in some ways always about their interrelations" (Dahrendorf, 2012, 44). I conclude this introduction by summarizing the key research questions and methodological strategies of the papers.

Political Economic Effects of EMU

The Eurocrisis has awakened the interest of political economy (PE) research in the Eurozone (for overviews, see Frieden and Walter, 2017; Iversen, Soskice, and Hope, 2016; Nölke, 2016). The puzzle that the PE literature tries to explain is this: since the Great Recession and its European aftermath, EMU member states have been essentially divided into two starkly differing groups. First, a group of countries that relatively swiftly recovered from the economic downturn, such as Austria, Belgium, Germany, and the Netherlands. Second, the so-called GIIPS countries (**G**reece, **I**reland, **I**taly, **P**ortugal, and **S**pain), which were and in part still are plagued by high levels of public debt, low economic growth, and skyrocketing unemployment rates. The two groups are often juxtaposed in terms of north vis-à-vis south and core vis-à-vis periphery, respectively. The question thus becomes: why do these two groups of countries perform so differently in the EMU? In essence, the PE literature offers two distinct answers to this question, where each can be broadly ascribed to either comparative PE or international PE. While the subfield of comparative PE traditionally focuses on issues relating to the domestic arena like industrial relations, the subfield of international PE has a strong emphasize on international processes like capital and finance flows (Menz, 2017).

According to the dominant view in comparative PE, the roots of the crisis lie in the labor market differences across countries of the Eurozone, and specifically in the different wage bargaining institutions (e.g., Hall, 2014; Hancké, 2013*b*; Iversen and Soskice, 2013; Johnston, Hancké, and Pant, 2014). In 'coordinated' labor markets like those of Germany and other core

countries, wage setters are highly sensitive to the competitiveness needs of export-oriented firms and are both willing and capable to engage in nominal wage restraint. At the same time, in 'uncoordinated' labor markets like those of southern Europe, the needs of export-oriented manufacturing firms are sidelined and the wage demands in non-exposed sectors prevail. The result is higher wage growth in peripheral countries when compared to core countries. Thus, there is a tendency for unit labor costs (nominal wages divided by labor productivity) to decline in relative terms in core countries, and to increase in relative terms in peripheral countries. This divergence in unit labor costs translates into opposed inflation dynamics, real exchange rate disparities, and inverse current account trends. While these imbalances could be eliminated by readjusting exchange rate parities in a system of floating exchange rates, this option is ruled out by membership in the EMU.

However, as mentioned earlier, this labor market view is not the only explanation of the Eurocrisis among political economists. There is also a competing explanation—call it the finance view—that originated in economics (see Baldwin and Giavazzi, 2015) and has been picked up by international PE, which argues that the causality runs in the opposite direction: developments in capital markets and particularly the surge in cross-border banking loans caused both the competitiveness deterioration and the capital account deficits in the Eurozone periphery. Savers in the north, so the story goes, were on the lookout for high quality assets on which to place their savings. With the start of EMU, the supply of assets of perceived high quality increased and northern citizens purchased southern bonds (especially government bonds) in exchange for cash. These purchases took the form of interbank flows from northern to southern banks. Southern banks, in turn, lent the extra cash to southern citizens. The resulting increase in money supply in the south led to higher inflation and lower real interest rates in the peripheral countries, thus increasing demand, eroding competitiveness, and boosting imports (e.g., Fuller, 2018; Schelkle, 2017).

In Chapter 1, Lucio Baccaro and I spell out in more detail the concrete causal mechanisms that connect the two theoretical perspectives to wage dynamics in the Eurozone. Since the labor market view and the finance view have never been jointly tested before, we argue the

case for a critical desideratum in the literature. The empirical findings are based on descriptive statistics and time-series cross-section (TSCS) modeling of 11 Eurozone countries. The latter includes both cross-country models on the determinants of wage changes and country-specific models of the impact of wage changes on changes in bilateral trade. We show that the labor market view—in contrast to the finance view—does a poor job in explaining wage dynamics across countries. There is, however, one important exception: Germany. We find that Germany experienced exceptionally low wage growth since the introduction of the euro and our empirical results suggest that wage coordination is a major reason behind this trend. Furthermore, the bilateral trade models show that German exports exhibit a high degree of wage sensitivity. Put differently, wage moderation benefits the German export sector because improved cost competitiveness directly translates into higher exports. We therefore conclude that the labor market view offers an accurate explanation for Germany's success in the Eurozone. Yet in the case of other countries, in particular those at the periphery, financial institutions seem to be the decisive factor.

The outstanding economic performance of Germany in the Eurozone (Dustmann et al., 2014) raises several questions: who are the actors behind the German success story? How did these actors assess the expected costs and benefits of the EMU before 1999? Did they strategically anticipate their success? I address these questions in Chapter 2, where I examine the support of German businesses—especially the German export sector—for the EMU before the common currency was officially introduced. Building on the political economy of exchange rate preferences (see Frieden, 1991; Hefeker, 1997*b*; Steinberg and Walter, 2013), I argue that large exporters were generally supportive of the EMU and their support increased particularly in response to an appreciating deutsche mark, which endangered the price competitiveness of their products. Since most other businesses were much more skeptical about the prospects of the EMU, major export producers and their organized workforce used their dominant position in industrial peak associations to advance their interests. The empirical analysis is based on business surveys and a detailed qualitative process tracing of the role of export interests in the country's two leading business and labor organizations. The results largely corroborate

my theoretical expectations. These findings show that the German export coalition, i.e., large enterprises of the export sector and their workers, are highly sensitive towards the competitiveness needs of their sector and very much expected (at least since the mid-1990s) that the EMU will be beneficial in this regard. More specifically, the results of this paper suggest that these actors clearly understood that, in a system of fixed exchange rates like the Eurozone, a deliberate strategy of wage disinflation inevitably leads to gains in competitiveness and thus higher exports.

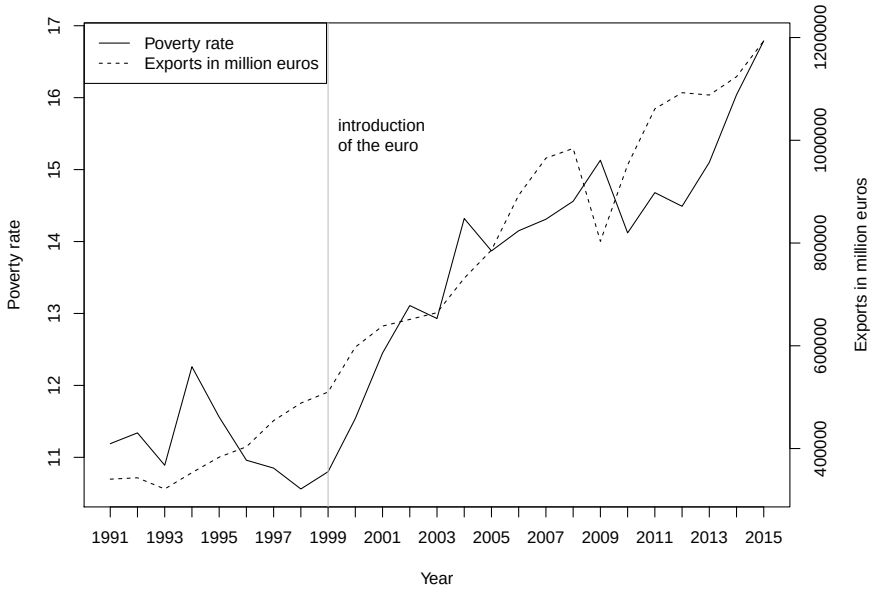
Socioeconomic Effects of EMU

Much has been written about the devastating social consequences of the Eurocrisis like rising unemployment and increasing inequality in those countries that have been hit hardest by the recession (Gutiérrez, 2014; Matsaganis and Leventi, 2014; Perez and Matsaganis, 2018; Petmesidou and Guillén, 2014). What is more rarely considered, however, is that the EMU may also have considerable socioeconomic effects on those countries that experience only little macroeconomic hardship or even macroeconomic success. For example, Matthijs (2016, 400) makes the following argument:

> "Between 1998 and 2008, lower interest rates due to massive capital inflows in the Southern [countries] fueled faster growth and consumption, increasing wages and lowering overall returns to capital, which resulted in falling income inequality in the South. [...] By contrast, the only way for the richer Northern core countries to remain competitive within the Economic and Monetary Union (EMU) was to practice relative wage restraint and enact structural reforms. This initially decreased the return to labor and increased the return to capital, widening income inequality in the North during that period."

Assuming that this argument has some merit, the results of the first two papers of my thesis would suggest that—among core countries—inequality should have particularly increased in Germany despite, if not due to its remarkable economic success in the Eurozone. To get a

Poverty rate and exports in million euros in Germany, 1991–2015.



Note: The poverty rate is defined as the percentage of people who live in households with less than 60 percent of the median disposable income. Data comes from the WSI-Institute of Economic and Social Research (Verteilungsmonitor 2018). The data on exports is taken from the Federal Statistical Office of Germany.

sense of how both the distribution of income and the export volume have evolved in Germany, the subsequent figure plots the country's poverty rate based on disposable household income (left y-axis) and German exports in million euros (right y-axis) between 1991 and 2015. The trend line of the poverty rate shows that poverty reached its lowest post-reunification value in 1998. Since the introduction of the euro in 1999, the percentage of people living in poverty has rapidly increased. At the same time, the volume of exports has risen at a very similar pace as well. Both trends are highly correlated ($\rho = 0.92$). Even if one does not accept the notion that this correlation reveals a causal relationship, which itself is supposed to be the result of the causal effect of the EMU, it is still remarkable how little Germany's stellar economic success in the Eurozone has reverberated to the lower ends of the income distribution (for strong suggestive evidence that the relationship is indeed causal, see Chi Dao, 2019; Ochsenfeld, 2018). Matthijs (2016) shows that similar, although slightly less pronounced inequality trends can be found in other core countries too.

For the purposes of this thesis, the main takeaway from the preceding discussion is that the competitive pressures of the EMU seem to induce certain socioeconomic effects that are

not limited to a particular set of countries, but rather seem to apply—at varying degrees—to the entire Eurozone. While this once again puts the spotlight on the institutional fabric of the EMU, it also raises the question of whether there are inherent dynamics in the process of European institutional integration more generally that promote and solidify these specific socioeconomic trends. In this spirit, a longstanding line of critique holds that European institutional integration gives much more weight to the liberalization of markets than to social protection and labor market regulation (Leibfried and Pierson, 1995; Pollack, 2005; Rhodes, 1996; Streeck, 1996, 1997). In other words, while European integration has promoted the economic vision of a Europe of free markets, it has failed to establish a social Europe that ensures that the economic gains of market integration are fairly distributed and workers are sufficiently protected against labor market risks. Scharpf (1996, 1999) has famously described this as an asymmetry between 'negative integration' and 'positive integration': the European institutional integration process has removed trade barriers and market rigidities (negative integration), but has largely failed to introduce social policies that correct market dysfunctions (positive integration). Some commentators warn that the preponderance of negative integration has led to a convergence of national policy making that is characterized by labor market deregulation and privatization (Offe, 2003). They argue that the ability of national governments to protect their citizens from the adverse effects of free markets has been seriously compromised. Under the economic policy regime of the EU, the only national options that remain are supply-side measures like flexible employment conditions, growing wage differentiation, and cutbacks in welfare programs (Scharpf, 2002).

In the second part of the thesis, I put some of these arguments to the test. While existing empirical research on the distributional implications of EU institutions like the EMU provides evidence for an inequality-enhancing impact (Beckfield, 2006, 2009, 2019; Bertola, 2010; Busemeyer and Tober, 2015; Ochsenfeld, 2018), none of these contributions explicitly examines the long-term causal mechanisms through which European institutional integration is theorized to affect the distribution of income. In Chapter 3, I remedy this shortcoming by identifying and testing a major channel through which European institutional integration affects income

inequality. The theoretical argument is based on two considerations. First, empirical studies show that trade unions are a key factor in reducing inequality, including inequality at the top of the income distribution (e.g., Huber, Huo, and Stephens, 2017; Volscho and Kelly, 2012). Second, the fact that European institutional integration attaches much more importance to negative integration than to positive integration adversely affects trade unions because they find it increasingly difficult to organize effectively both on the national (Booth et al., 2000) as well as the European level (Streeck and Schmitter, 1991). By bringing these considerations together, I derive a novel interactive hypothesis which posits that the dampening effect of trade unions on top income inequality declines with increasing European institutional integration. I test this interactive relationship using a TSCS dataset of 15 EU members between 1955 and 2014, based on a novel index that captures all important institutional steps of the European integration process in these countries for the entire post-war period. Consistent with the theoretical argument, the analysis finds that the effect of trade unions on top income inequality is inversely related to the level of European institutional integration.

Chapter 3 suggests that trade unions are increasingly less able to protect workers from the adverse effects of progressing market integration. As a consequence, workers are more and more confronted with a choice between lower wages or unemployment (Scharpf, 2002). In Chapter 4, Marius R. Busemeyer and I claim that the resulting increase in economic insecurity should translate into growing public demand for more social spending because workers demand compensation for the growing risks they face. At the same time, however, the fiscal constraints of the EMU in the form of the permanently implemented Maastricht criteria should depress the supply of social spending (e.g., Filippin and Nunziata, 2019). Thus, the conflicting implications of European integration essentially break the link between social policy preferences and social policy, resulting in a lack of government responsiveness. Drawing on an index that (different from the index used in Chapter 3) explicitly measures the economic and political dimensions of European integration, the empirical analysis has two parts. First, applying a Bayesian mixed-effects model that deals with the multilevel structure of the theoretical argument to five waves of the European Social Survey (2004–2012), we provide evidence for

a positive relationship between European economic integration and public support for social policy. We use TSCS two-way fixed-effects specifications at the country level in the second part of the empirical analysis and find that higher levels of political integration—especially membership in the EMU—are associated with lower levels of social spending. Furthermore, we show that social policy responsiveness declines with progressing political integration and membership in the EMU, respectively.

Summary

This thesis studies the political and social economy of the Eurozone. In doing so, I hope to paint a comprehensive empirical picture of the political economic and socioeconomic effects of the EMU on member states. The thesis is accordingly divided into two separate but connected parts. While the first part examines the reasons for economic success in the Eurozone with a focus on the role of wage dynamics, the second part puts an emphasis on socioeconomic topics like growing inequality and decreasing responsiveness to social policy preferences. The second part is not merely limited to the EMU, but also looks at the process of European integration more generally of which the EMU is the most important institutional step to date (Martin and Ross, 2004*b*). Each part consists of two individual papers, one single-authored and the other co-authored, with each of the total four papers being a self-contained piece of research.

A guide to the remainder of the thesis follows, summarizing the key research questions and methodological strategies of the papers:

Chapter 1	What explains wage developments in the Eurozone and how do they affect competitiveness?	Descriptive statistics; TSCS modeling.
Chapter 2	Who are the actors behind Germany's success in the Eurozone?	Descriptive statistics; qualitative process tracing.

Chapter 3	What are the distributional implications of European institutional integration?	TSCS modeling.
Chapter 4	How does the EMU affect social policy responsiveness?	Bayesian mixed-effects modeling; TSCS modeling.

In the conclusion of the thesis, I discuss the substantive contributions of the papers by considering what they imply for the current and future state of the Eurozone. Moreover, given the limitations of this thesis, I provide some promising avenues for future research.

1

The Role of Wages in the Eurozone

Coauthored with Lucio Baccaro

Abstract

There are two main political economy explanations of the Eurocrisis. On the one hand, the labor market view regards cross-country differences in wage bargaining institutions as the root cause of the crisis. The finance view, on the other hand, downplays the role of labor market institutions and wages, and instead puts an emphasis on cross-border financial flows. For the first time, we attempt to assess these two explanations jointly. We find that financial flows are better predictors of nominal wage growth than labor market institutions. At the same time, we show that wage moderation matters for bilateral export performance in the important case of Germany, but not for bilateral exports of other countries. These results suggest the need for a more nuanced interpretation of the role of wage dynamics in the Eurozone and entail important policy implications.

1 Introduction

This paper deals with the role that wage dynamics have played in the Eurozone crisis. Two very different views have been proposed on this theme: one puts the emphasis on wage bargaining institutions, the other on financial developments. Our goal is to consider these two explanations jointly and differentiate them both conceptually and empirically.

The first view, which we refer to as the 'labor market view', emphasizes asymmetric wage dynamics as the root cause of the Eurocrisis, and attributes the asymmetries to the the coexistence of very different wage setting institutions in the Eurozone (e.g., Carlin and Soskice, 2014; Hancké, 2013*b*; Höpner and Lutter, 2017; Johnston, Hancké, and Pant, 2014; Johnston and Regan, 2016; Scharpf, 2011). Specifically, it argues that countries like Germany and other northern countries are equipped with coordinated wage bargaining systems with the ability to produce wage restraint, while uncoordinated wage bargaining systems in southern European countries produce the opposite result. These trends lead to unit labor costs (ULCs) and inflation divergences across member countries (lower relative ULCs in 'core' countries, higher in 'peripheral' ones), which within a single currency translate into corresponding real exchange rate (RER) depreciation and appreciation, respectively. In turn, these RER movements generate current account surpluses in the north and current account deficits in the south, a signature feature of the Eurozone in the pre-crisis years.

The labor market view is in many ways comparative political economy (CPE)'s distinct contribution to explaining the Eurocrisis. However, other scholars, particularly from international political economy (IPE), have challenged this interpretation and proposed an alternative that downplays the role of labor market institutions and focuses instead on financial developments within the Eurozone. An emphasis on financial flows and a neglect of labor market dynamics also characterizes the economists' 'consensus view' of the crisis (see Baldwin and Giavazzi, 2015).

Proponents of the finance-centered argument criticize the labor market view for ignoring the large cross-border financial flows that the onset of the euro set in motion. They argue that

the labor market view reverses the direction of causality. Far from being the prime cause of the crisis, the competitiveness imbalances between north and south were really the consequence of capital movements from the center to the periphery. These capital flows boosted investment in housing and, more generally, led to domestic demand overheat, resulting in wage increases and price inflation in the periphery (Jones, 2016; Perez, 2019; Schelkle, 2017; Tooze, 2018). The demand overheat brought about competitiveness and current account imbalances just like in the labor market view, but their ultimate cause was finance, not bargaining institutions.

Motivated by this debate, we engage in this paper in two sets of analyses. First, we examine to what extent wage bargaining institutions are able to explain nominal wage developments, controlling for financial flows (credit creation and cross-border capital flows). We find that financial flows are a better predictor of nominal wage inflation than bargaining structure and conclude that by ignoring the financial determinants of wage growth, the labor market view may have exaggerated the impact of wage bargaining institutions.

In a second set of analyses, we test whether wage developments mattered for trade performance and specifically whether they had the effect of increasing bilateral exports within the Eurozone. Contrary to research arguing that nominal wage growth is not a significant determinant of export growth (Hope and Soskice, 2016; Storm and Naastepad, 2015*a*,*b*), we find a statistically significant correlation between trends in relative nominal wages and bilateral export volumes in Germany, but not in other coordinated countries such as Austria and the Netherlands.

These findings suggest the need to move away from black and white arguments about the role of wages in the Eurozone. On the one hand, there is no clear evidence that wage bargaining institutions are responsible for higher wage inflation in the European periphery or lower wage inflation in the European core. At the same time, wages seem to have played an important role for a crucial country in the Eurozone, Germany, where low nominal wage growth seems to have facilitated export expansion, thus contributing to the German current account surplus. These results dovetail with recent research highlighting the importance of wage moderation for the German export-led growth model (Baccaro and Pontusson, 2016;

Baccaro and Benassi, 2017; Höpner, 2019; Tober, 2019*b*).

The remainder of the paper is organized as follows: First, we review the debate over labor market-based and finance-based explanations of the Eurocrisis. Second, we analyze the determinants of nominal wage growth in the pre-crisis period, assessing the explanatory power of bargaining structure and financial variables. Third, we examine to what extent nominal wages explain bilateral export flows in Germany and a number of other countries. And finally, we discuss the econometric results against the backdrop of the emergence of an export-led growth model in Germany.

2 From Wage Bargaining to the Current Account

The relationship between wage bargaining and wage growth is one of the most researched topics in political economy. Under the assumption that wages are determined by labor market institutions, and not just by supply and demand for labor, a vast literature has argued that more coordinated bargaining structures lead to lower wage inflation than uncoordinated bargaining structures (Baccaro and Simoni, 2010; Calmfors and Driffill, 1988; Soskice, 1990; Soskice and Iversen, 2000)

The reason for this is that when bargaining is coordinated, wage setters are incentivized to take into account the possible undesirable consequences of high nominal wage settlements, i.e., higher inflation, which may discourage investment and/or induce the central bank to adopt a more restrictive monetary policy. When wage setters are small enough to think that they are unable to affect the price level, however, such incentives for wage moderation are absent. The result is either higher wage inflation in uncoordinated bargaining systems, or (if the inflation rate is pinned down by independent, inflation-targeting central banks) higher unemployment for a given inflation rate (Hall and Franzese, 1998; Soskice and Iversen, 2000).

A related stream of literature holds that wage outcomes are contingent on the type and composition of actors engaging in coordinated bargaining. If bargaining is coordinated by wage setters in protected sectors, the incentives for wage moderation will be limited or en-

tirely absent. Actors in non-exposed sectors face relatively inelastic labor demand curves and thus are able to shift higher nominal costs onto prices. If, conversely, bargaining is directed by firms and unions that are exposed to international competition, the need for maintaining competitiveness will lead to more moderate wage settlements (Crouch, 1990; Garrett, 1998; Johnston and Regan, 2016). Wage inflation, in turn, is systematically related to price inflation because in oligopolistic labor and product markets, prices are formed by adding a mark-up to unit costs.[1]

Drawing on the arguments summarized above, a literature inspired by the Varieties of Capitalism (VoC) perspective (Hall and Soskice, 2001) has explained the Eurocrisis as the ultimate consequence of incompatible wage bargaining regimes. Coordinated wage bargaining structures in core countries such as Germany, Austria, Belgium, and the Netherlands, as well as in Nordic countries like Finland, produce systematically lower wage inflation than uncoordinated ones in peripheral countries such as the Mediterranean countries and Ireland (Hancké and Soskice, 2003; Hancké and Rhodes, 2005; Hancké, 2013*a*). This phenomenon interacts with two key features of the euro—a single nominal exchange rate for all member countries and a single nominal interest rate set by the ECB—to generate divergences in competitiveness and real exchange rates.

When a common exchange rate and a single policy interest rate are combined with country-specific inflation rates, the consequence is that real exchange rates and real interest rates will vary systematically across member countries.[2] This will generate two opposite impulses. A country with lower wage and price inflation will experience RER depreciation relative to other members of the currency area, and its net exports will tend to grow (the magnitude of the effect will depend on how sensitive they are to the price change). Simultaneously, real interest rates will be higher than in countries with higher inflation. The combination of higher real

[1]This is a key assumption of both orthodox (New Keynesian) and heterodox models. See: Carlin and Soskice (2014); Storm and Naastepad (2012).

[2]The real interest rate is the difference between the nominal interest rate and the inflation rate, and is lower (higher) the higher (lower) the inflation rate. The RER is the ratio of domestic and foreign prices multiplied by the nominal exchange rate (quantity of foreign currency per unit of domestic currency) and appreciates (depreciates) when, keeping foreign prices constant, there is domestic inflation. An appreciation (depreciation) of the RERs implies that the country in question loses (gains) competitiveness with respect to trade partners.

interest rates and lower real exchange rates will lead to foreign demand stimulation and domestic demand depression, and through this channel to import reduction. The sectoral composition of GDP is likely to be affected as well (Baccaro and Pontusson, 2016), with sectors like construction, in which demand is interest-rate sensitive, being penalized, and conversely, the exporting sector—to the extent that it benefits from a competitive real exchange rate—benefiting from the shift. This is vice versa for the combination of lower real interest rates and higher real exchange rates.[3]

2.1 The Labor Market View

In short, the labor market explanation for the Eurocrisis can be summarized as follows: differences in wage bargaining institutions lead to different growth rates of nominal wages, which (assuming labor productivity is determined exogenously) translate into inflation rate divergences; these in turn lead to real exchange rate disparities, which finally generate current account imbalances, with core countries registering current account surpluses and peripheral countries current account deficits.[4]

Existing research in CPE has provided some empirical support for this argument. Early on, Scharpf (2011) drew attention to a striking contrast in the evolution of ULCs between Germany, where ULCs had declined, and the GIIPS (i.e., Greece, Ireland, Italy, Portugal, and Spain), where they had increased, and linked these trajectories to differences in bargaining institutions across countries. Pursuing a similar line of argument, the econometric analysis by Höpner and Lutter (2017) concluded that countries with coordinated bargaining institutions have lower ULCs than countries with uncoordinated bargaining institutions. Most promi-

[3]It should be noted that while the real exchange rate disparity is a necessary consequence of countries having the same currency but different inflation rates, the real interest rate disparity is not. Rather, it is a contingent feature of the particular way international financial markets have responded to the introduction of the euro in the first ten years of the new currency's life, and specifically of their treating sovereign bonds issued by core and peripheral countries as if they had essentially the same risk profile. This is demonstrated by the generalized decline of interest rates spreads relative to German bonds in the pre-crisis years. It was only after the start of the Eurocrisis that financial markets started differentiating—this time heavily—among bond-issuing countries (Schelkle, 2017; Sinn, 2014; Sgherri and Zoli, 2009).

[4]Recently, Manger and Sattler (2019) have shown that the association between coordinated bargaining, wage moderation structures, and trade surpluses holds for a larger sample of OECD countries, even controlling for fixed vs. flexible exchange rate regimes.

nently, Hancké (2013*b*), Johnston, Hancké, and Pant (2014), and Johnston and Regan (2016) have argued that the Eurozone witnesses the uneasy coexistence of coordinated wage bargaining systems, in which the interest of exposed sectors in wage restraint predominate, with uncoordinated wage systems lacking the ability to produce wage restraint. Johnston and Regan (2016) have claimed that the problem of uncoordinated bargaining systems is specifically located in non-exposed sectors where wage inflation is considerably higher than in corresponding non-exposed sectors in northern countries, rather than in exposed sectors where price-setting is constrained by international competitiveness requirements.

2.2 Capital Flows and Competitiveness

There is, however, an alternative—finance-centric—explanation of the phenomena discussed above, which argues that the causality runs from finance to the labor market rather than vice versa (Jones, 2016; Perez, 2019; Schelkle, 2017; Tooze, 2018). In a nutshell, this alternative argument goes as follows. With European monetary integration, the perceived quality of southern assets and their risk-return profile improved as a result of the decline in country risk-premia, and savers in the north increased their purchases of southern financial assets. These purchases took the form of interbank flows from northern to southern banks. Southern banks, in turn, lent the extra reserves to the southern economies. The resulting increase in money supply in the south led to higher inflation and lower real interest rates in the peripheral countries, thus increasing domestic demand, eroding competitiveness and exports, and boosting imports.

It should be noted that cross-border financial flows from the north to the south had once been considered a positive development in the Eurozone and a sign that a welcome process of cross-country convergence was taking place. Cross-border flows would enable less developed countries to invest more than their domestic savings would allow, thus catching up with more developed countries (Blanchard and Giavazzi, 2002). Only later did it become clear that the investments of peripheral countries like Spain and Ireland were mostly in low-productivity sectors like construction and were leading to a deterioration of competitiveness and external

positions rather than any catch-up. In any case, in the financial view of the crisis, developments in capital markets, particularly the surge in cross-border banking loans, caused both competitiveness deterioration and capital account surpluses (the mirror image of current account deficits) in the Eurozone periphery (Fuller, 2018). In this alternative interpretation, labor market developments—far from being the driving force—are epiphenomenal to financial developments.

It is important to note that there are two variants of the argument focusing on financial flows and they diverge with regard to the role of foreign vis-à-vis domestic sources of finance (see Cesaratto, 2017). The first view, summarized above, rests on a mainstream 'loanable fund' theory of credit, according to which for banks to lend money to the private sector, they first have to receive the money from somewhere. This version essentially argues that northern banks exported the savings of northern firms and citizens to southern banks, and that these then used the newly available funds to extend credit to their own private economies.

The second view relies on the heterodox theory of endogenous money (see Chapter 4 in Lavoie, 2014), according to which the supply of credit adjusts endogenously to the demand for it. This implies that provided there is demand for credit supported by adequate collateral (for example because a low real interest rate stimulates construction investment), southern banks have no need to wait for northern funds to arrive in order to satisfy such demand. Rather, they can themselves create all the (scriptural) money that the private sector (in Spain and Ireland) or public sector (in Greece) demands, and are all more likely to do so when real interests rates are low. While the first view of finance underscores cross-border financial flows, the latter puts the emphasis on domestic credit creation.[5]

2.3 Wage Developments and Trade Performance

The labor market view and financial view of the Eurocrisis have different positions on where the causal chain begins (in the labor market in the former case, in financial markets in the latter

[5]In the explanation centered on domestic credit creation, cross-border flows emerge ex post from southern banks having to borrow reserves from northern banks (see Cesaratto, 2017).

case), but they share the rest of the causal chain: something causes asymmetric developments in nominal ULCs and real exchange rates, which in turn affects competitiveness, exports, imports, and current account balances. There is, however, an empirical issue that has not been properly addressed by either view: how sensitive are trade flows really to movements in ULCs? If they are not very sensitive to relative cost and price differences (a position known as 'elasticity pessimism', see Krugman, 2016), then whatever caused the loss of competitiveness in the south (and gain of competitiveness in the north) is not very important overall.

There is no consensus on this issue and the degree of price sensitivity of German exports is especially controversial. A long tradition in political economy sees the German exports especially as relying on a quality, as opposed to cost or price, advantage (Hall and Soskice, 2001; Hope and Soskice, 2016; Horn et al., 2017; Vermeiren, 2017; Streeck, 1991). It is argued that the German institutional system—rigid collective bargaining institutions, high wages, strong employment protection, worker involvement through Work Councils, codetermination, generous investment in vocational training and in social security—provides for 'beneficial constraints' which protect German firms from socially disruptive cost competition and force them to innovate (Streeck, 1991).

Recently, two post-Keynesian economists, Storm and Naastepad, have argued that the German export performance has nothing to do with wage moderation and is solely due to Germany's superior productivity performance, which in turn is the consequence of the beneficial effects of non-liberal labor market and corporate governance institutions (Storm and Naastepad, 2015*a*,*b*). German exports, they hold, are not very sensitive to ULCs and even less to wage dynamics. According to these authors, German labor market institutions matter not because they produce wage moderation; rather, they matter because they strengthen the country's non-price competitiveness (see Chapter 5 in Storm and Naastepad, 2012).

Storm and Naastepad's diagnosis clashes with the views of two other heterodox economists, Flassbeck and Lapavitsas (2015), who regard wage dynamics as key to understanding the Eurocrisis. However, for Flassbeck and Lapavitsas the crucial driver of the crisis is Germany's prolonged wage moderation, not the southern countries' wage militancy (see also Bibow,

2013; Bofinger, 2015). In their view, German wage moderation has had three destabilizing consequences: (1) it has reduced German imports from Eurozone partners by depressing internal demand in Germany; (2) it has caused real exchange rate devaluation in Germany and correspondingly real exchange rate appreciation in the Eurozone partners; and (3) it has generated an excess of savings in Germany, which have then been used to finance current account deficits in the periphery. For Flassbeck and Lapavitsas, unlike Storm and Naastepad, there is no doubt that wage dynamics affect trade outcomes.

3 Analyzing the Role of Wage Moderation

As the preceding discussion has revealed, there are unresolved issues in the debate over what impact wage dynamics have had in causing the Eurozone crisis. First, it is not clear whether different degrees of coordination in wage bargaining affect nominal wage changes. The labor market view asserts that they do, but the financial view sees them as the consequence of demand dynamics caused by cross-border financial flows. Second, it is not clear to what extent nominal wage changes—independently of what causes them—affect trade flows.

In this empirical section, we seek to address these two issues. First, drawing on previous research, we estimate the determinants of nominal wage growth in the Eurozone. We bring in an important innovation by controlling—to our knowledge for the first time—for the following two financial variables: total credit to the private sector and cross-border financial flows. If bargaining structure has an independent effect, its regression coefficient should survive inclusion of the financial variables. Second, we estimate—again to our knowledge for the first time—bilateral export flows as a function of relative bilateral wage dynamics for Austria, Germany, and the Netherlands, as well as France, Ireland, Portugal and Spain—the countries for which our first step indicates a possible impact of bargaining structure on wage growth. This analysis should provide information as to whether relative nominal wage trends matter or not for export volumes, controlling for other determinants. In both parts of the empirical analysis, our results are based on 11 of the 12 first euro countries (excluding Luxembourg).

These are Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, and Spain.

We must add that it is far from straightforward to tease out the multiple causality paths between labor markets, financial markets, and demand dynamics through reduced form estimating equations. Thus, the analysis will have to rely on some identifying assumptions, which we will spell out in due course.

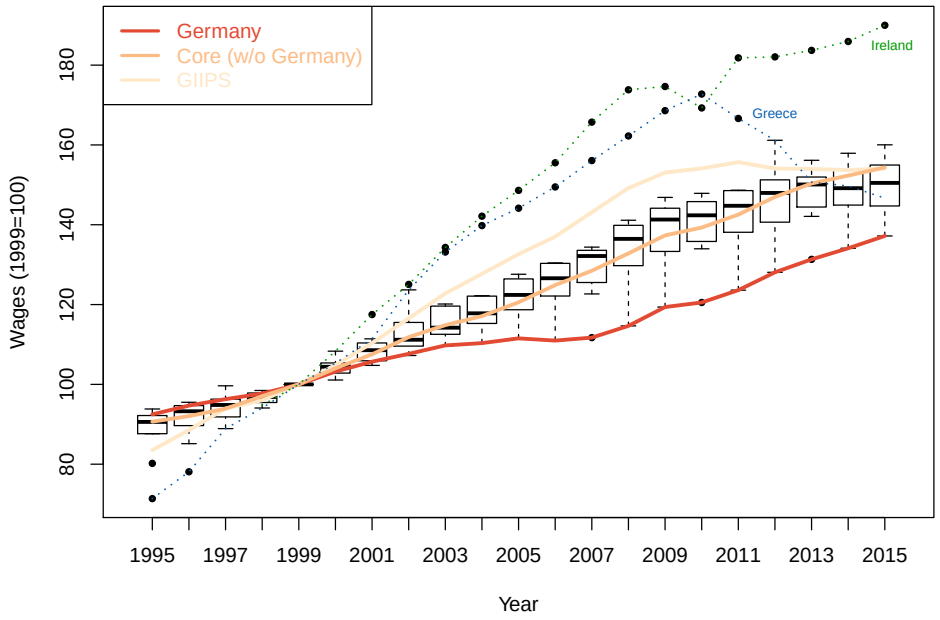
3.1 A First Descriptive Look

We start with a brief descriptive analysis. To get a first impression of how wages in the Eurozone developed over time and across countries, we present time-series boxplots in Figure 1. The graph summarizes nominal wage rates per hour worked in all sampled countries between 1995 and 2015. The base year (=100) is 1999, which is the year when the euro was officially introduced. On top of the individual boxplots, we plot lines for the (average) wage rates in Germany, the remaining core countries (Austria, Belgium, Finland, France, and the Netherlands), and the GIIPS. The data come from the OECD Productivity and Unit Labour Cost by Industry Database (ISIC Rev. 4).

The graph shows that wage development in Germany was exceptional from a comparative perspective. After the introduction of the euro, wages increased in Germany at a much slower rate than in any other Eurozone country. Apart from the first couple of years of the common currency, the German trend is consistently the lowest observed in data. In some years, the wage rate in Germany is so low compared to other countries that it even formally qualifies as an outlier (see points outside the lower whiskers[6]). In contrast to the rationale of the labor market view, however, the much steeper trend line of the remaining core countries suggests that such low wage growth is not a general feature of all coordinated economies. The difference with Germany becomes particularly pronounced when we look at the GIIPS. In these countries, wages rose rapidly in the Eurozone and only leveled off after the crisis.

[6]Outliers are those observations that lie outside 1.5 $\times$ the 'inter quartile range', i.e., the difference between the 75th and 25th quartiles.

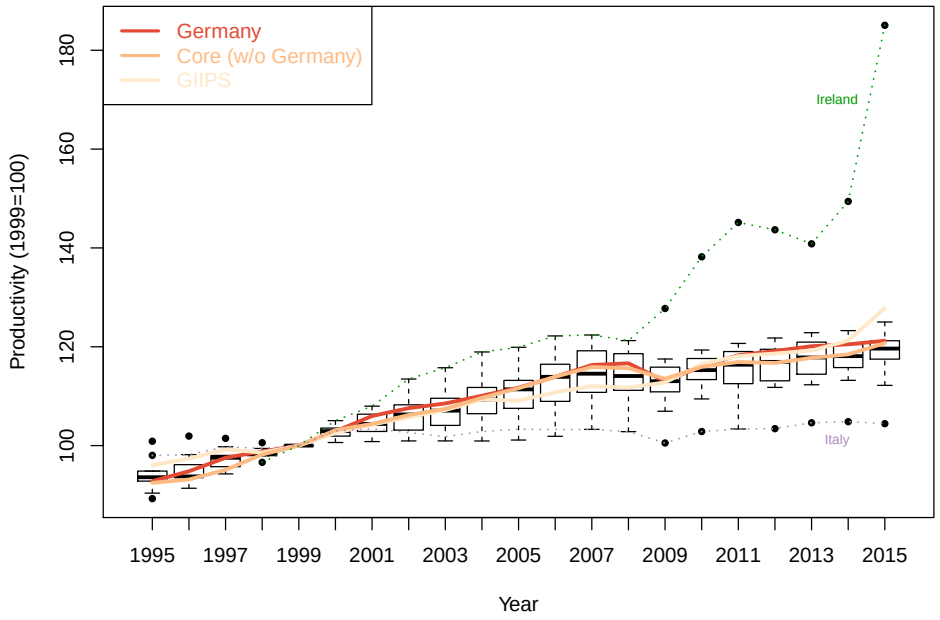
Figure 1: Nominal wages in 11 euro countries, 1995-2015.



Wages escalated especially in Greece and Ireland. Between 1999 and 2007, nominal wages grew by 56 percent in Greece and 66 percent in Ireland. In comparison, Germany registered only a nominal wage increase of 12 percent. Figure A4 in the appendix shows that trends in nominal manufacturing wages very much mirror these overall wage dynamics.

As explained above, some argue that German success in the Eurozone has more to do with labor productivity growth than with wage moderation (Storm and Naastepad, 2015*a*,*b*). To shed some more light on this alternative interpretation of German competitiveness, Figure 2 plots labor productivity (defined as gross value added per hour worked at constant prices; OECD Productivity and Unit Labour Cost by Industry Database, ISIC Rev. 4) for the same set of countries over the same time period. It becomes immediately clear that Germany does not exhibit any exceptional levels of labor productivity. With productivity growth of 16 percent between 1999 and 2007, Germany is in better shape than laggards like Italy and Spain (3 percent each) but does worse than France, Ireland, or even Greece (22, 21, and 20 percent, respectively). In short, the data do not support the claim that the German competitiveness gains are due to outstanding productivity (and the same holds for trends in manufacturing productivity, see Figure A5).

Figure 2: Labor productivity in 11 euro countries, 1995-2015.

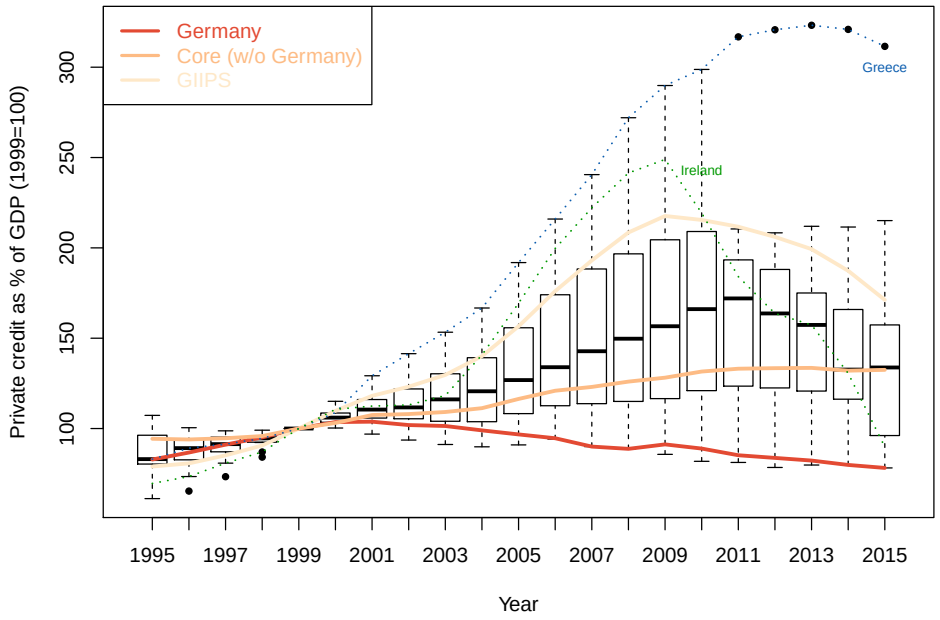


To provide a first assessment of the validity of the finance view, Figure 3 tracks the development in total credit to the private non-financial sector from domestic banks as a percentage of GDP (from the Bank of International Settlements). In many ways, the resulting picture resembles the wage dynamics in Figure 1. Germany, again, exhibits an unusual trend. Between 1999 and 2007, total private credit in Germany decreased by 10 percent. This is the strongest decline of all countries. In fact, besides Belgium (-4 percent), total private credit grew in every other country. This becomes clear from the monotonically increasing average trend of the remaining core. As in the case of nominal wages, total private credit rose most strongly in the GIIPS. On average, total private credit increased by 93 percent in these countries. Credits skyrocketed especially in Greece (141 percent) and Ireland (122 percent).

3.2 Determinants of Nominal Wage Growth

These descriptive findings suggest that wage and credit creation trends largely overlap in the Eurozone. We next try to disentangle the impact of these two factors. Our key identifying assumption in this model is that nominal wages adjust to changes in demand conditions with

Figure 3: Total private credit as percentage of GDP in 11 euro countries, 1995-2015.



a lag. This assumption draws on the lag structure of Carlin and Soskice's three-equation macroeconomic model. While nominal wages do not respond simultaneously to changes in demand conditions in this model, because they are determined by wage setters in 'wage rounds', prices adjust immediately to a wage change (see in particular Carlin and Soskice, 2014, 48-51). Thus, we estimate the following regression equation:

$$\Delta \ln(Wages_t)^* = \alpha + \beta_1 Coordination_t + \beta_2 \Delta \ln(Loans_{t-1}) + \beta_3 \Delta \ln(Credits_{t-1}) + x'\gamma + \Delta\epsilon_t. \quad (1)$$

In words, we regress the first difference of the lag of logged (equivalent to percentage change) nominal wages against Visser's index of wage coordination (Visser, 2016), the first difference of the lag of logged loans from nonresident banks as a percentage of GDP (World Bank Global Financial Development Database), and the first difference of the lag of logged total credit to the private non-financial sector from domestic banks as a percentage of GDP (the Bank of International Settlements). According to the labor market view, the index of wage coordination should have a negative sign, based on the idea that wage bargaining institutions produce nominal wage moderation. By entering both changes in cross-border capital flows and changes

in domestic credit creation, we aim at parsing out the relative importance of foreign vis-à-vis domestic sources of funds. From a finance-centered perspective, the expected sign of these financial indicators should be positive.

A vector of control variables enters the equation with $x'\gamma$. The vector includes three of the most common economic explanations for wage dynamics (see Blanchard and Katz, 1999). These are lagged changes in the logged inflation rate (based on the consumer price index; OECD Main Economic Indicators Database) as a proxy for the expected current inflation rate, lagged changes in logged labor productivity (OECD Productivity and Unit Labour Cost by Industry Database, ISIC Rev. 4), and lagged levels of unemployment (European Commission's Ameco database) as an indicator for labor market tightness. The expectation is that wage growth responds positively to past inflation and past productivity and negatively to unemployment, which discourages wage militancy. In addition to the index of wage coordination, two further institutional controls often used by the political economy literature on the determinants of wages are the partisan control of government (index of cabinet composition where higher values indicate more left-leaning government, in Armingeon et al., 2018) and trade union density (Visser, 2016). It is expected that more left-oriented governments may lead to greater wage inflation than right-oriented ones (e.g., Hibbs, 1977), and that union density proxies for the labor market power of workers, which should be linked to faster wage growth. The appendix provides detailed descriptive statistics on all these variables.

The subsequent models are based on our set of 11 countries observed annually between 1999 and 2014. We estimate them by ordinary least squares with panel corrected standard errors that correct for country-specific heteroscedasticity and spatial correlation of errors (Beck and Katz, 1995, 1996). Moreover, we include a Wooldridge test for autocorrelation in time-series cross-section data with the null hypothesis of no autocorrelation (Wooldridge, 2010). Panel unit-root tests suggest that the data are stationary after first-differencing. We test for cointegration using Westerlund panel cointegration tests (Westerlund, 2005). Unable to reject the null hypothesis of no cointegration, with proceed with the first difference specification.

Table 1 presents parameter estimates and standard errors under six different model spec-

Table 1: Determinants of nominal wage growth in the Eurozone, 1999–2014.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Coordination$_t$	.006*	.006*	.005*	.002	.001	−.001
	(.002)	(.002)	(.001)	(.001)	(.001)	(.001)
Δ ln(Loans$_{t-1}$)		.024	.004	.004	.003	−.008
		(.016)	(.014)	(.011)	(.010)	(.013)
Δ ln(Credit$_{t-1}$)			.141*	.106*	.082*	.112*
			(.035)	(.026)	(.025)	(.021)
Δ ln(Inflation$_{t-1}$)				.413*	.381*	.598*
				(.107)	(.095)	(.110)
Δ ln(Productivity$_{t-1}$)				.392*	.338*	.256*
				(.086)	(.079)	(.083)
Unemployment$_{t-1}$				−.150*	−.195*	−.128*
				(.037)	(.038)	(.037)
Partisanship$_t$					.001	.001
					(.001)	(.001)
Union density$_t$					.003	.004
					(.007)	(.007)
Constant	.008	.005	.006	.018*	.022*	.021*
	(.007)	(.007)	(.006)	(.006)	(.007)	(.008)
Observations	176	176	176	173	152	91
H_0: no autocorrelation	.306	.330	.387	.532	.306	.195
H_0: no cointegration	.216	.248	.430	.302	—	—
R^2	.099	.122	.241	.462	.431	.467

* $p < .05$. Westerlund cointegration tests for Models 5 and 6 are missing because `Stata` does not allow to run these tests with more than seven regressors.

ifications. Contrary to the expectations of the labor market view, the sign of the coefficient is positive in this sample (as well as statistically significant). In the next model, we add the first of our two financial variables: lagged loans from nonresident banks as a percentage of GDP. This indicator is positive but statistically indistinguishable from zero. In Model 3, we additionally include lagged total private credit as a percentage of GDP. The estimated coefficient is positive and highly statistically significant. The estimate is robust to the inclusion of controls and tells us that for each percentage point increase in total private credit (as a percentage of GDP), nominal wages increase by roughly 0.1 percentage points. The coefficient of cross-border banking flows remains statistically insignificant throughout.

The counter-intuitive result of a positive effect of coordination on nominal wage changes disappears, in the sense that the coefficient becomes statistically indistinguishable from zero, once we add economic (Model 4) and institutional (Model 5) controls. The economic controls are signed according to expectations and bounded away from zero in all cases. At the same time, none of the institutional variables has any impact on the dependent variable. In the last model, we restrict our sample to the pre-crisis years (1999–2007). Even in this case, the wage coordination variable remains insignificant. In this shorter timeframe, cross-border banking flows become statistically significant when total private credit is not included in the model (not shown). This could suggest that the effect of cross-border loans ran through domestic credit creation in this period (foreign banks lent to domestic banks, which in turn lent to the domestic private sector) and this effect ceased when the crisis hit.

In any case, the crucial finding is that—as suggested by many proponents of the finance view (e.g., Storm and Naastepad, 2016)—total private credit was a major reason for the peculiar wage dynamics in the Eurozone, while bargaining structure does not seem to be a significant predictor of wage growth in the Eurozone.[7] In Table A3, we repeat the analysis with nominal manufacturing wages. In contrast to the preceding findings, total private credit is not a significant predictor in the models that use the full sample. However, when we restrict the analysis to pre-crisis years (Model 6), the variable attains statistical significance and the coefficient has a similar size as previously reported. This implies that in the pre-crisis years an expansion of private credit did not just affect wage growth in non-exposed sectors, but also in the manufacturing sector in which wage growth should in theory be moderated by competitiveness requirements.

One reason why we fail to find an effect of wage coordination may be that the effect is heterogeneous across countries. To allow for this possibility, we add—in separate models (one country at a time)—an interaction term between the coordination index and a country dummy. Consequently, this gives us 11 separate models. The interaction term captures the

[7]One reason why we do not find a significant effect of wage coordination may be that our measure of wage coordination is less precise than the economic variables. Yet, we apply the same indicators used by the previous literature, which finds significant results (e.g., Johnston, 2012).

differential effect of a marginal change in bargaining structure in a specific country relative to the marginal effect of bargaining structure in the sample as a whole. In Table 2, we report both the country-specific interactions and the country-by-country linear combinations of the main effect of the wage bargaining coefficient and the country-specific interaction for both the shorter (1997-2007) and longer (1999-2014) samples.

These additional analyses suggest a statistical relationship between wage bargaining coordination and nominal wage growth in the following cases: Austria, France, Germany, Ireland, the Netherlands, Portugal, and Spain. On the one hand, wage bargaining coordination seems to have had a wage-increasing impact in France, Ireland (only pre-crisis period) and Spain (only long series) relative to the effect of bargaining coordination in the sample as a whole. On the other, coordinated wage-setting had a negative effect on nominal wages in Austria, Germany, and the Netherlands (only long series) relative to the sample as a whole. Furthermore, for Austria, Germany, and Portugal, we find a negative total effect of wage bargaining coordination in the pre-crisis period. For France and Spain (only long series), we find a total positive effect. In short, wage bargaining structure is estimated to have an effect on wage growth in several countries but the effect appears highly heterogeneous (when we repeat the analysis with manufacturing wages, we find statistically significant effects in the cases of France, Germany, and Spain; see Table A4).

3.3 Impact of Wages on Exports

For wages to have an impact on exports as postulated by the labor market view, export volumes need to be sensitive to changes in wages and this is a contested proposition as we argued above. To test this hypothesis, we estimate standard bilateral export regressions for those countries for which we have some evidence that bargaining structure affects wage growth, i.e., Austria, France, Germany, Ireland, the Netherlands, Portugal, and Spain. The regressions examine whether these countries' bilateral exports to and from other euro countries in our sample are affected by relative changes in wages. The basic regression equation has the fol-

Table 2: The effect of country-specific wage bargaining structures on nominal wage growth, 1999–2007 (short) and 1999–2014 (long).

	Austria		Belgium		Finland		France		Germany		Greece	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Country-specific coordination	−.003*	−.003*	.001	.001	.000	.000	.007*	.006*	−.004*	−.002*	−.000	−.002
	(.001)	(.001)	(.001)	(.001)	(.002)	(.001)	(.002)	(.002)	(.001)	(.001)	(.001)	(.003)
Linear combination	−.004*	−.002	−.001	.001	−.001	.002	.007*	.008*	−.003*	.000	−.001	−.000
	(.001)	(.001)	(.002)	(.001)	(.002)	(.002)	(.003)	(.003)	(.002)	(.002)	(.002)	(.003)
Remaining variables	Yes		Yes		Yes		Yes		Yes		Yes	
Observations	91	152	91	152	91	152	91	152	91	152	91	152
R^2	.520	.454	.486	.432	.484	.432	.522	.454	.521	.438	.484	.435

	Ireland		Italy		Netherlands		Portugal		Spain	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Country-specific coordination	.004*	.003	.001	.001	.000	−.002*	−.004	−.003	.001	.005*
	(.001)	(.002)	(.001)	(.001)	(.001)	(.002)	(.002)	(.002)	(.001)	(.001)
Linear combination	.001	.004	−.002	.002	−.001	−.000	−.007*	−.003	−.000	.004*
	(.002)	(.003)	(.002)	(.002)	(.001)	(.001)	(.004)	(.003)	(.001)	(.002)
Remaining variables	Yes		Yes		Yes		Yes		Yes	
Observations	91	152	91	152	91	152	91	152	91	152
R^2	.545	.452	.485	.432	.484	.439	.496	.438	.487	.463

* $p < .05$.

lowing form:

$$\Delta \ln(Exports_{c,p})^* = \alpha + \beta_1 \Delta \ln\left(\frac{Wages_c}{Wages_p}\right) + \beta_2 \Delta \ln\left(\frac{Productivity_c}{Productivity_p}\right) + \beta_3 \Delta \ln(Demand_{p-c}) + \Delta\epsilon_{c,p}. \tag{2}$$

The first difference of the natural logarithm of bilateral exports of goods from country c to the partner country p ($p = 1, \ldots, 10$) is regressed against the first difference of the natural logarithm of the country's wages divided by the wages of the partner country, the first difference of the natural logarithm of the country's labor productivity relative to labor productivity in the partner country, and the first difference of the natural logarithm of total imports of the partner country excluding imports from country c. The latter term proxies for demand in the partner country. Notice that by entering both nominal wages and labor productivity in the specification, we are implicitly controlling for nominal unit labor costs. We expect a statistically significant $\beta_1 < 0$ if a country's bilateral exports are sensitive to wage differences. Put differently, in case of wage sensitivity, an increase in wages is associated with a decrease in exports. Different from the determinants of wages, in this estimating equation we assume a simultaneous effect of relative wages on export outcomes. This is consistent with the lag structure of the Carlin and Soskice (2014) macro model, in which firms respond to a change in wages in the same period.

The analysis is based on annual observations of our set of 11 euro countries between 1999 and 2014. Data for bilateral exports and imports come from the OECD STAN Database on Bilateral Trade in Goods by Industry and End-use (BTDIxE), ISIC Rev. 4. The exports figures are originally reported as thousand dollars. We have divided them by the dollar-euro exchange rate (from the Ameco database) and expressed them as trillion euros. Exports have then been expressed in 1999 constant prices by using export deflators (from the Ameco database). As in the previous analysis, the data on nominal wages and labor productivity are from the OECD Dataset on Productivity and Unit Labour Cost by Industry, ISIC Rev. 4. The models are again estimated by ordinary least squares with panel corrected standard errors. Moreover, as in the

Table 3: Wage sensitivity of exports, 1999–2014.

	Austria		France	Germany	Ireland	Netherlands	Portugal	Spain
$\Delta \ln \left(\frac{Wages_c}{Wages_p} \right)$	−.947	−1.081	.537	−.838*	−.331	−.083	−.247	−.549
	(.878)	(.964)	(.281)	(.359)	(.300)	(.541)	(.398)	(.296)
$\Delta \ln \left(\frac{Productivity_c}{Productivity_p} \right)$	.396	.558	−.155	.870*	.351	.355	.965	−.579
	(1.321)	(1.331)	(.310)	(.396)	(.379)	(.760)	(.630)	(.463)
$\Delta \ln(Demand_{p-c})$	.955*	.991*	.713*	.633*	.705*	.734*	.552*	.473*
	(.155)	(.171)	(.053)	(.076)	(.120)	(.175)	(.100)	(.129)
Constant	−.001	−.001	−.012	.003	.023*	.026	.013	.013
	(.012)	(.013)	(.004)	(.007)	(.011)	(.014)	(.008)	(.009)
Observations	150	150	150	150	150	150	150	150
H_0: no autocorrelation	.000*	AR(1)	.831	.726	.274	.543	.600	.478
H_0: no cointegration	.102	.102	.157	.210	.129	.108	.146	.219
R^2	.407	.457	.594	.594	.249	.304	.230	.332

* $p < .05$.

previous analysis, we tested that the the variables are stationary in first differences and that there is no cointegration, hence a specification in first differences is appropriate. The data are weighted by taking into account that bilateral exports are of different magnitudes depending on the partner. Weights are constructed by dividing trade flows by the sample mean trade flow, such that bilateral exports above (below) the mean are weighted more (less).

Table 3 presents the results of our bilateral export models. In the case of Austria, France, Ireland, Netherlands, Portugal, and Spain, changes in relative nominal wages do not have any detectable effect on bilateral exports. The same holds true for relative labor productivity. At the same time, demand in partnering countries seems to be a significant predictor of export performance. The relationship is particularly strong in Austria, where a one percent increase in foreign demand leads to an almost equal percentage increase in bilateral exports. Since the Wooldridge test for autocorrelation suggests that there is serial correlation in the Austrian model, we estimate a second model for the country where we include a panel-specific Prais-Winsten autoregressive (AR1) transformation. The results remain substantially unchanged.

The picture looks quite different in Germany. Here, changes in relative nominal wages

exhibit a very strong relationship with changes in bilateral export performance. A one percent growth in relative nominal wages is associated with a 0.8 percentage point decrease in bilateral exports. Relative labor productivity is also a strong predictor in the German case. A one percent increase in productivity corresponds with a 0.9 percentage point growth in bilateral exports. In other words, unit labor costs are an important predictor of German exports. Although changes in demand are statistically significantly related to changes in German exports, the size of this effect suggests that foreign demand is of less importance in Germany than in Austria and the Netherlands. In other words, compared with their Austrian and Dutch counterparts, German exports are more sensitive to wage changes and less sensitive to demand changes. When we estimate models that use overall ULCs instead of wages and labor productivity, we find these results corroborated (see Table A5).[8]

In contrast to the argument that German export success is entirely due to productivity, our results show that relative nominal wage moderation is a significant predictor even controlling for productivity. In addition, our descriptive analysis has shown that Germany—when compared to other Eurozone countries—gained virtually nothing in labor productivity (see Figure 2) but experienced much lower nominal wage growth (see Figure 1). This is reflected in our relative data. While German nominal wages decreased by 11 percent between 1999 and 2014 (17 percent before the crisis) relative to the average trade partner, relative labor productivity increased by only 2 percent on average (same before the crisis). Since our bilateral export models indicate that both variables have roughly a similar effect on exports, this suggests that wage moderation contributed considerably more to Germany's export success than productivity growth. Furthermore, these results suggest that Germany is the only country that

[8]When the analysis focuses on the sensitivity of exports to manufacturing wages (Table A6), it finds an insignificant coefficient even for Germany, while the effect of labor productivity remains significant (although smaller). This suggests that the cost advantage of German exports is not so much related to the direct containment of wage costs in the manufacturing sector, but to the indirect and systemic benefits of wage moderation for the German real exchange rate in the economy as a whole, including the non-exposed sectors (see Baccaro and Benassi, 2017). Table A7 repeats the analysis for the pre-crisis period. We regard the fact that the finding for Germany cannot be reproduced in these models as a statistical artifact that results from the small sample size. Thus, to check the robustness of the initial finding, we re-estimated the analysis of Germany with quarterly data (see Table A8). The corresponding estimates indicate that German wages are negatively associated with exports both in the shorter and the longer period. Furthermore, in Table A9, we add domestic credit as a predictor of trade flows. This variable is always insignificant suggesting that domestic credit has no direct impact on trade performance in any of these countries.

seems to operate in accordance with the logic of the labor market view, i.e., wage coordination is associated with wage moderation and wage moderation in turn stimulates exports.

How can we explain these cross-country differences between Germany and other coordinated countries such as Austria and the Netherlands? Tables A10-A12 in the appendix try to shed some light on this question by re-estimating our bilateral export models across different categories of research and development (R&D) intensity (for definitions of these categories, see Galindo-Rueda and Verger, 2016). In the Dutch case, exports of any degree of R&D intensity do not seem to depend on wages, confirming our previous finding in Table 3. The Austrian models show that only exports of medium-low R&D intensity (e.g., textiles, food products, furniture) are sensitive to changes in nominal wages. A one percent increase in nominal wages is estimated to lead to a 0.9 percentage point decrease in exports of this category. These exports account for about 27 percent (average across trading partners and time) of total Austrian exports. As for Germany, we find that German exports of medium (e.g., rubber and plastic products, basic metals) and medium-low R&D intensity exhibit a very strong degree of wage-sensitivity. The estimation suggests that a one-percent wage increase is associated with a 2.2 percentage point decrease in this type of exports, which accounts on average for roughly 29 percent (up to 40 percent in trade with Austria) of total German exports. Thus, the difference between Austria and Germany is that German medium and medium-low intensive products are far more sensitive to changes in nominal wages than similar exports in Austria.

4 A Case of German Exceptionalism?

The political economy research on the Eurocrisis has seen the emergence of two competing views in the last few years. Proponents of the labor market view focus on real phenomena such as wage bargaining and wage trends, while proponents of the finance-centric view emphasize the expansion of credit in peripheral countries and the increase in cross-border banking flows the euro brought about. In this paper we have tried to explore the respective contributions of

the two views.

First, we have estimated wage equations of the type that have appeared previously in the literature, modeling nominal wages as a function of institutional and economic variables but controlling for credit flows. Second, we have followed up with an analysis of export volumes in Germany, Austria, and the Netherlands, as well as Ireland, France, Portugal, and Spain, to ascertain to what extent relative wages were associated with export flows.

These analyses lead us to the following conclusions. The financial view seems to provide a better explanation of wage developments than the labor market view: we have found no evidence that bargaining structure is linked to wage changes on average. To the extent that there is an effect, it seems to be highly heterogeneous across countries. In contrast, financial variables appear to have greater explanatory power. Interestingly, cross-border banking flows—the variable most of the literature discussed above focuses upon—seems to be less important than domestic credit. This finding does not support the hypothesis that what caused the demand booms in peripheral countries was the export of capital from the north to the south. Rather, it is compatible with a reduction of real interest rates in the peripheral countries stimulating demand for credit, to which credit supply adjusts endogenously.

Simultaneously, the financial view does not explain everything. The descriptive analysis detects an unusual degree of wage moderation in Germany. Importantly, we have found that nominal wages are a significant predictor of bilateral exports in Germany but not in any of the other countries examined. This result contradicts claims that wage moderation did not matter for the German export performance (Hope and Soskice, 2016; Storm and Naastepad, 2015*a*,*b*). The point estimates suggest that a decrease of German nominal wages by one percent relative to wages of the average member of the Eurozone increases export volumes by 0.8 percent controlling for labor productivity and foreign demand. This non-negligible effect can be interpreted in two ways: a reduction of wages, controlling for productivity, increases profits and through this channel improves non-price competitiveness (e.g., by enabling more investments in marketing and distribution). Alternatively, wage reduction leads to a decrease of relative prices, i.e., an improvement of price competitiveness. Both channels are compatible

with our finding.

Overall, the analysis paints a picture of German exceptionalism. Wage moderation was largely a German phenomenon and only in Germany it had the effect of boosting exports. This conclusion dovetails with recent research emphasizing changes in the German industrial relations system, which increased the ability of German firms to compete not just on quality, but also on costs (Baccaro and Benassi, 2017; Kinderman, 2005; Streeck, 2009; Scharpf, 2018).

While a full reconstruction of events is beyond the scope of this paper, a few remarks are in order. After reunification, German manufacturing firms faced a cost problem, which reduced their ability to compete internationally. In particular, the need to finance the costs of unification had led to increased social security contributions and higher labor costs overall. The response to the cost problem was an employer offensive. In the 1990s, manufacturing firms (primarily but not exclusively those based in the new *Länder*) began leaving employer associations to avoid being bound by the industry-level contract and associated wage provisions (Turner, 1998; Silvia and Schroeder, 2007). In response, employer associations introduced the option of membership without having to apply the industry contract. This move stemmed the hemorrhage but reduced the employers' capacity for coordination. Additional cost reductions were obtained by outsourcing non-essential functions to firms applying less expensive contracts (Doellgast and Greer, 2007; Helfen, 2011). In addition, large firms used their market power to squeeze the profit margins of domestic suppliers, creating further incentives for these firms to seek respite outside the scope of industry bargaining (Greer, 2008; Silvia and Schroeder, 2007).

Moreover, large firms restructured and internationalized their supply chains, offshoring especially (but not exclusively) the more labor intensive phases to former communist countries (Kinkel and Lay, 2003). Often times, the credible threat of offshoring sufficed to extract concessions from workers in order to avoid firm relocation. Thus, the 1990s and afterwards saw a wave of concessionary bargaining at the workplace level, exchanging 'opening clauses' for the promise of job security (Hassel and Rehder, 2001; Haipeter, 2009). The Hartz reforms of the early 2000s added momentum to cost cutting. However, the trend of wage moderation

had begun before their introduction (Dustmann et al., 2014). Furthermore, as suggested by our descriptive analysis, wage moderation was not just a peculiarity of the service sector—the most affected by the Hartz reforms, but also (albeit to a lesser extent) of the manufacturing sector.

A related literature has examined how—in the fifteen years preceding the crisis—the German export industry increased dramatically as a share of GDP, and this enabled it to become the driver of the economy as a whole. This literature suggests that wage moderation is a key feature of the German growth model and that as exports have become more cost- and price-sensitive over time, wage and consumption repression increased export competitiveness (Baccaro and Pontusson, 2016). The euro contributed to cementing the export-led regime by giving the country a lower nominal exchange rate than a German currency would have had and by providing an opportunity for real exchange rate devaluation through nominal wage restraint. As a corollary, scholars have begun to investigate the politics of the German growth model. Höpner (2019) documents the joint efforts of German trade unions and employer associations (and even of the Bundesbank) to build an 'undervaluation regime' already in the Bretton Woods years. Tober (2019*b*) shows that Germany's choice to support a large Eurozone in the mid-1990s—one that also included high debt/high inflation countries like Italy—was strongly supported by large export-oriented firms.

For German economic and political actors on the ground there seems to be absolutely no doubt about the importance of a competitive exchange rate for the German export industry and the corresponding role of wage moderation. We provide three quotations to highlight this point. The first statement was made by the former president of the Confederation of German Employers' Associations (BDA): "A return to the Deutsche Mark would be extremely dangerous. The exchange rate risks would be huge for our export-oriented companies. (…) The return to the Deutsche Mark would be politically, socially, and economically a colossal disaster" (Dieter Hundt in an interview on December 28, 2011; own translation).

On the union side, too, the importance of a competitive real exchange rate appears to be self-evident. This is clearly expressed by a statement of the current head of the German Trade

Union Confederation (DGB): "If we were to return to the D-Mark—as some populists demand—we would lose the title of world export champion immediately because the Deutsche Mark would gain 20 to 30 percent in value and would make our products much more expensive" (Reiner Hoffmann in an interview on March 20, 2017; own translation). Finally, comparing the behavior of German trade unions in the wage bargaining process with trade unions in other Eurozone countries, Theo Waigel, German Finance Minister between 1988 and 1999 and often referred to as 'the father of the euro' in Germany, writes in his recently released memoirs: "In contrast [to trade unions in other Eurozone countries], the German trade unions' behavior was exemplary: higher employment and more jobs were more important to them than growing wages. For that reason, Germany gained competitive advantages" (own translation; Waigel, 2019, 245-246).

5 Concluding Remarks

Ultimately, both the labor market view and the financial view explain important aspects of the Eurocrisis. The financial view is right to underplay the role of wage bargaining institutions in bringing about the loss of competitiveness in peripheral countries and to emphasize instead the demand effect of credit flows. The labor market view captures developments in Germany rather well.

We conclude with a caveat. While our analysis leads us to conclude that wage moderation matters for exports in Germany, it does not imply that the strategy of internal devaluation promoted by the European authorities is the correct approach to solving the crisis. Sometimes the labor market view is perceived by scholars as implicitly supporting a strategy of wage reduction and labor market liberalization in the crisis countries in order to spur export-led growth (Perez, 2019; Storm and Naastepad, 2015*b*)

Our analysis suggests otherwise: labor market liberalization in peripheral countries is unlikely to be effective. Conversely, a strategy of reflation in Germany based on real wage growth and expansionary public expenditures would go a long way towards redressing im-

balances in the Eurozone.

Appendix

This appendix provides supporting information for the paper "*The Role of Wages in the Euro-zone*".

Table A1: Descriptive statistics: Determinants of nominal wage growth.

Variable	Obs	Mean	SD	Min	Max
Nominal wages per hour worked	176	127.00	18.31	79.97	172.76
Level of coordination	176	3.49	1.16	1	5
Loans from nonresident banks as % of GDP	176	63.50	38.09	15.83	219.75
Total private credit (domestic) as % of GDP	176	93.82	29.27	36.20	170.28
Gross value added per hour worked at constant prices	176	110.21	7.49	88.13	131.68
Unemployment	176	0.09	0.04	0.03	0.28
Inflation rate	176	4.79	0.10	4.55	4.96
Government partisanship	175	2.59	1.43	1	5
Trade union density	156	0.31	0.18	0.08	0.76

Table A2: Descriptive statistics: Wage sensitivity of exports in Austria, Germany, and the Netherlands.

Variable	Obs	Mean	SD	Min	Max
Austria					
Bilateral exports	160	4.49	8.18	0.16	32.51
Demand	160	2.08e+08	1.83e+08	2.81e+07	7.92e+08
Relative productivity	160	102.44	5.82	85.91	117.82
Relative wages	160	94.63	7.61	72.73	111.26
Germany					
Bilateral exports	160	31.97	25.31	2.80	94.47
Demand	160	1.27e+08	9.64e+07	2.39e+07	3.62e+08
Relative productivity	160	101.35	5.49	84.26	115.10
Relative wages	160	89.03	8.10	65.85	101.90
Netherlands					
Bilateral exports	160	14.87	19.34	1.05	86.78
Demand	160	1.82e+08	1.73e+08	2.69e+07	7.32e+08
Relative productivity	160	99.65	5.40	82.46	112.66
Relative wages	160	101.24	7.89	78.84	119.73

Figure A1: Wage bargaining coordination in 11 euro countries, 1999-2014.

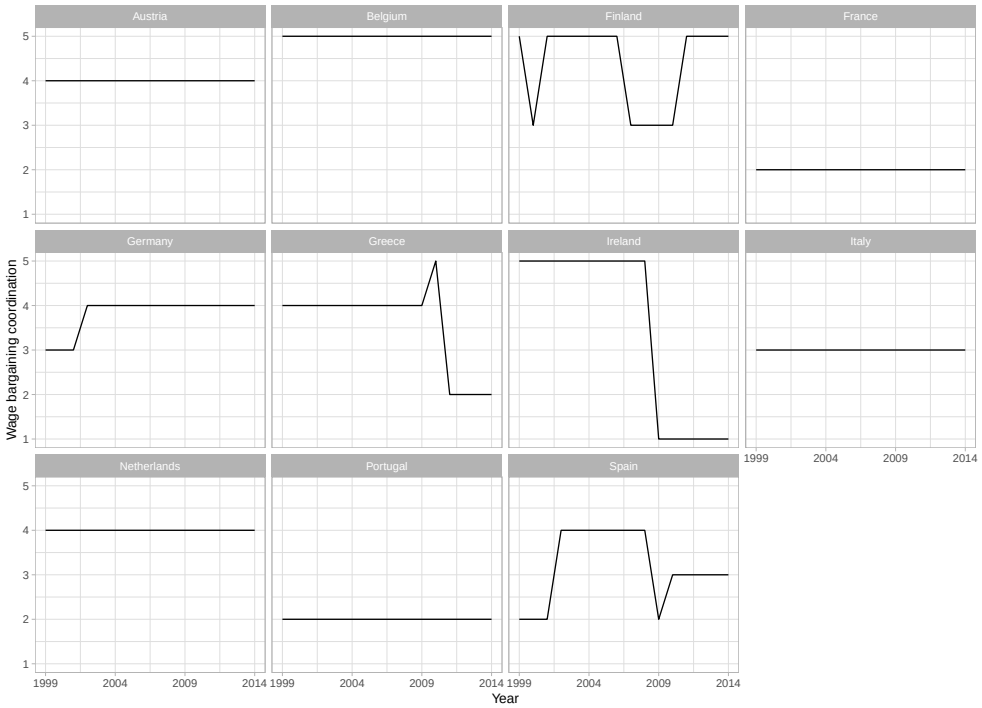


Figure A2: Loans from nonresident banks as percentage of GDP in 11 euro countries, 1999-2014.

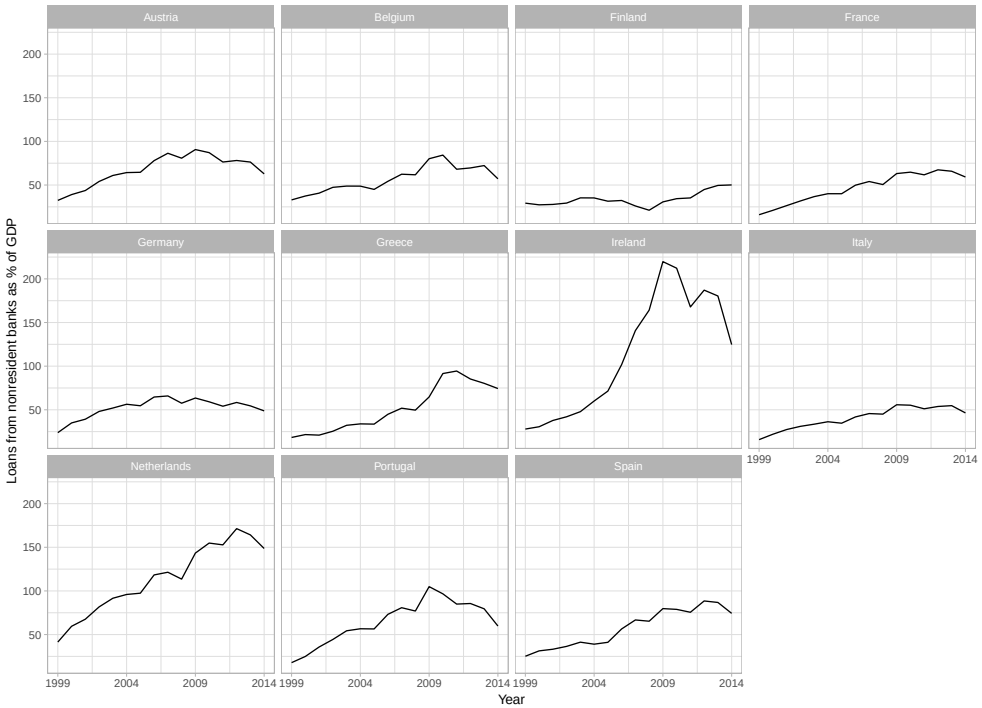


Figure A3: Credit to the private non-financial sector from domestic banks as percentage of GDP in 11 euro countries, 1999-2014.

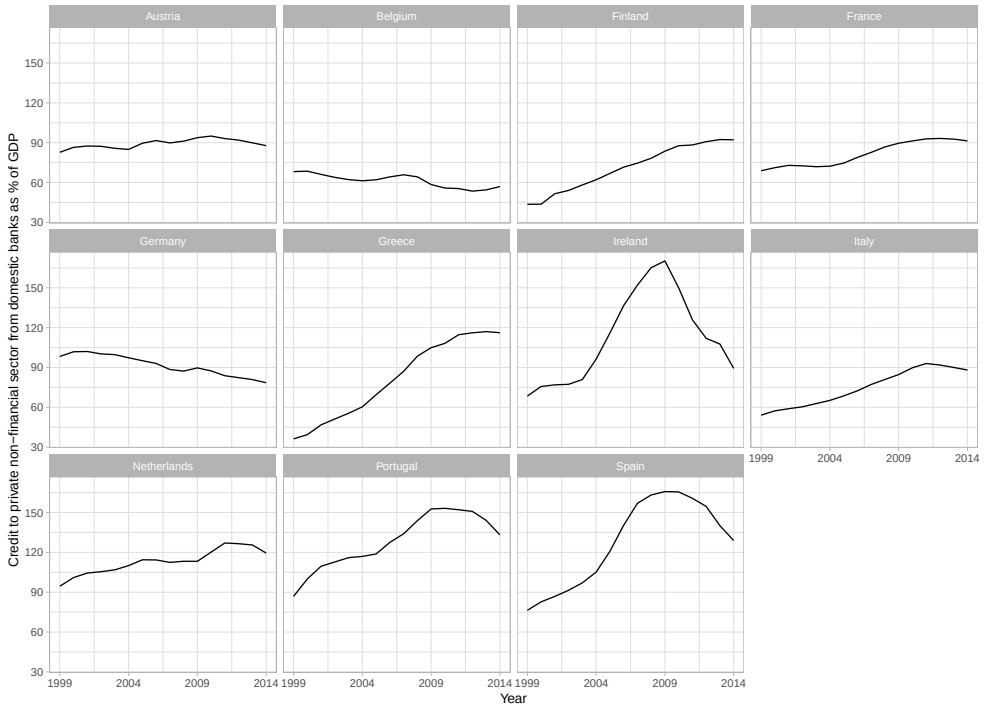


Figure A4: Nominal manufacturing wages in 11 euro countries, 1995-2015.

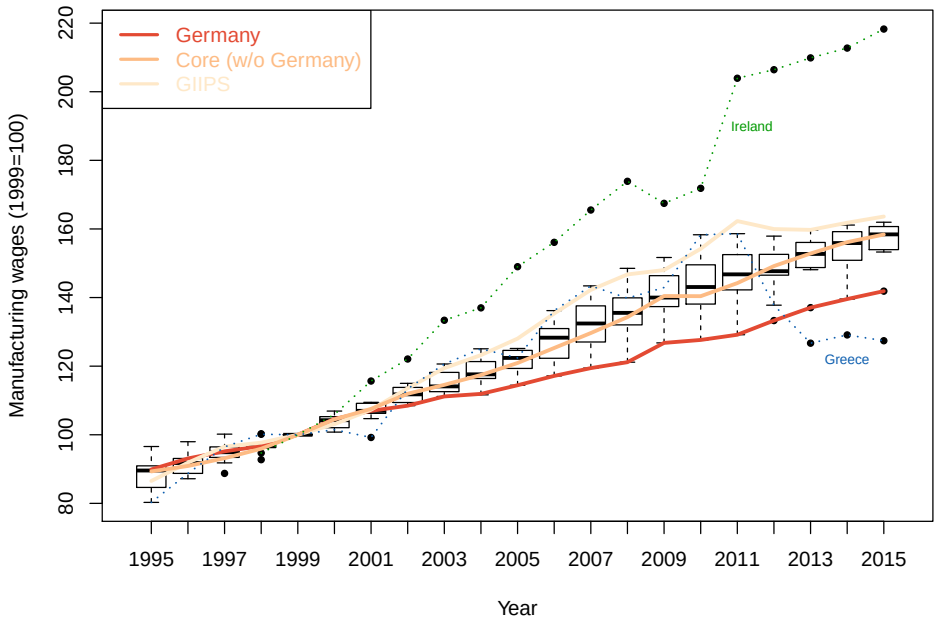


Figure A5: Manufacturing labor productivity in 11 euro countries, 1995-2015.

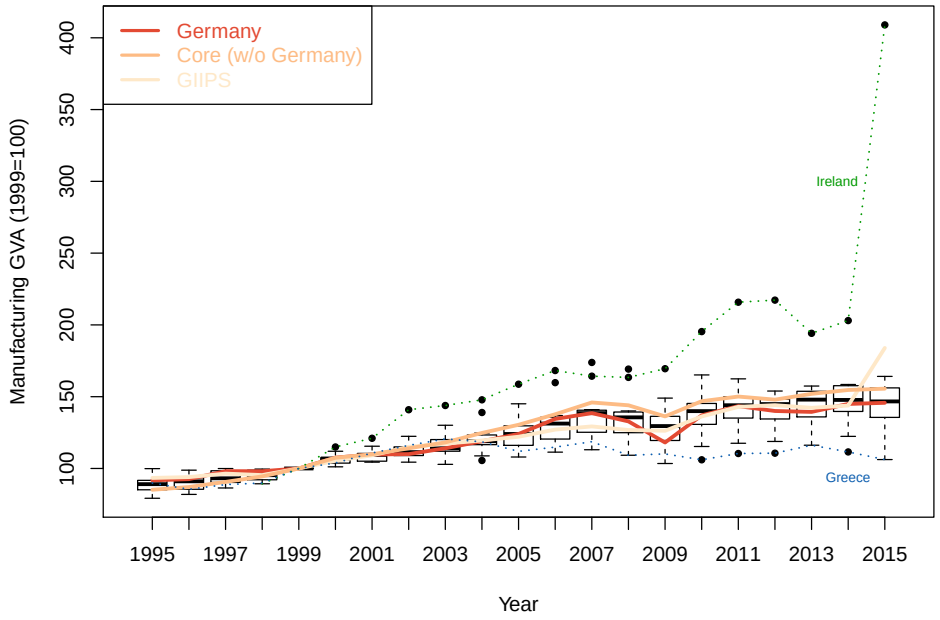


Table A3: Determinants of nominal manufacturing wage growth in the Eurozone, 1999–2014.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Coordination$_t$	.005*	.005*	.004*	.001	−.000	.000
	(.002)	(.002)	(.002)	(.002)	(.003)	(.002)
Δ ln(Loans$_{t-1}$)		.008	−.005	−.008	−.008	−.033
		(.019)	(.019)	(.019)	(.019)	(.018)
Δ ln(Credit$_{t-1}$)			.086	.073	.043	.120*
			(.053)	(.054)	(.058)	(.031)
Δ ln(Inflation$_{t-1}$)				−.089	.075	.408*
				(.225)	(.240)	(.180)
Δ ln(Manufacturing				.154*	.170*	.101
Productivity$_{t-1}$)				(.056)	(.059)	(.083)
Unemployment$_{t-1}$				−.174*	−.175*	−.163*
				(.075)	(.070)	(.082)
Partisanship$_t$					.001	.001
					(.001)	(.001)
Union density$_t$					.003	.004
					(.012)	(.010)
Constant	.013	.012	.013	.036*	.035*	.031*
	(.008)	(.009)	(.008)	(.011)	(.011)	(.012)
Observations	176	176	176	173	152	91
H_0: no autocorrelation	.019*	.013*	.105	.240	.710	.621
H_0: no cointegration	.002*	.023*	.090	.281	—	—
R^2	.036	.037	.060	.160	.171	.250

* $p < .05$. Westerlund cointegration tests for Models 5 and 6 are missing because `Stata` does not allow to run these tests with more than seven regressors.

Table A4: The effect of country-specific wage bargaining structures on nominal manufacturing wage growth, 1999–2007 (short) and 1999–2014 (long).

	Austria		Belgium		Finland		France		Germany		Greece	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Country-specific	−.002	−.002	.001	.000	.001	−.002	.007*	.002	−.001	−.002*	−.005	−.006
coordination	(.001)	(.001)	(.001)	(.001)	(.002)	(.002)	(.002)	(.003)	(.002)	(.001)	(.007)	(.006)
Linear	−.002	−.002	.001	−.000	.002	−.002	.009*	.002	−.000	−.002	−.003	−.006
combination	(.003)	(.003)	(.002)	(.003)	(.002)	(.004)	(.003)	(.006)	(.002)	(.003)	(.006)	(.006)
Remaining variables	Yes		Yes		Yes		Yes		Yes		Yes	
Observations	91	152	91	152	91	152	91	152	91	152	91	152
R^2	.262	.178	.252	.171	.232	.172	.276	.173	.253	.178	.277	.197

	Ireland		Italy		Netherlands		Portugal		Spain	
	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
Country-specific	.004	.006	.001	.002	−.001	−.002	−.006	−.003	.002	.007*
coordination	(.003)	(.004)	(.002)	(.002)	(.001)	(.003)	(.002)	(.003)	(.003)	(.003)
Linear	.003	.004	.001	.002	−.000	−.002	−.008	−.004	.002	.004
combination	(.002)	(.005)	(.003)	(.004)	(.002)	(.002)	(.005)	(.006)	(.002)	(.003)
Remaining variables	Yes		Yes		Yes		Yes		Yes	
Observations	91	152	91	152	91	152	91	152	91	152
R^2	.288	.216	.250	.173	.252	.176	.262	.173	.256	.208

* $p < .05$.

Table A5: ULC sensitivity of exports, 1999–2014.

	Austria	France	Germany	Ireland	Netherlands	Portugal	Spain
$\Delta \ln\left(\frac{ULC_c}{ULC_p}\right)$	−.708	.414	−.853*	−.333	−.176	−.467	−.196
	(.815)	(.251)	(.292)	(.249)	(.452)	(.324)	(.247)
$\Delta \ln(Demand_{p-c})$	.968*	.718*	.632*	.705*	.745*	.583*	.594*
	(.143)	(.054)	(.077)	(.118)	(.177)	(.090)	(.129)
Constant	−.003	−.011	.003	.023	.026	.012	.009
	(.009)	(.004)	(.007)	(.010)	(.014)	(.008)	(.010)
Observations	150	150	150	150	150	150	150
H_0: no autocorrelation	.000*	.823	.764	.251	.539	.636	.406
H_0: no cointegration	.016*	.048*	.071	.062	.025*	.045*	.036*
R^2	.401	.590	.596	.249	.303	.223	.290

* $p < .05$.

Table A6: Manufacturing wage sensitivity of exports, 1999–2014.

	Austria	France	Germany	Ireland	Netherlands	Portugal	Spain
$\Delta \ln\left(\frac{ManufacturingWages_c}{ManufacturingWages_p}\right)$	−.296	.620*	−.453	−.293	−.777	−.243	−.151
	(.730)	(.249)	(.316)	(.326)	(.452)	(.428)	(.285)
$\Delta \ln\left(\frac{ManufacturingProductivity_c}{ManufacturingProductivity_p}\right)$	.175	−.343*	.484*	−.119	.387	.204	−.170
	(.495)	(.126)	(.167)	(.149)	(.274)	(.265)	(.221)
$\Delta \ln(Demand_{p-c})$	.961*	.650*	.587*	.709*	.660*	.576*	.517*
	(.167)	(.063)	(.088)	(.133)	(.164)	(.099)	(.150)
Constant	−.003	−.007	.010	.030*	.031*	.013	.010
	(.011)	(.004)	(.008)	(.011)	(.014)	(.008)	(.010)
Observations	150	150	150	150	150	150	
H_0: no autocorrelation	.056	.566	.916	.355	.253	.882	.365
H_0: no cointegration	.292	.223	.467	.123	.170	.211	.499
R^2	.391	.631	.596	.244	.352	.213	.295

* $p < .05$.

Table A7: Wage sensitivity of exports, 1999–2007.

	Austria	France	Germany	Ireland	Netherlands	Portugal	Spain
$\Delta \ln \left(\frac{Wages_c}{Wages_p} \right)$	−.718	.138	.134	−.320	−.711	−.330	−.353
	(.792)	(.280)	(.448)	(.624)	(.827)	(.676)	(.376)
$\Delta \ln \left(\frac{Productivity_c}{Productivity_p} \right)$	.683	.648*	−.409	1.650*	.997	1.671*	.722
	(1.155)	(.317)	(.551)	(.635)	(1.044)	(.756)	(.575)
$\Delta \ln(Demand_{p-c})$	.348	.303*	.332*	.513	.798*	.371	.064
	(.353)	(.122)	(.143)	(.305)	(.332)	(.263)	(.160)
Constant	.034	.010	.053*	.018	.043	.017	.046
	(.021)	(.010)	(.016)	(.031)	(.029)	(.020)	(.013)
Observations	79	79	79	79	79	79	79
H_0: no autocorrelation	.127	.432	.406	.004	.099	.197	.692
H_0: no cointegration	.170	.444	.226	.323	.261	.466	.406
R^2	.050	.189	.144	.115	.194	.083	.028

* $p < .05$.

Table A8: Wage sensitivity of quarterly exports in Germany.

	1999–2007	1999–2014
$\Delta \ln\left(\frac{Wages_c}{Wages_p}\right)$		
Δ_t	−.066	−.071
	(.053)	(.041)
Δ_{t-1}	−.258*	−.170*
	(.063)	(.052)
Δ_{t-2}	−.145*	−.078*
	(.053)	(.041)
Linear combination	−.468*	−.318*
	(.141)	(.112)
$\Delta \ln\left(\frac{Productivity_c}{Productivity_p}\right)$		
Δ_t	−.215	.213
	(.177)	(.126)
Δ_{t-1}	−.114	.197
	(.208)	(.146)
Δ_{t-2}	.175	.339*
	(.170)	(.125)
Linear combination	−.154	.750*
	(.434)	(.300)
$\Delta \ln(Demand_{p-c})$		
Δ_t	.249*	.430*
	(.057)	(.043)
Δ_{t-1}	.135*	.213*
	(.065)	(.045)
Δ_{t-2}	.078	.130*
	(.057)	(.041)
Linear combination	.462*	.773*
	(.135)	(.090)
Quarter 2	−.009	−.007
	(.023)	(.018)
Quarter 3	−.053*	−.049*
	(.019)	(.013)
Quarter 4	.058*	.048*
	(.023)	(.018)
Constant	.010	.004
	(.015)	(.011)
Observations	330	610
R^2	.638	.594

* $p < .05$.

Table A9: Wage sensitivity of exports controlling for domestic credit, 1999–2014.

	Austria	France	Germany	Ireland	Netherlands	Portugal	Spain
$\Delta \ln\left(\frac{Wages_c}{Wages_p}\right)$	−.931	.444	−.787*	−.347	−.067	−.242	−.541
	(1.018)	(.346)	(.303)	(.305)	(.553)	(.401)	(.292)
$\Delta \ln\left(\frac{Productivity_c}{Productivity_p}\right)$	.373	−.043	.833*	.313	.322	.938	−.583
	(1.775)	(.369)	(.413)	(.395)	(.838)	(.670)	(.455)
$\Delta \ln(Demand_{p-c})$	.955*	.726*	.635*	.692*	.734*	.548*	.474*
	(.164)	(.058)	(.076)	(.124)	(.175)	(.102)	(.127)
$\Delta \ln(Credit_p)$	.012	−.080	.049	.105	.031	.026	−.078
	(.512)	(.115)	(.147)	(.133)	(.281)	(.123)	(.196)
Constant	−.001	−.011	.002	.022	.026	.012	.014
	(.012)	(.004)	(.007)	(.011)	(.014)	(.008)	(.009)
Observations	150	150	150	150	150	150	150
R^2	.407	.596	.595	.253	.304	.230	.334

* $p < .05$.

Table A10: Wage sensitivity of Austrian exports across different levels of R&D intensity, 1999–2014.

	High & medium-high	High	Medium-high	Medium	Medium-low	Medium & medium-low	Low
$\Delta \ln\left(\frac{Wages_c}{Wages_p}\right)$	−.958	−4.853	−.248	−.547	−.928*	−.849	−4.143
	(1.310)	(3.577)	(.529)	(.626)	(.417)	(.930)	(2.127)
$\Delta \ln\left(\frac{Productivity_c}{Productivity_p}\right)$	1.215	5.052	.601	−1.785*	−.001	−.033	2.489
	(1.976)	(5.257)	(.765)	(.824)	(.498)	(1.122)	(3.394)
$\Delta \ln(Demand_{p-c})$	.950*	.652	1.040*	1.437*	.593*	.966*	1.083
	(.213)	(.520)	(.111)	(.133)	(.087)	(.277)	(.595)
Constant	.005	.072	−.006	−.007	.008	.012	.043
	(.016)	(.039)	(.007)	(.010)	(.007)	(.022)	(.048)
Observations	150	150	150	150	150	150	150
R^2	.216	.053	.474	.684	.529	.301	.052

* $p < .05$.

Table A11: Wage sensitivity of German exports across different levels of R&D intensity, 1999–2014.

	High & medium-high	High	Medium-high	Medium	Medium-low	Medium & medium-low	Low
$\Delta \ln\left(\frac{Wages_c}{Wages_p}\right)$	−.333	.051	−.459	−1.329	−.838	−2.157*	−1.851
	(.409)	(.755)	(.427)	(.765)	(.491)	(.695)	(1.062)
$\Delta \ln\left(\frac{Productivity_c}{Productivity_p}\right)$	.367	−.924	.893*	.774	.494	1.350	.398
	(.459)	(.940)	(.452)	(.855)	(.545)	(.754)	(1.288)
$\Delta \ln(Demand_{p-c})$	.663*	.563*	.706*	.725*	.286*	.325*	.716*
	(.094)	(.181)	(.096)	(.143)	(.092)	(.161)	(.184)
Constant	.003	.026	−.004	.002	.024	.024	.026
	(.008)	(.015)	(.009)	(.013)	(.010)	(.016)	(.019)
Observations	150	150	150	150	150	150	150
R^2	.483	.083	.605	.451	.276	.363	.193

* $p < .05$.

Table A12: Wage sensitivity of Dutch exports across different levels of R&D intensity, 1999–2014.

	High & medium-high	High	Medium-high	Medium	Medium-low	Medium & medium-low	Low
$\Delta \ln\left(\frac{Wages_c}{Wages_p}\right)$	−.233	.051	−.457	−.458	−.738	−1.145	−1.071
	(.594)	(.995)	(.523)	(1.059)	(.800)	(.871)	(.685)
$\Delta \ln\left(\frac{Productivity_c}{Productivity_p}\right)$	.914	2.148	−.189	−1.175	2.634*	1.564	−.611
	(.869)	(1.474)	(.737)	(1.278)	(.985)	(1.153)	(1.069)
$\Delta \ln(Demand_{p-c})$	.603*	.293	.852*	1.495*	.817*	1.010*	.338*
	(.186)	(.328)	(.156)	(.228)	(.210)	(.278)	(.223)
Constant	.026	.024	.027	.005	.036	.044	.050
	(.016)	(.028)	(.013)	(.015)	(.015)	(.022)	(.016)
Observations	150	150	150	150	150	150	150
R^2	.258	.069	.357	.376	.201	.219	.050

* $p < .05$.

2

The Launch of EMU and German Export Interests

Abstract

In this paper, I examine the support of German businesses—especially the German export sector—for European monetary integration before the euro was officially introduced in 1999. Building on the political economy of exchange rate preferences, I argue that large export producers should have been in favor of a currency union and their support should have particularly increased in response to an appreciating deutsche mark. At the same time, other businesses should have been much more skeptical. Thus, borrowing from new advances in comparative political economy, I expect that major exporters and their organized workforce used their dominant position in peak industrial associations to advance their interests. The empirical analysis is based on business surveys and a detailed qualitative examination of the role of export interests in the country's two leading business and labor organizations. The results largely corroborate my theoretical expectations. I conclude the paper by discussing the significance of these findings for the larger debates on Germany's current role in the Eurozone and Germany's motivation to join the euro.

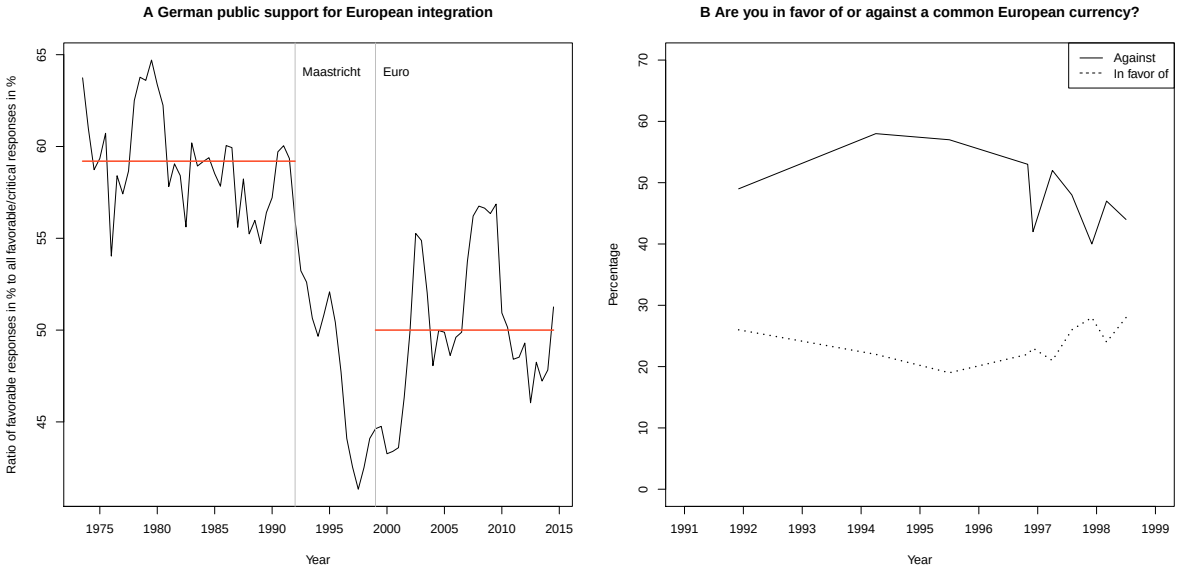
1 Germans and the Euro

Almost three decades ago, the Maastricht Treaty radically advanced European integration by challenging the sovereign tradition of European nation states in an unprecedented manner (Dyson and Featherstone, 1999). Most importantly, the treaty laid the legal foundations of the Economic and Monetary Union (EMU) with the euro as common currency. Forming the EMU has arguably been the most momentous decision in the history of European integration to this day. How was this decision perceived by the German public?

Figure 1 plots German public support for European integration (Panel A) and the euro (Panel B) over time. Public support for European integration is measured by a novel attitudinal index that combines several Eurobarometer questions. Higher values indicate stronger support for the European Union (EU) (for more detail, see Guinaudeau and Schnatterer, 2017). The graph shows that up until the signing of the Maastricht Treaty a comfortable majority of respondents had positive attitudes towards the EU. After Maastricht, this trend reversed dramatically. Commentators have dubbed this stunning reversal in the support for European integration the 'post-Maastricht blues' (Eichenberg and Dalton, 2007). Around the time the euro was introduced as official currency in 1999, public support for European integration reached historical lows in Germany. Although support has rebounded somewhat since the turn of century, it has on average stayed below pre-Maastricht levels (compare the red horizontal lines for averages).

Panel B sheds some light on the source of the German public's discontent with the Maastricht Treaty. Based on repeated surveys of the Institut für Demoskopie Allensbach between 1991 and 1999 (Noelle-Neumann, 1992, 1997; Noelle-Neumann and Petersen, 1998), the graph depicts the percentages of respondents who stated to be in favor (dotted line) or against (solid line) a common European currency, i.e., the euro. Over the whole period, the percentage of respondents who rejected the common currency vastly exceeded the number of its proponents (the average percentage spread is about 25). The plot shows are clear Maastricht effect, too. While already 49 percent of respondents opposed a common currency in 1991, this number

Figure 1: German public support for European integration and the euro.



increased to 58 percent in 1994. This finding is confirmed by another Allensbach study from March 1992, in which 42 percent of respondents answered that the Maastricht Treaty should be rejected by the German Bundesrat as opposed to 25 percent who stated that it should not be rejected (with 33 percent undecided, see Noelle-Neumann, 1992). As the date of the introduction of the euro got closer, opposition to the common currency seems to have declined to some degree. However, this cannot hide the fact that—even on the eve of the euro adoption—the German public predominantly opposed the new currency.

While the German public's disapproval of the EMU at the time of its inception is historically well established, the attitude of the German business community towards the formation of the currency union is still a matter of controversy. There are essentially two opposing viewpoints in the literature. On the one hand, Moravcsik (1998) argues in his widely-cited book *The Choice for Europe* that German business strongly supported the EMU because it would open up markets, guarantee the free movement of capital and investment, and limit the appreciation of the deutsche mark. The author even claims that the the German government's support for the EMU was considerably influenced by the preferences of major economic actors, in particular the interests of the export sector and large banks. According to Moravcsik, this economic explanation of Germany's decision to join the Eurozone is strongly backed by the sequence

and timing of events, which suggest that German support for the common currency gained traction exactly at a time of capital liberalization, dollar depreciation, and macroeconomic convergence to German standards (for a similar economic argument, see Hefeker, 1997*a*, 2007). Most recently, Iversen, Soskice, and Hope (2016) draw on Moravcsik's economic reasoning by stating that "the German government believed [at the time of Maastricht] the elimination of the use of devaluation by France and Italy was a major benefit for German exporters" (ibid., 171).

On the other hand, a large body of work paints the German rationale for forming the EMU strongly in political terms (De Grauwe, 2013). According to this view, Germany's approval is seen either as a quid pro quo for the French consent to German reunification (Mehlhausen, 2015; Scharpf, 2018; Wyplosz, 1997, 2006)[1] or as consequence of Helmut Kohl's personal belief system and political self-assertion (Esch, 2012; Risse et al., 1999; Risse and Engelmann-Martin, 2002)[2]. On the latter, Mody (2018) argues that Kohl had no business support for his EMU-friendly position whatsoever: "The German public did not support it, and neither did the German business community" (ibid., 93). While Moravcsik contends that large exporters and banks strongly favored the currency union, Mody claims that Kohl was concerned by the lack of enthusiasm among bankers and manufactures and eventually pushed the EMU through against their will.

In addition to its inconclusive findings, extant research on German business attitudes towards the EMU suffers from two further shortcomings. First, it largely treats the business community as a monolithic block with uniform preferences across sectors and enterprises (Moravcsik (1998, 392) mentions sectoral differences but neither describes them in detail nor does he attach particular importance to them) by characterizing it as either firmly supportive of the EMU (ibid.) or strongly opposed to it (Mody, 2018). Yet potential differences within the

[1]Proponents of this interpretation argue that the French consent was subject to the German willingness to give up the deutsche mark and join the EMU, with the goal to break the dominance of the Bundesbank in European monetary policy making (Eichengreen, 2008) and as a way "to integrate Germany's new potency within a genuinely European framework" (Marsh, 2013, 20).

[2]Due to Kohl's self-identification as a convinced and patriotic European, so the argument goes, he was able to spin a powerful narrative that linked support for the euro to German identity. Reunification was critical to the extent that it allowed Kohl to silence the domestic critics of a common currency and shift the public debate towards a euro-optimistic outlook.

business community might be quite revealing, as they may provide important information on the underlying motivations and, in the case of business disagreement, the way dominant interest groups exercised their influence. Second, the existing literature also does not examine whether business preferences changed over time. The temporal dimension seems to be very relevant in the case of the EMU, however, because the political debate on a common European currency started well ahead the Maastricht Treaty and continued even after its completion, especially with regard to its concrete design. Moreover, the temporal sequence may help in determining whether business preferences had any influence on actual political decision-making at all. For instance, if it turned out that business was predominantly opposed to the EMU around the time of Maastricht, it would be very difficult to maintain the argument that these preferences motivated the decision of the German government.

Beyond its historical significance, what can be learned from studying the EMU-related interests of German economic actors prior to the introduction of the euro? In an attempt to explain why some countries flourish in the Eurozone while others falter, the comparative political economy (CPE) literature has distinguished between the export-led growth model of northern countries, which are highly sensitive to the competitiveness needs of the exporting sector and hence engage in nominal wage restraint, and southern market economies, in which the unrestrained wage demands of the non-exposed sectors prevail. According to this main CPE explanation of the Eurocrisis, the resulting divergence in unit labor costs translated into inflation and real exchange rate disparities, which in turn explains the differences in competitiveness between north and south (e.g., Carlin and Soskice, 2014; Hancké, 2013*b*; Johnston, Hancké, and Pant, 2014). However, Baccaro and Tober (2017) show that wages grew nowhere as slowly as in Germany and that wage moderation can only explain the German gains in export competitiveness and not—as the CPE literature traditionally claims—exports of other northern countries. These findings put the spotlight especially on German employer associations and trade unions, who in the country's system of industrial relations bargain over wages, and not the government, which has no direct say in these negotiations (Dustmann et al., 2014). Thus, the question of whether economic actors in Germany were a priori aware

of these implications of the euro and possibly even strategically motivated by them is highly relevant for our understanding of current economic dynamics in the Eurozone.

In the next section, I develop following two-part theoretical argument. First, the literature on the political economy of exchange rate policy makes clear predictions about which business actors should support the EMU and which should oppose it: while the export sector and large enterprises should generally be in favor of a European currency union, the non-exporting sectors and smaller enterprises are expected to be much more skeptical about monetary integration. Exporters are expected to support a large EMU because a fixed exchange rate regime eliminates exchange rate variability among participating countries. This feature of a currency union should become particularly desirable for export enterprises when they are faced with an appreciating home currency resulting from competitive depreciations/devaluations of other currencies, which hurt the price competitiveness of their products. Overall, this implies that frictions within the business community should emerge. I expect that these will especially emerge in the context of industrial peak associations, where small and large enterprises from different sectors are collectively organized. Second, new contributions to the field of CPE argue that the German export industry has solidified its dominant position by being able to present its own economic interests as the national economic interests at large. Building on this idea, I expect that major representatives of the export sector should play an active role in attempts to dispel the concerns of those voices in the business community that have reservations about the prospects of a common European currency.

In the empirical section, I draw on business surveys from 1988-1998 as well as primary and secondary sources covering these and earlier years. The results show that the preferences of the German business community on the EMU largely correspond to the theoretical expectations. However, the business surveys also show that business support for the currency union decreased considerably in the wake of the Maastricht Treaty across all sectors of the Germany economy and increased again only in the second half of the 1990s. In line with these findings, the EMU-related positions of Germany's peak business association, the Bundesverband der deutschen Industrie (BDI; Federation of German Industries), demonstrate that while the

BDI was decidedly critical of the common currency in the late 1980s and early 1990s, it became fully supportive of the euro after a large real appreciation of the deutsche mark in the mid-1990s. In addition, the developments within the BDI reveal a strategic approach of large exporters to overcome the skepticism of small-to-medium-sized companies by equating the well-being of these smaller enterprises with their own well-being. The paramount importance of export interests and the opinion-forming power of the export industry also became manifest in Germany's peak labor association, the Deutsche Gewerkschaftsbund (DGB; German Trade Union Confederation). I conclude by discussing the significance of these findings for the larger debates on Germany's current role in the Eurozone and the country's motivation to join the euro.

2 Business Disagreement and the Role of the Export Sector

I start developing the theoretical argument by pointing out how—based on the literature on the political economy of exchange rate preferences—different business actors should assess the costs and benefits of European monetary integration. Since this discussion suggests that business attitudes towards the EMU vary and are partly opposed to each other, I argue that the dominant export sector, which should strongly support a fixed, undervalued exchange rate regime, may take effective steps to influence those who are skeptical of a European currency union. I expect that the major representatives of the export sector adopt a strategy that aims to allay the reservations of other (especially smaller) businesses by presenting the argument to them that their own prosperity is inextricably linked to the success of large exporters.

2.1 Business Attitudes towards the EMU

In the following, I distinguish between preferences about the exchange rate regime and preferences about the exchange rate level.

Exchange rate regime. The seminal contribution to this field is Frieden (1991). Frieden identifies four categories of business actors: import-competing producers, non-tradables producers, export-competing producers, and international traders and investors. The business dealings of import-competing and non-tradables producers are limited to the domestic economy. Thus, they should favor a floating exchange rate system that allows governments to use monetary policy as a macroeconomic tool to affect domestic economic conditions. By contrast, the export sector and international traders and investors should favor a fixed exchange rate system because the uncertainty and risks induced by currency fluctuations hurt their foreign business activities (see also Broz and Frieden, 2006; Frieden, 2016).

Since the main focus of this paper is on the preferences of the export sector, its motivation for fixed exchange rates deserves closer attention. Hefeker (1996, 1997*b*) provides a series of reasons for why export-competing producers should favor a fixed exchange rate regime. First, exchange rate variability adds uncertainty to foreign trade. Thus, risk-averse export companies are expected to respond to larger exchange rate movements with a decrease in output. This implies that fixed exchange rate systems should promote the volume of trade compared to floating systems (for corroborating empirical evidence on this, see Klein and Shambaugh, 2006, 2009). Second, exporters set their prices in the domestic currency of the respective country in which they sell their products. Due to competitive pressure, they have to fix their prices (pricing to market) and so are unable to adjust prices in accordance with exchange rate fluctuations. Consequently, their profits decline with adverse changes in the exchange rate. Third, export companies may adopt a wait and see attitude when faced with uncertainty about future exchange rates. The likely result is lower investments and forgone profits. In short, since the export sector values exchange rate predictability, it favors a fixed exchange rate system.

Another important determinant of exchange rate preferences, which should apply to all industries, is enterprise size. Large enterprises should favor monetary integration because they benefit from economies of scale and international cooperation (Casella, 1992). At the same time, smaller enterprises are expected to be opposed to the prospects of a currency union.

Since they cannot afford the costs of cross-border business operations, lower transaction costs as a result of monetary integration might lead to decreasing market shares vis-à-vis large enterprises (see remarks on the banking industry in Hefeker, 1997*b*). This is corroborated by recent research that shows that preferential trade liberalization disproportionately benefits large enterprises and hurts their smaller counterparts (Baccini, Pinto, and Weymouth, 2017).

In sum, the literature on exchange rate regime choice suggests that diverging business interests on the EMU should originate from industry lines (tradable versus nontradable) and enterprise size (large versus small). As a corrolary, Bearce (2003) argues that conflicts should also arise between factors of production. As monetary integration promotes the free movement of money, capital should support a currency union. In contrast, labor depends more on the domestic economy and so should prefer autonomy in monetary policy-making. However, Bearce fails to consider that workers might also benefit from monetary integration to the extent that their respective sector benefits from it (Baccaro and Pontusson, 2019; Hefeker, 1997*a*). This would imply that workers and capital owners in a sector have shared interests and therefore unite in their opinion on EMU.

Exchange rate level. A priori, it is not entirely straightforward how preferences about the level of the exchange rate might impact business attitudes towards the EMU. However, this is not to say that the exchange rate regime and the exchange rate level are two separate issues. As Steinberg and Walter (2013, 31) put it:

> "An additional set of complications arises from the fact that the exchange-rate regime and exchange-rate level are chosen neither in isolation from one another nor in isolation from other policies. The exchange-rate regime and the currency's level are related because fixed exchange rates are much more likely to become misaligned than flexible exchange rates, which can easily adjust as market conditions change."

The literature suggests that especially the export sector should be concerned with the exchange rate level (Walter, 2014). Generally, export enterprises should favor a weak currency

because domestic depreciation lowers the price of exported goods and hence boosts the international competitiveness of the their sector (much of this work builds again on Frieden, 1991). Even though it is generally believed that exporters of standardized goods benefit more from a weak currency than exporters of highly specialized goods due to the fact that the former are more sensitive to price changes than the later (Broz and Frieden, 2001, 2006; Walter, 2008), this does not imply that maximum price sensitivity is required for depreciation to improve competitiveness. "It is sufficient to assume a significant amount of the price elasticity of demand, which is usually true for large, diversified countries" (Höpner, 2019, 3). Specifically on Germany, extant empirical research suggests that exports overall exhibit a considerable degree of price sensitivity vis-à-vis other Eurozone countries (Baccaro and Tober, 2017). Accordingly, German exporters' attitudes towards the exchange rate regime may be influenced by their preferences about the exchange rate level.[3]

Whether the desire for a competitive currency coincides with the desire for monetary stability consequently depends on how exporters assess the implications of the EMU for the (real) exchange rate level. If they expect that the euro—in addition to eliminating exchange rate fluctuations—also enhances the price competitiveness of their products, then preferences regarding the level of the exchange rate should reinforce support for the EMU. From the perspective of the German export sector, the euro might improve price competitiveness in two ways, where the first aspect relates to countries inside and the second aspect to countries outside the currency union. First, by binding other countries to the common rules of the EMU, the possibility of competitive currency devaluations is ruled out among EMU members. Such devaluations typically imply a real appreciation of the deutsche mark, as was the case in the first half of the 1990s (De Grauwe, 1997), and hence a loss in price competitiveness. Second, by forming a currency union with countries that are economically weaker than Germany, the euro's value is likely to stay below what the corresponding value of the deutsche mark would

[3]Tradable producers might not always be in favor of a weak currency, in particular if they strongly rely on imported inputs, which become more expensive following domestic depreciation, or hold large degrees of foreign debt, implying that depreciation increases their debt burden (Walter, 2008). In addition, domestically oriented industries should also lose from depreciation because it decreases the domestic relative price of their products and increases the domestic relative price of tradable products (Frieden, 1991).

be. Thus, due to the stimulus of an undervalued euro, German exports should become more price competitive relative to non-EMU countries (it has been recently debated whether this makes Germany a currency manipulator, e.g., Krugman, 2017). Both aspects have in common that competitive gains should generally increase with the size of the currency union (assuming the countries that join have weaker currencies than the deutsche mark). In other words, the more countries join the EMU the less likely become competitive currency devaluations and the more likely will the euro be undervalued from a German point of view.

Historically, the German export sector has shown a high degree of awareness regarding the importance of a competitive exchange rate for export success (Höpner, 2019; Kinderman, 2008). Höpner (2019) shows that a coalition led by large exporters and industrial associations (most importantly the BDI) promoted a policy regime of undervaluation in the Bretton Woods years, which was based on competitive disinflation vis-à-vis trading partners and resistance to correcting revaluations. Furthermore, firm-based cross-country studies show that export enterprises favor fixed exchange rates, and that their support increases in response to appreciations of the real effective exchange rate (for a review, see Steinberg and Walter, 2013). This suggests that preferences about the exchange rate regime should become increasingly relevant for exporters when they are faced with an appreciating currency.

2.2 The Dominant Role of the Export Sector

Assuming that these attitudes towards the EMU are correctly identified, disagreement may emerge within the business community. The different viewpoints should especially clash in the context of peak associations, where enterprises of different size and from different sectors are collectively organized. The question thus becomes: whose interests prevail and why?

To address this question I borrow from recent contributions to the field of CPE, which argue for the existence of a "strong and resilient cross-class coalition" (Thelen, 2014, 58) in the German manufacturing sector, consisting of export producers and their skilled workforce (see also Hassel, 2014). According to the proponents of the so-called Growth Models Perspective, the dominant position of this coalition explains why the German economy has shifted to an

purely export-led growth strategy (i.e., an economic model that relies much more on external demand than on domestic consumption) since the 1990s (Baccaro and Pontusson, 2016; Baccaro and Benassi, 2017). More importantly, a related body of work tries to theoretically identify the underlying characteristics of such dominant coalitions (Amable and Palombarini, 2009; Amable et al., 2019; Baccaro and Pontusson, 2019).

For the purpose of this paper, three of these seem particularly relevant (here I draw mainly on Baccaro and Pontusson, 2019). First, the respective coalition is not a coalition among equals in the sense that all members have the same influence. Instead, there is an internal hierarchy in which some have an advantage over others. This internal hierarchy mirrors the relative economic resources, political leverage, and dependence on other members of the coalition. Second, the coalition has the ideological strength to convince others that its own interests are everyone's interests, even if this implies for some that they adopt preferences which are objectively against their actual material interests. Third and related to the first point, the coalition includes both business owners and workers.

While these characteristics are by no means established empirical facts (for an account that explicitly rejects the validity of structural business power, see Iversen and Soskice, 2019), I believe that they are still useful for deriving testable hypotheses regarding the anticipated business controversy on EMU and the role of export interests within it. Based on the notion that the export sector indeed occupies a dominant position in the German economic system, large export enterprises may be the most influential economic actors both within the export sector itself as well as outside. Since large exporters are also supposed to be among the strongest supporters of the EMU, I expect them to actively promote their position in the context of Germany's peak business association (the BDI). In particular, this should entail attempts to dissolve the concerns of those businesses who oppose a currency union. As a consequence of their preeminent economic position, large exporters should be able to produce an ideological discourse that presents their own preference for monetary integration as the interest of the entire business community, including those who have strong material reasons to reject the EMU.

This is not to be understood as a sincere attempt at persuasion, but rather reflects the leading exporters' interpretational sovereignty. Put differently, major export enterprises are not interested in engaging in an open dialogue with other businesses about the pros and cons of the currency union. Instead, they promote their own, self-serving interpretation of the benefits of EMU and, due to their outstanding role in the German economy, this interpretation will not be contested by others (and others, even if they wish, will not be able to contest this interpretation, respectively). Furthermore, this discourse—which may be entirely dominated by the interests of the export sector—should also stretch to Germany's peak labor association (the DGB), where unions representing the skilled-labor force of the export industry may reinforce the ideological influence of export producers by supporting the EMU in anticipation of economic benefits for their sector.

2.3 Summary

In essence, the political economy of exchange rate preferences suggests that large enterprises of the export sector should have been strongly in favor of the EMU because the currency union promised to eliminate exchange rate variability and enhance the price competitiveness of their products. It can be expected that their support became particularly strong under the impression of an increasingly appreciating deutsche mark. To guarantee a competitive real exchange rate, they thus may have favored a large EMU that includes countries that were prone to currency devaluations and economically weaker than Germany. At the same time, other sectors and smaller enterprises may have been much more skeptical. I expect that these diverging preferences became especially visible in industrial peak associations. Thus, I assume that within these peak associations, the major representatives of the dominant export sector made a conscious effort to influence the skeptics of European monetary integration in line with their own interests.

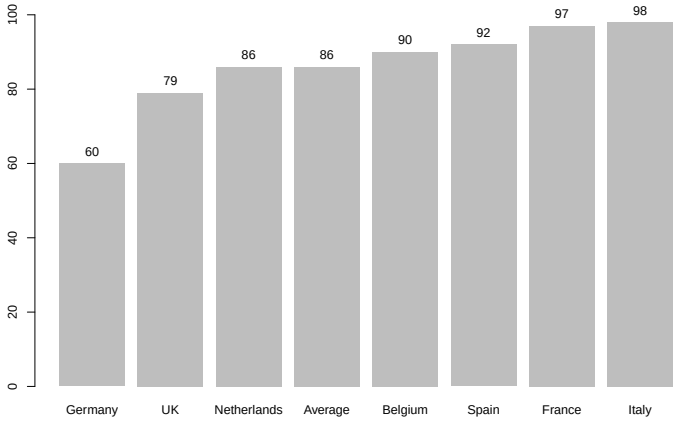
3 Empirical Findings

The empirical analysis has two parts. First, in order to assess the support of German businesses—especially the export sector—for the EMU, I draw on business surveys conducted between 1988 and 1998. Second, I use primary and secondary sources to examine the EMU-related positions of industrial peak associations and the role of export interests within them. The primary sources are both archival material of published statements by the BDI and the DGB and newspaper articles. Methodologically, I apply theory-guided process tracing with the goal to identify the temporal sequence of events that has causally led to these positions (Falleti, 2016; Trampusch and Palier, 2016). As mentioned earlier, timing is important in several respects. First, the debates surrounding a common European currency did neither start nor end with the Maastricht Treaty. For instance, many questions on the design of the EMU—especially the question who should become a member of the Eurozone—were only settled after Maastricht. Second, the reviewed literature suggests that the support of the export sector for EMU should particularly increase in response to an appreciating deutsche mark. Such a finding would lend credence to the argument that the German export sector cares strongly about the price competitiveness of its products (Baccaro and Tober, 2017; Höpner, 2019). Third, referring to the broader underlying debate on Germany's decision to join the euro, if the economic explanation (Iversen, Soskice, and Hope, 2016; Moravcsik, 1998, 2012) has merit, then it can be expected that business support for the currency union was strong throughout and especially in the early half of the 1990s when the EMU was formed. On the other hand, if those are right who claim that business was always firmly opposed to EMU (Mody, 2018), we should see low levels of support (if not outright critique of the EMU) over the entire time period.

3.1 Business Surveys on EMU Preferences

In 1988, the Association for the Monetary Union of Europe commissioned a poll based on 1036 interviews of business leaders in Belgium, France, Germany, Italy, the Netherlands, Spain, and the United Kingdom (Association for the Monetary Union of Europe, 1988). The results of

Figure 2: Percentage of business leaders who support a common European currency, 1988.



this poll are summarized by Figure 2. While a majority of German business leaders expressed support for a common European currency, the level of business support in Germany was much lower than in the other surveyed countries. In fact, German business support was 26 percentage points below the cross-country average and 19 percentage points behind the United Kingdom, the country with the second lowest level of support. This level of business support in Germany was confirmed in a 1989 survey of 500 business leaders from industry, construction, and commerce conducted by the Ifo Institute for Economic Research, in which 59 percent of respondents described a common currency as 'reasonable', 7 percent as 'perhaps reasonable', and 34 percent as 'rather not' or 'not reasonable' (Nerb, 1989).

Table 1 breaks these numbers down for each sector and presents the corresponding data from a follow-up survey that was conducted in August 1992 (Nerb, 1992), that is after the signing of the Maastricht Treaty. As expected, industry leaders—which include the large exporters—showed the highest level of support in 1989, with almost two-thirds of them describing a common currency as reasonable. In contrast, about half of the construction and commerce leaders supported a common currency at the time. The 1992 survey shows that support across all sectors plummeted after the Maastricht Treaty. The overall percentage of those who found a common currency reasonable dropped from 59 to 40. In the industry sec-

Table 1: Attitudes towards EMU across economic sectors in percent, 1989/1992.

	Reasonable		Perhaps		Not reasonable	
Economic sector	1989	1992	1989	1992	1989	1992
All	59	40	7	12	34	48
Industry	65	45	6	11	33	44
Construction	54	43	6	12	40	46
Commerce	47	26	15	12	38	62

Sources: Nerb (1989, 1992).

tor, only 45 percent of leaders remained supportive, while 44 percent opposed the EMU (not reasonable). In construction and commerce, more business leaders described the EMU as not reasonable than reasonable.

The same survey reveals that the decrease in support for European monetary integration clearly was caused by the Maastricht Treaty. 80 percent of the surveyed business leaders stated in August 1992 that the treaty is flawed and should be amended (only 14 percent declared the opposite). This opinion was shared across sectors, ranging from 78 percent in industry to 84 percent in commerce. Furthermore, 76 percent of all respondents agreed to the statement that a European currency would not be as stable as the deutsche mark. 49 percent of business leaders concurred that the 'hard deutsche mark' was irreplaceable (up from 35 percent in 1989). Thus, the Ifo Institute concluded that "politicians obviously have failed to generate sufficient acceptance for a European currency among businesses" (own translation, Nerb, 1992, 5).

Next, I turn to business surveys that were carried out by the DIHT between 1995 and 1998. The DIHT (renamed Deutscher Industrie- und Handelskammertag, DIHK, in 2001) is an umbrella organization for the local Chambers of Commerce and Industry. All German companies (with the exception of handicraft businesses, the free professions, and farms) are required by law to join a chamber. Thus, the DIHT represents more than three million enterprises, ranging from small kiosk owners to large publicly traded companies. Table 2 presents results from three surveys, which were conducted in 1995, 1997, and 1998 (DIHT, 1995*b*, 1997, 1998). The survey findings are based on the responses of more than 25.000 companies. The question they

Table 2: Attitudes towards EMU across economic sectors in percent, 1995/1997–1998.

	Desirable			Undesirable			No answer		
Economic sector	1995	1997	1998	1995	1997	1998	1995	1997	1998
All	36	50	58	45	36	34	19	14	8
Industry	41	59	66	42	29	28	17	12	6
Construction	31	34	41	53	48	46	16	18	13
Commerce	26	38	46	52	46	44	22	16	10
Services	34	50	59	45	34	31	21	16	10

Sources: DIHT (1995*b*, 1997, 1998).

were asked is whether the start of the EMU on January 1, 1999, is desirable or not. Table 2 shows the distribution of responses in percent both for all sectors and for individual sectors. To improve readability and simplify comparisons, I include barplots at the bottom of the table, which compare responses across different sectors.

The results illustrate that overall support for the EMU had further declined by 1995: only one third of all companies labeled the EMU as desirable at the time. Two years later, however, approval had increased markedly. In 1998, business support for the common currency reached again roughly the same level than opinion polls had reported in the late 1980s. Looking at the individual economic sectors, the German industry sector consistently showed the highest levels of support for the EMU. While the number of industry companies that found the EMU desirable was about equal to the number of industry skeptics in 1995, a strong two-thirds majority of the industry sector expressed a desire for the EMU in 1998. A similar increase in support can be observed for the service sector, even though this increase started from a lower base level (only 34 percent of support in 1995 compared 41 percent in the industry sector). At the same time, construction and commerce industries clearly had reservations regarding the common currency. The construction companies that opposed the EMU always outnumbered

Table 3: Attitudes towards EMU across sector-specific enterprises in percent, 1995/1997–1998.

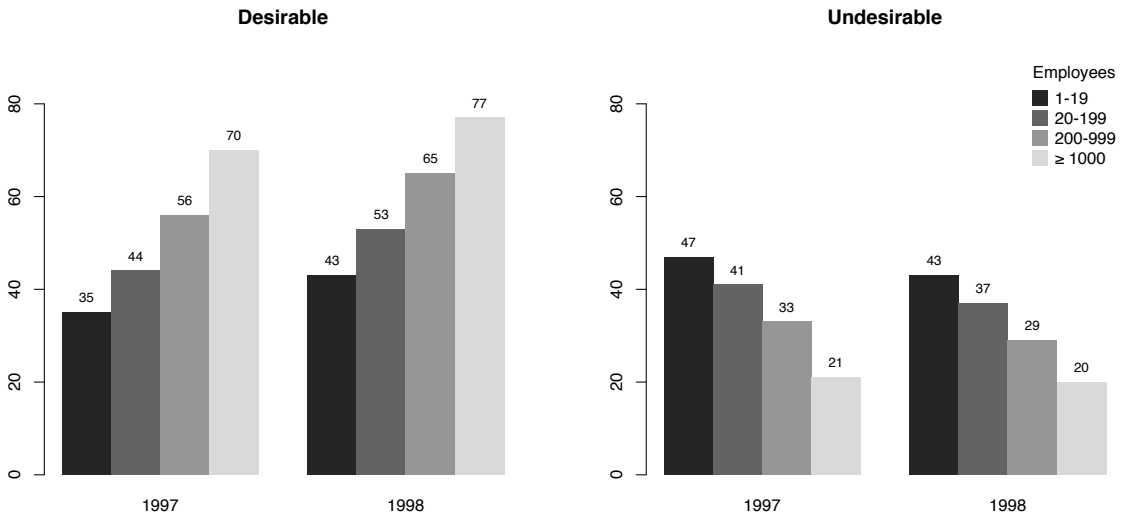
	Desirable			Undesirable		
Economic sector	1995	1997	1998	1995	1997	1998
Industry						
Intermediate goods	45	60	67	39	29	28
Capital goods	42	60	67	41	28	26
Durable consumer goods	35	62	64	45	28	29
Nondurable consumer goods	40	56	61	45	32	34
Commerce						
Wholesale trade	30	42	54	53	44	39
Retail trade	24	36	41	52	44	39
Services						
Hospitality	28	42	48	38	27	40
Transport	22	40	52	54	43	37
Banking		83	92		16	8
Insurances		67	74		26	22
Enterprise-related services		51	59		31	31
Other services	38	42	52	43	36	35

Note: For some categories, information is not available for the 1995 survey.
Sources: DIHT (1995*b*, 1997, 1998).

their EMU-friendly peers. In the commerce sector, resistance to the EMU was strong in 1995. Although the disapproval of the EMU leveled off somewhat in subsequent years, support for monetary integration remained relatively low.

Given that companies in the construction and trade sectors largely operate in the domestic market, whereas many companies in the industry and service sectors have an international outlook, these numbers closely correspond to the theoretical expectations. Table 3 substantiates these findings by looking at sector-specific producer groups and companies. In the industry sector, approval of EMU was higher among the predominantly export-oriented manufacturers of intermediate and capital goods than among producers of nondurable consumer goods (e.g., food), which rely more on the domestic market. According to the DIHT, the analyses of some local chambers "show a clear positive relationship between export dependency and approval of the EMU" (own translation, DIHT, 1998, 5). For instance, an analysis of the survey responses of Bavarian industrial companies revealed that among companies with an export

Figure 3: Attitudes towards EMU across enterprise sizes in percent, 1997/1998.



share below 20 percent less than 50 percent found the EMU desirable. Among companies with an export share of 50-60 percent, however, support for the EMU was above 70 percent (DIHT, 1997). Enterprises in the commerce sector exhibited a similar pattern. While disapproval of the EMU was generally relatively high in this sector, companies of the wholesale trade, which often have foreign trade relations, supported monetary integration to a noticeably higher degree than the domestically oriented retail trade. In the diverse service sector, large differences between companies emerge. On the one hand, as expected, service providers like banks and insurers had a very strong desire for the EMU. On other hand, domestically operating services like the hospitality industry were considerable less supportive of the euro.

Another proposition of the earlier theoretical discussion is that large enterprises should be more in favor of the EMU than small enterprises. Figure 3 strongly corroborates this conjecture. The difference in additional support between a small enterprise with 1-19 employees and a large enterprise with more than 1000 employees exceeds 30 percentage points. The larger the company, the more likely did it approve of the EMU, with the biggest businesses being overwhelmingly in favor of monetary integration. On the flip side, while more than 40 percent of the smallest enterprises found the common currency undesirable, only around 20 percent of the largest employers agreed with them.

In sum, these results show that support for the EMU was high among large enterprises—especially large exporters, banks, and insurance companies. Drawing on the political economy of exchange rate preferences, I argue above that one decisive reason for this support were the expected benefits from less exchange rate variability. Table 4 sheds some light on this claim. The reported numbers are based on a pilot survey conducted by the DIHT in August 1995 (DIHT, 1995*a*), which was based on a much smaller sample size than the later surveys (504 enterprise representatives[4]). Apart from the question on its desirability, this survey also asked what kind of benefits enterprises associated with the EMU (respondents were provided with specific answer categories).

Regarding the desire for a European currency union, the results largely confirm the previous findings. Within the industry sector, approval of the EMU was particularly high in mechanical engineering, electrical engineering, and the automotive industry. This comes as little surprise, given that these sectors are often referred to as Germany's export engine (e.g., Heymann, 2015). In the service sector, insurance companies showed again a high degree of support for the EMU. The numbers for the banking industry are considerably less enthusiastic than previously reported. Perhaps this can be attributed to the small sample size, which might have led to an under-representation of larger banks. Small banks are generally expected to be less in favor of monetary integration (Hefeker, 1997*b*). In general, enterprise size once more exhibits a strong positive association with support for the EMU. Finally, enterprises with branches in other EU countries also expressed a strong desire for monetary integration. This further substantiates the notion that enterprises that operate in foreign markets should be in favor of the EMU.

The second part of the table refers to the expected benefits from monetary integration. The reported values are averages based on a scale that ranges from 1 (not important) to 5 (very important). The results strongly support the claim that the export sector, internationally operating service industries, and large enterprises were in favor of the EMU because they expected economic benefits from less exchange rate variability. All of these businesses ascribed great

[4]49 percent from the industry sector, 4 percent from the construction sector, 15 percent from the commerce sector, and 32 percent from the service sector (including 14 percent from the banking sector).

Table 4: Attitudes towards EMU and expected benefits, 1995.

	The start of the EMU on January 1, 1999, is			The benefits of a common currency are			
	desirable	undesirable	not enough information	price comparison	cross-border payments	less exchange rate variability	foreign travel
Industry	59.6	35.9	4.5	3.3	3.2	4.0	2.4
Chemicals	58.4	41.7	0.0	2.8	3.1	3.8	2.3
Metals	54.8	41.9	3.2	3.0	3.2	3.9	2.2
Mechanical engineering	58.8	35.2	5.9	3.6	3.4	4.2	2.2
Electrical engineering	73.7	23.7	2.6	3.7	3.1	4.3	2.4
Automotive	77.0	23.1	0.0	3.2	3.5	4.5	2.1
Construction	50.0	50.0	0.0	2.9	2.6	2.8	2.5
Commerce	43.8	46.6	9.6	3.5	3.4	3.9	2.5
Services	53.1	43.1	3.8	3.3	3.4	4.1	2.6
Hospitality	38.9	50.0	11.1	2.7	3.1	3.1	2.8
Transportation	56.2	37.5	6.3	3.8	3.9	4.4	2.3
Banking	54.1	45.9	0.0	3.3	3.4	4.3	2.6
Insurances	63.7	36.4	0.0	3.1	3.6	4.1	2.2
Other services	51.8	40.7	7.4	3.3	3.2	3.8	2.9
1-19 employees	33.3	54.9	11.8	3.3	3.2	3.6	3.0
20-99 employees	50.0	42.7	7.3	3.4	3.2	3.9	2.6
100-499 employees	52.3	43.8	3.8	3.2	3.2	3.7	2.3
500-999 employees	57.2	34.7	8.2	3.6	3.5	4.1	2.4
$\geq$ 1000 employees	64.5	33.3	2.2	3.3	3.4	4.4	2.4
Branch in the EU	64.3	32.8	2.8	3.4	3.5	4.3	2.4

Note: Numbers do not always add up to 100 due to rounding. Numbers on the question regarding the start of the EMU are reported in percent. Numbers on the question regarding the benefits of the EMU are averages based on a scale ranging from 1 (not important) to 5 (very important).

importance to this item. Other potential benefits were significantly less important to them. The highest value (4.5) was given by the automotive industry, which also happened to be the industry with the strongest desire for the EMU (77.0) in this survey. Of course, some of these categories are not mutually exclusive. For instance, the major enterprises of the export sector like the kind we can find in the automotive industry tend to be large in size and usually have branches in other countries. Thus, it is not surprising that across these categories less exchange rate variability similarly was perceived as a critical advantage of the currency union. In contrast and in accordance with the theoretical expectations, domestically operating enterprises, for instance in the construction or hospitality sectors, attached much less importance to this feature of EMU.

All in all, these survey results corroborate central elements of the theoretical argument. Within the business community, the EMU was strongly supported by large export enterprises and internationally oriented service providers like large banks and insurers. An important reason why they favored monetary integration was that they anticipated benefits from less exchange rate variability. At the same time, enterprises that rely largely on the domestic market like those we find in the construction sector as well as small enterprises across all sectors were much more skeptical about the prospects of a currency union. Additionally, the data show that the Maastricht Treaty led to a significant drop in the support for EMU across all sectors. The major concern was that the euro would not be as stable as the strong deutsche mark. However, as the date of the official introduction of the euro approached, cross-sector business views of the EMU became considerably more positive, especially in the industry sector. Some have suggested that this change of position can be explained by the fact that "firms had already begun to prepare for EMU in the form of new accounting procedures" (Kaltenthaler, 1998, 88). Above, I have provided additional explanations: an appreciating deutsche mark and the dominating role of large exporters. I will turn to these aspects in the next section.

3.2 The Dominance of Export Interests in Industrial Peak Associations

The analysis of business surveys suggests that the EMU was by no means an uncontroversial issue among German businesses. For one thing, support for the EMU plummeted after the signing of the Maastricht Treaty and only bounced back in the second half of the 1990s. For another, support varied considerably across enterprises of different size and from different sectors. This raises two questions: first, why did business support for the common currency increase since the mid-1990s? Second, how were the differences in opinion within the business community resolved? To answer these questions, this section gives a detailed account of the BDI's positions on the EMU and the underlying role of export interests. Furthermore, I will compare this account to the corresponding account of Germany's peak labor association, the DGB.

The BDI. I focus on the BDI for several reasons. First, the BDI is Germany's leading peak business association, especially when it comes to economy policy (Braunthal, 1963). Compared to the BDI, the other two major German business organizations—the Bundesverband der Deutschen Arbeitgeberverbände (BDA; Confederation of German Employers' Associations) and the DIHT—have a more specialized focus on labor market/social policy (BDA) and regional (DIHT) interests, respectively (Schroeder and Weßels, 2017). Second, the BDI represents indirectly nearly all German industrial enterprises. Particularly important for the purposes of this study, it represents not only large and small enterprises from the export sector, but also companies from import-competing (e.g., the Bundesverband der Deutschen Süßwarenindustrie; Federation of the German Confectionery Industry) and nontradable (e.g., Hauptverband der Deutschen Bauindustrie; Association of the German Construction Industry) sectors (Duckenfield, 2006). Third, the BDI is commonly perceived as the industrial umbrella organization with the greatest political influence (Bührer, 2016). Fourth, the BDI has a long history of engaging in foreign policy, most notably European policy (Bührer, 2016, 2017; Rhenisch, 1999).

To the last point, the BDI supported the basic idea of European monetary integration early

on (Bührer, 2016, 2017). The results of the The Hague Summit in 1969, which charged a committee led by the Prime Minister of Luxembourg, Pierre Werner, with the task to prepare a plan for an economic and monetary union, were strongly welcomed by the BDI. From the BDI's perspective, increasing European coordination of economic and monetary policies had to be an essential part of the future integration program (BDI, 1970). When the so-called Werner Report in October 1970 proposed a three stage plan leading to irrevocably fixed exchange rates and the adoption of a common currency within a decade, the BDI praised it as a promising way forward (BDI, 1971). Since none of these ideas materialized in subsequent years, however, the BDI criticized European governments for their lack of action in European economic policy-making (BDI, 1980). The signing of the Single European Act in 1986 and the ensuing internal market program—i.e., the free movement of capital, labor, goods, and services—accordingly were praised by the BDI as historically significant steps breaking the preceding gridlock (BDI, 1988).

Yet when the 1988 European Council Summit in Hanover set up a committee chaired by Jacques Delors (who also was President of the European Commission at the time), which should study and recommend concrete stages leading to a European economic and monetary union, the BDI began to publicly advocate for a slowing down of the process. In an opinion piece entitled 'Don't sacrifice price stability for monetary integration' (own translation, BDI, 1989*a*) published in March 1989, the BDI cautioned against hasty institutional steps towards a currency union. According to the BDI, the existing European Monetary System (EMS) had proven to be an 'island of stability' and had brought planning and calculation security to the German industry. Thus, in line with the Bundesbank, BDI's primary concern was price stability: "In no case must it be endangered by a misguided monetary cooperation" (own translation, ibid., 4). The formation of a European central bank and a common currency, so the BDI, should only be the last steps in the process of monetary integration. Prior to these, all countries must—under the same conditions—belong to the EMS Exchange Rate Mechanism (ERM), there needs to be a sufficient consensus on economic, financial, and monetary policy, and all capital controls have to be fully lifted. Furthermore, giving up the possibility of ex-

change rate adjustments too early could lead to significant challenges due to the economic and structural differences between member states. The statement concluded with the BDI's hope that the upcoming report of the Delors Committee would recommend a timetable that is 'economically responsible'.

After the Delors Report was presented in April 1989, proposing a three-staged move towards EMU, and the European Council declared in June 1989 that the first of the three stages of EMU should start on July 1, 1990, the BDI began to outline its own vision of the currency union. While it generally evaluated the Delors Report as an important contribution to the discussion (BDI, 1989*b*), it renewed its concern that economic differences between countries were still too large to form a currency union (BDI, 1989*d*) and again warned against premature decisions that might lead to a 'dangerous inflation community' (BDI, 1989*c*). For the German industry, BDI's president Tyll Necker argued in October 1990, price stability is more important than exchange rate stability (Süddeutsche Zeitung, 1990).

In front of the Finance Committee of the German Bundestag, BDI's director general, Ludolf von Wartenberg, stated in September 1991:

> "It is senseless to believe that because of its export relationships in the European Community, German industry automatically values a single European currency. That view does not represent entrepreneurial reality. [...] A political union must be interwoven with the monetary union, the rules for entry must be strict, and the central bank must be committed to stability. On these essential principles, there can be no compromises " (as quoted in Mody, 2018, 93).

The BDI provided a statement to the Finance Committee, in which it put these and other demands in concrete terms: the starting point for a monetary union must be an economic union that is based on competition and open markets; since the EMU also has significant political implications, it must accompanied by a European political union; the future European central bank must be fully independent and its primary objective must be price stability because a stable currency is more important than a common currency; due to the large economic differences within the European Community, it would be reasonable if only a small number of

core countries joined the EMU initially; finally, participation in the EMU must based on strict compliance with ex ante defined convergence criteria, with strict fiscal discipline as their centerpiece (BDI, 1991*b*).

Although the results of the Maastricht Intergovernmental Conference in December 1991 and the Maastricht Treaty (signed February 7, 1992) itself largely met these requirements, the BDI criticized that the defined entry criteria would allow for too much political discretion. Moreover, the BDI expressed concern about the fact that the simultaneous development of an economic and political union was not achieved. Since the BDI believed that the currency union should only be the last step in the completion of such a double-track union, it considered the automatic movement to the final stage of EMU premature and economically unwise. Germany should only abandon the deutsche mark if the new European currency had the same degree of stability. No country should be forced to enter the EMU against its will (BDI, 1991*a*, 1992; Handelsblatt, 1991). So, despite being generally supportive of the EMU as a long-term goal, the BDI and in particular its president, Heinrich Weiss, "took an exceptionally antagonistic attitude towards the government, publicly questioning the economic competence of the Chancellor and the coalition" (Duckenfield, 2006, 81).

Yet, this confrontational approach caused unease within the BDI, with some BDI officials fearing it might reduce the organization's political influence, and eventually led to Weiss's resignation in August 1992 (Nürnberger Nachrichten, 1992). Subsequently, the BDI took a more supportive stance towards the Kohl administration. Following the government's lead, the BDI called for a swift ratification of the Maastricht Treaty (BDI, BDA, and DGB, 1992), welcomed the yes-vote in the French referendum (Süddeutsche Zeitung, 1992*b*), and publicly expressed relief about the decision of Germany's Federal Constitutional Court that declared the Maastricht Treaty to be consistent with the German constitution (Süddeutsche Zeitung, 1993*a*). This did not mean, however, that the BDI abandoned its initial position on EMU. In April 1993, Ludolf von Wartenberg repeated BDI's central requirement that membership in the EMU should be based on strict compliance with the convergence criteria. He warned that a politically motivated softening of the admission criteria would pose a serious threat to the

Figure 4: Real effective exchange rates of Germany (DE), Italy (IT), Spain (ES), the United Kingdom, and the United States. Source: Darvas (2012).

future viability of the currency union. Given that no member state fulfilled the convergence criteria at the time, von Wartenberg was skeptical that the EMU could start on time (Frankfurter Allgemeine Zeitung 1993; see also Handelsblatt 1993). In its 1994 annual report, the BDI argued that—due to the lack of convergence—"the time horizon of a common currency is a long way a way" (own translation, BDI, 1994, 18).

At the same time, the BDI became increasingly concerned about the negative implications of an appreciating deutsche mark for the export industry. The large real appreciation of the deutsche mark (see Figure 4 for a comparison of Germany's real effective exchange rate with other countries in the 1990s) had essentially two reasons. First, the rapid depreciation of the US dollar following the Plaza Accord in 1985 (Eichengreen, 2008). Second, German reunification. In reunited Germany, rising consumer demand (especially high East German demand for products from the West) increased inflation and state deficits escalated because the public-sector costs of reunification were initially credit-financed. In an attempt to counteract these trends, the Bundesbank's raise of the discount rate produced a post-reunification recession (Scharpf, 2018). The result was a period of successive devaluations of various European currencies, and the departure of the British pound and the Italian lira from the EMS

in 1992 (Henning, 1994). In addition, Sinn (1996) argues that the high public and private demand for capital following reunification increased the attractiveness of the deutsche mark as an investment currency and created strong appreciation pressure.

Consequently, BDI's new president, Tyll Necker (second term), stated in an interview in March 1993: "In the general public, far to little attention is paid to the massive deterioration of the competitive situation in the industrial sector [caused by the appreciation of the deutsche mark]. In countries such as the United Kingdom, Sweden, Italy, and Spain, our products have become up to 30 percent more expensive. So in the near future, we will have to prepare ourselves for further sharp declines in exports" (own translation, Süddeutsche Zeitung, 1993*b*). After another large real appreciation of the deutsche mark in early 1995, economists concluded that the currency was overvalued by 15 to 20 percent (De Grauwe, 1997; Sinn, 1996). Leading industry associations like the powerful Verband der Automobilindustrie (VDA; Association of the Automotive Industry) publicly complained that the strong appreciation of the deutsche mark greatly hurt their exports (VDA, 1996). The BDI itself identified the appreciating deutsche mark as the main reason for the weak performance of the German economy in 1995 (BDI, 1995*b*).

Against the backdrop of these adverse economic trends, the BDI published a response to the European Commission's green paper on the practical arrangements for the introduction of the single currency from May 1995, in which it adopted a markedly different tone towards the EMU. In its statement, the BDI argued that the euro would be without any doubt beneficial for the private sector because the common currency would allow to fully exploit the potential of the Single Market. Thus, in order to facilitate planning for the German industry, a reliable framework regarding the exact timetable and legal procedure of the currency conversion should be established as soon as possible. Another critical aspect—so the statement continued—is the setting of the conversion rate. An excessive valuation of the deutsche mark at the conversion date on top of the existing overvaluation would lead to a significant loss in the price competitiveness of the German industry, which in turn would have severe negative consequences for corporate earnings, investment, and employment. Moreover, and—

according to the statement—this aspect is of particular importance to the German industry, since the risk of currency depreciation would remain for countries that are not part of the euro, it is in the industry's interest that as many countries as possible join the EMU (BDI 1995*a*; see also later that year, BDI 1995*d*).

The BDI continued to push these aspects in 1996. In a stunning reversal of its previous position, the BDI argued in a press release that regarding some of the convergence criteria the Maastricht Treaty would allow for 'political discretion' (BDI, 1996*c*). According to Hans-Olaf Henkel, Tyll Necker's successor as BDI president, countries should be allowed to join the euro even if their deficit-to-GDP ratio exceeds the permitted 3 percent, as long as they show the will and the capacity to be permanent members of a stability community (Süddeutsche Zeitung, 1996). BDI's remarkable change in position becomes perhaps clearest by comparing its 1995 and 1996 annual reports. In the 1995 report, the BDI still advocated for its initial position: "In the interest of a real and permanent stability community, the selection of participants must not—on any account—follow political considerations, but exclusively economic assessments" (own translation, BDI 1995*b*, 19; see also BDI 1995*c*). In stark contrast, the 1996 report stated the following: "As for the fiscal criteria, the [Maastricht] Treaty allows for political discretion, which should be used responsibly. A 'precision landing' is not required" (BDI, 1996*b*, 18).

The BDI's focus on the fiscal criteria of the Maastricht Treaty especially had Belgium and Italy in mind, as both countries were so debt-laden that it was impossible for them to achieve a debt-to-GDP ratio even close to the required limit of 60 percent of GDP (Finanz- und Wirtschaftsspiegel, 1995; The Wall Street Journal Europe, 1995). In April 1997, Henkel explicitly praised the efforts Italy had made to meet the Maastricht criteria (Frankfurter Allgemeine Zeitung, 1997). The German magazine Der Spiegel explained BDI's change of mind in the following way: "Behind this pushing is businesslike calculation: some entrepreneurs fear massive appreciation if investors flee to the Mark after a collapse of the currency union, others hope that a new, soft euro improves sales opportunities abroad. In particular, many enterprises wish for protection against currency speculations, exchange rate fluctuations, and the overvaluation of the Mark, which has hurt their business frequently in the past years" (own

translation, Der Spiegel, 1996*b*, 78). This explanation was borne out only a few days after Der Spiegel had published its article when the chairman of Mercedes-Benz, Helmut Werner, described recent exchange rate fluctuations as totally unpredictable and unacceptable for the German economy (Süddeutsche Zeitung, 1996).

However, BDI's sudden enthusiasm for a large EMU was not shared by all its members. Reinhard Kudiß, the coordinator of BDI's task force on the currency union, is quoted in the same Spiegel article as saying that the euro is mainly supported by large export enterprises. In contrast, small enterprises would fear the costs and risks that are associated with the replacement of the deutsche mark (Der Spiegel, 1996*b*). This assessment was confirmed by Hans-Olaf Henkel, who publicly admitted that approval of the euro was low among small- and medium-sized businesses in the BDI (Süddeutsche Zeitung, 1996). Indeed, the principal disagreement in the BDI seems to have been between enterprises of different sizes rather than between different sectoral associations, which either did not see the EMU as a major concern to their business (e.g., the Bundesverband der Deutschen Süßwarenindustrie) or simply accepted the dominant position of major exporters (e.g., the Hauptverband der Deutschen Bauindustrie) (for details, see Duckenfield, 2006).

To dispel the concerns of smaller businesses, the BDI formed a special committee—called the Industry Forum EMU—in the spring of 1996, which had the alleged goal to provide a 'sober assessment' of the risks and chances associated with the currency union. Chaired by the BDI president himself, the vast majority of members consisted of Germany's leading export enterprises including AEG, Bilfinger & Berger, Bosch, Hoechst, Mercedes-Benz, and Siemens. The only medium-sized company in the committee was the Kleinewefers-Beteiligungs GmbH, an internationally operating mechanical engineering company with several hundred employees. Small enterprises were not represented at all. In July 1996, the Industry Forum EMU presented its report to the German public (BDI, 1996*a*). In essence, the report reiterated BDI's previous statements on the benefits of the EMU, especially its significance in reducing risks from exchange rate fluctuations and an overvalued deutsche mark. More importantly, the report claimed that the euro would be beneficial for small- and medium-sized enterprises, too.

The corresponding paragraph is worth quoting as a whole:

> "Small- and medium-sized industry enterprises would also benefit from the fact that Europe gradually frees itself from the unpredictable currency fluctuations. Indeed, they usually have a lower export share than large businesses. But as suppliers to large businesses, they [smaller enterprises] depend on them to operate successfully in exports.
>
> As a result of the relocation of production, the supply networks will be inevitably newly established too—often at the expense of small- and medium-sized partners from Germany. The network of industrial supplies in Germany is no longer as tear-proof as it used to be. Under the pressure of competition, more and more enterprises are forced to switch to foreign partners instead of their regular German suppliers.
>
> As a result of the higher valuation of the deutsche mark, not only did the price competitiveness of German enterprises abroad suffer, but import competition has also become severely exacerbated. This is especially true for medium-sized industries.
>
> The exchange rate-related price reduction of foreign products in Germany is forcing domestic providers to lower their prices and leads to a deterioration of their earnings situation and the loss of domestic market share. Higher exchange rate stability would tend to reduce import competition pressure and, as the need for currency hedging ceases, would also lead to a relief on the import side" (own translation, BDI, 1996*a*, 11).

These remarks show that the large exporters behind BDI's Industry Forum EMU framed the benefits of the currency union for small- and medium-sized enterprises mainly in terms of their own well-being. The argument they advanced was that these smaller enterprises in their role as suppliers depend on the success of large export companies and thus the export-related benefits of EMU should trickle down to them as well. Mark Duckenfield describes this strategy as follows: "The large companies which dominated the Industry Forum looked at what was in

the direct corporate interest of their members in an analysis of the costs and benefits of EMU. For their smaller counterparts, they looked not at the immediate impact of EMU on a small firm's bottom-line, but rather at a different conception of small company well-being. These conceptions prioritized the indirect benefits of EMU to small firms through direct benefits to large firms" (Duckenfield, 2006, 97). In short, Germany's major exporters argued that what is good for them is good for everyone else.

In an apparent effort to make this argument seem somewhat less blunt, the report also mentioned potential EMU-related benefits for domestic businesses, especially import-competing enterprises. However, these remarks are yet another example of the interpretational sovereignty (see above) of major export producers. They conceal that while import-competing producers might have reasons to favor a low exchange rate, they have also an inherent interest in national monetary policy-making and the way in which it can affect domestic prices (see literature above, especially Frieden, 1991). Moreover, the report did not mention that many import-competing companies are often heavily dependent on imports of intermediate goods and thus the depreciation of other currencies might have actually been beneficial for them because of the ensuing reduction in costs. Being pressed on this issue in a Spiegel-interview, this economic effect of the D-Mark appreciation was even (hesitantly) acknowledged by Helmut Werner, chairman of Mercedes-Benz and member of the Industry Forum EMU (cf. Der Spiegel, 1996*a*).

To sum up, while the BDI had been generally sympathetic to a common European currency since the idea gained traction in the late 1960s, it criticized the Delors report for being too hasty in its institutional recommendations. In particular, it feared that the EMU might threaten price stability. Consequently, the BDI insisted on clearly defined entry criteria, which should ensure that a sufficient degree of convergence was achieved among the future members of the currency union. From the BDI's perspective, strict compliance with these convergence criteria was a sine qua non and thus it recommended a small EMU of few core countries. This perspective changed, however, when the German economy was confronted with a massive real appreciation of the deutsche mark between 1992 and 1995, which seriously hurt German

exports. Since the spring of 1995, the BDI thus demanded that as many countries as possible should join the EMU because this would guarantee that competitive depreciations and exchange rate fluctuations of any kind are ruled out. In a remarkable reversal from its initial position, the BDI even argued that compliance with the fiscal criteria of the Maastricht Treaty was a question of political discretion. The BDI's main concern throughout this period was the well-being of the export sector, which reflected the dominant position of large exporters within the organization. Other sectors within the BDI were either indifferent or tacitly accepted the powerful role of the export industry. However, small- and medium-sized companies remained skeptical of the EMU. The BDI leadership together with large exporters addressed the concerns of these companies by setting up the Industry Forum EMU. The Industry Forum did not, as it claimed, provide an objective assessment of EMU's costs and benefits, but rather had a simple message for the skeptics of the common currency: what is good for large exporters is good for you as well.

The DBG. Finally, I want to briefly compare the BDI's views on the EMU with the corresponding positions of the DGB. The DGB lends itself to a comparison with the BDI because the DGB is by far the largest German confederation of trade unions, representing millions of workers from all industries and sectors. This makes the DGB Germany's peak labor association (Schroeder, 2013).

On questions of the EMU, the DGB collaborated with the BDI early on (Kädtler and Hertle, 1997). After a meeting of high-ranking officials in Cologne on June 20, 1988, BDI and DGB agreed to form a joint working group that should assess the ramifications of the completion of the European internal market. In July 1989, following the release of the Delors Report, the working group published a joint statement in which it directly addressed the prospects of a European currency union. According to the statement, monetary stability was of the utmost importance to both the BDI and the DGB. Moreover, the completion of the internal market would not necessarily require a currency union and irreversibly fixed exchange rates. Existing institutional instruments should be used instead. The working group described the

Delors Report as an 'extraordinarily important contribution to the discussion'. Despite being critical of some aspects, it welcomed its fundamental assertions (BDI and DGB, 1989). In another joint statement from August 1990, BDI and DGB expressed their general support for the EMU. However, an essential prerequisite would be increased economic convergence between member states. Furthermore, the EMU must be accompanied by a European political union and a democratic strengthening of the European Parliament (BDI and DGB, 1990).

Immediately after the signing of the Maastricht Treaty, some DGB representatives expressed concern that the treaty provisions placed much more weight on economic policy than social policy, might eventually lead to social cutbacks, and did not endow the institutions of the EU (especially the European Parliament) with sufficient democratic rights (Süddeutsche Zeitung, 1992*a*,*c*). Yet, despite these concerns, the DGB overall remained supportive of the EMU (Kaltenthaler, 1998). Together with BDI and BDA, the DGB thus called for a prompt ratification of the Maastricht Treaty (BDI, BDA, and DGB, 1992) and welcomed the Federal Constitutional Court's Maastricht-decision in October 1993 (Süddeutsche Zeitung, 1993*a*). As stated in a report from 1995, the DGB based its support on the hope that the EMU would facilitate better coordination of economic policy and increase the pressure for a Europeanization of employment policy. Furthermore, the DGB demanded that the EMU should not only be geared towards monetary stability, but should give equal importance to employment guidelines as well. The example of the Bundesbank had shown—so the DGB argued—that an excessively rigid monetary policy can lead to employment losses and declining growth. The DGB expected that the European Central Bank would more strongly consider employment aspects than the Bundesbank (DGB, 1995).

In the 1995 report, the DGB also shared its opinion on the expected economic benefits of the EMU for Germany. The DGB saw the main benefit in the complete removal of exchange rate risks that hamper exports, slow growth, and destroy jobs. In particular, the common currency would solve the problem of a sharply appreciating deutsche mark caused both by the devaluation of other European currencies as well as speculative currency attacks. According to the statement, the "real appreciation is equivalent to an overvaluation of the DM and thus

to a loss in price competitiveness" (own translation, DGB, 1995, 16). Moreover, the more countries join the EMU, the more competitive would the euro be in relation to other, non-European currencies like the dollar. Because of the significance of these expected economic benefits, the EMU should not be postponed. Referring to the example of Belgium, the DGB argued that the debt-to-GDP ratio was only a 'product of the past', which "says nothing about the current quality of the country's fiscal policy" (own translation, ibid., 21). This would show that a strict understanding of the fiscal entry criteria does not necessarily lead to an appropriate selection of EMU members.

Some of these arguments were reiterated in a DGB position paper in 1997. The paper advanced following five EMU-friendly theses. First, exchange rate fluctuations and the overvaluation of the deutsche mark have hurt the German export sector, and have led to a slowdown in economic growth and an increase in employment losses. With the EMU, in contrast, these exchange rate risks will largely disappear. Additionally, the euro will be more competitive in international financial markets than the deutsche mark. These features of the EMU will be beneficial to the German export sector. Second, the EMU as a logical continuation of a deepening single market will lead to welfare gains because of a reduction in costs and an increase in the competitiveness of the German industry. Third, the EMU-induced losses in the autonomy of national economic policy-making need to be compensated at the European level. Fourth, noncompliance with the convergence criteria does not constitute a ground for postponement of the EMU. A postponement would lead to a massive appreciation of the deutsche mark, which in turn would have severe negative consequences for German exports. Fifth, the scope of action for an active European employment policy is considerable larger with a currency union than without it (DGB, 1997).

While unease was growing in some parts of the DGB in the second half of the 1990s (Die Zeit, 1997), public opposition to the EMU from DGB leaders was rare. The most notable exception was the head of the domestically oriented IG BAU (Industrial Union Construction-Agriculture-Environment), Klaus Wiesehügel. At a meeting of the SPD in April 1997, he said: "With regard to the European Monetary Union, I am increasingly convinced that it must be

postponed if we do not want to run into [an] employment catastrophe" (own translation, Nürnberger Nachrichten, 1997). Wiesehügel's main concern was that the austerity measures, which were adopted in order to comply with the convergence criteria, would lead to a recession and job losses. This concern was generally shared within the DGB, but it did not prompt its leadership around chairman Dieter Schulte to reverse the DGB's overall course (Der Spiegel, 1997). This reflected the position of more powerful DGB unions, especially the strongly export-oriented IG Metall (Industrial Union of Metalworkers).[5]

According to an IG Metall representative in February 1996, the IG Metall identified the independence from exchange rate fluctuations, which frequently resulted from currency devaluations in other member states, as the main benefit of the EMU. The representative argued that this would be particularly important for Germany because two-thirds of German exports go to other European countries (Schnabel, 1998). The chairman of IG Metall, Klaus Zwickel, described the euro as a blessing for employment security. He stated that 1 million jobs disappeared in his sector between 1991 and 1997. Two-thirds of them, Zwickel claimed, can be attributed to exchange rate fluctuations (Capital, 1998). To address the concerns of other DGB members, the IG-Metall head adopted a strategy that combined support for EMU with calls to tackle the jobs crisis (Die Zeit, 1997). In June 1997, for instance, he referred to the EMU as 'the right step' and made the case for a duly start in 1999. A delay would lead to further massive job losses. However, the EMU should be complemented by an active European employment policy. In Zwickel's own words: "It is therefore not the monetary union, but the neo-liberal economic concepts that must be attacked" (own translation, Der Tagesspiegel, 1997). Given this strong support for the EMU by the head of IG Metall, IG BAU's Wiesehügel could not maintain his opposition for long. In September 1997, he declared: "The euro has to come, and it has to come now" (own translation, Focus, 1997).

All in all, these remarks show that the DGB's views on the economic implications of the EMU closely resembled the perspective of the BDI. As was the case with the BDI, the DGB

[5]In 1997, the IG Metall represented 30.9 percent (2.660.951) of all DGB members (8.623.471). In contrast, the IG BAU's share was only 7.6 percent (655.356). See: `https://www.dgb.de/uber-uns/dgb-heute/mitgliederzahlen`.

was concerned most with the interests of the export sector and thus supported the EMU due to its expected trade benefits. By doing so, the DGB followed its long-standing tradition of advocating for (or at least tacitly agreeing to) policy measures that are believed to promote export expansion (Kaltenthaler, 1998; Kreile, 1977). Not all DGB members were in favor of the EMU. But the common currency enjoyed the support of the export-oriented IG Metall, the largest and most powerful trade union within the DGB. Its chairman praised the economic benefits of EMU and rejected any suggestions that the currency union should be postponed. Reacting to fears of some DGB members that the EMU might lead to employment losses in their sectors, the head of IG Metall tried to separate these concerns from the EMU as such and instead called for a European-wide coordination of economic policy, in particular an active employment policy. The DGB leadership adopted exactly these positions in its public statements.

4 Concluding Discussion

This paper has examined German business attitudes towards the EMU prior to the official introduction of the common currency in 1999. I have argued that the EMU should be strongly supported by businesses that operate internationally, especially large exporters. Based on the existing literature on the political economy of exchange rate preferences, the German export sector may favor European monetary integration for two reasons. First, a fixed exchange rate regime eliminates currency fluctuations, which hurt trade relations due to the ensuing uncertainty. Second, the EMU might increase the price competitiveness of German exports because currency devaluations are ruled out among member states and the value of the euro is likely weaker than the corresponding value of the deutsche mark would be. Consequently, support for the euro among export producers should grow particularly in response to an appreciating deutsche mark. In this case, exporters should be in favor of a large EMU that includes as many countries as possible. At the same time, domestically oriented enterprises should be much more skeptical of the currency union. I thus have argued that the major representatives

of the export industry may use their dominant position to produce a discourse that presents their own interests as the interests of the entire business community. The ideological influence of the export sector should also translate to the EMU-related debate among organized workers.

The empirical analysis has largely corroborated these theoretical considerations. Among all sectors of the German economy, the industry sector was consistently exhibiting the highest level of support for the common currency. Approval of the EMU was particularly high among large exporters like those we find in the automotive industry. For them, less exchange variability was the greatest benefit of the common currency. However, the data also show that support was relatively low from a comparative perspective and that support across all sectors declined as a result of the Maastricht Treaty. This presumably reflected Germans' close affection to the deutsche mark (cf. Figure 1) and the country's traditional concern with a stable currency (Tietmeyer, 1998). Only since the mid-1990s did the EMU enjoy growing support again. These results closely match the developments within Germany's peak business association, the BDI. Despite its general support for the EMU as a long-term goal, the BDI criticized the Maastricht Treaty as an overhasty step that endangers the stability of the existing EMS. Since monetary stability was BDI's highest priority at the time, it called for a small EMU consisting of a few core countries that strictly comply with all convergence criteria, especially the fiscal requirements. Yet, after a period of domestic (reunification) and international (dollar appreciation) economic turmoil that led to a large real appreciation of the deutsche mark, the BDI did a remarkable about-face in the mid-1990s. Anxious about the price competitiveness of German exports, the BDI now advocated for a large EMU based on softer fiscal entry criteria. This course of action was strongly supported by large export producers. The doubts of smaller BDI members were wiped away by the argument that what is good for their large counterparts is good for them as well. The story of the DGB is strikingly similar. There, too, export interests trumped all other concerns. Within the DGB, public opposition to IG Metall's stance was rare and, if uttered, could not be maintained for long.

As mentioned at the beginning of this study, these findings have important implications

for the research on, first, Germany's role in the Eurozone and, second, Germany's decision to join the EMU. To the first point, the paper provides important insights into Germany's current role in the Eurozone. As mentioned earlier, the CPE literature claims that some countries fare better than others in the EMU because they boost the price competitiveness of their exports by means of nominal wage restraint. Recent research suggests that Germany stands out in this regard (Baccaro and Tober, 2017). The results of this study shed led on the underlying reasons of Germany's outstanding success in the EMU. The BDI's remarkable change of mind following the large real appreciation of the deutsche mark in the first half of the 1990s shows the high degree of awareness in the German business community regarding the competitiveness needs of the export sector. In particular, this includes a competitive real exchange rate (cf. Höpner, 2019). My empirical findings suggest that Germany's leading economic actors were very much aware that—at least since the strong depreciation of the US dollar and the collapse of the EMS following German reunification—the EMU will be beneficial for the price competitiveness of German exports. It also demonstrates the dominant position of large export enterprises vis-à-vis all other businesses and the powerful influence they wield over them. Moreover, the analysis of the DGB has revealed that this influence is not limited to the business community, but spreads to organized workers as well. This is important because a strategy of competitive disinflation, like the one we have seen in Germany, requires the willingness of trade unions to exert wage moderation in exchange for gains in price competitiveness. The results of this study leave little doubt that the adoption of this kind of strategy in Germany results from a conscious choice of the German export coalition, consisting of major export producers and their workforce.

As for Germany's decision to join the EMU, Moravcsik (1998) argues in a widely-cited contribution that Germany's main motivation to join the EMU was economic in nature and closely reflected the interests of the export sector. The results of this paper suggest that this explanation is not grounded in empirical facts. While a small majority of German business leaders supported a common European currency in the late 1980s, the percentage of business support was much smaller than in other countries. Moreover, the detailed analysis of BDI's

position on EMU illustrates that when the idea of a currency union gained political traction in the late 1980s and early 1990s, the BDI publicly opposed it and advocated for a slowing down of the process. The German industry's discontent with the Maastricht Treaty also becomes apparent by the fact that industry support for the common currency dropped dramatically after the signing of the treaty (see Table 1). This is not to say that the German government might not have been motivated by economic reasons at all. However, in light of my empirical findings, it seems unlikely that such reasons were the decisive factor and it is outright implausible that they reflected any demands on part of the German business community.

A different question is whether and to what degree the concrete design of the EMU—after the political decision for the common currency had already been made—was influenced by the export industry and the BDI, respectively. The empirical analysis in this paper has shown that BDI's initial demands regarding the membership in EMU were largely met in the form of the Maastricht convergence criteria. Thus, an interesting avenue for future research is to examine how important BDI's demands actually were for the Kohl administration. So far, extant research has mainly focused on the powerful role of the Bundesbank in the EMU negotiations (Dyson and Featherstone, 1999), arguing that the material implications of EMU were too complex for the BDI to adopt a clear position (ibid., 449). The results of this study suggest that this is not the case.

Another interesting question pertaining to the membership in EMU, which to my knowledge has not received any attention in the existing literature, is whether the position of the export industry/BDI affected the decision in May 1998 to let Italy join the Eurozone. Mody (2018) argues that Kohl made this decision almost unilaterally against fierce opposition from both domestic actors and European counterparts. He contends that "[i]t seemed as if every German other than Kohl wanted to keep Italy out" (ibid., 120). This study has demonstrated, however, that Mody is mistaken on this last point. Since the mid-1990s, major exporters and the BDI leadership were very much in favor of a large EMU that should include countries like Belgium and Italy despite their bad fiscal performance. This might help to explain why Kohl, in spite of all opposition and a looming federal election in September 1998, managed to push

through the Italian membership in EMU. Even though much of the existing evidence suggests that decision-making in Germany in the 1990s was marked by a remarkable primacy of politics personified by Helmut Kohl, the impending access to previously blocked documents like the Cabinet minutes of the Federal Government (blocked for 30 years by law) might shed new light on these important questions.

3

European Institutional Integration, Trade Unions, and Income Inequality

Abstract

What are the distributional implications of European institutional integration? This paper argues that European institutional integration exerts a moderating effect on the relationship between trade union strength and income inequality—particularly inequality at the top—within countries of the European Union. I contend that European institutional integration reduces the bargaining power of trade unions due to rising market competition and decreasing union control over the supply of labor. Thus, the effectiveness of trade unions in reducing inequality should decline with progressing European institutional integration. Based on a long-term within-country analysis of the EU15, I will show that the effect of trade unions on inequality varies strongly with European institutional integration. Consistent with the theoretical argument, the inequality-reducing effect of trade unions becomes substantially lower the more a country integrates in the European Union.

1 Distributional Implications of Negative Integration

Described in such terms so many times that it has almost become an empty phrase, it is still worth reminding: the European Union (EU) is a unique historical experiment. On a continent battered by perennial hostility and destruction, the process of European institutional integration starting in the 1950s must be seen as a bold attempt of replacing war with cooperation. The EU's contribution to "the advancement of peace and reconciliation, democracy and human rights" (Norwegian Nobel Committee, 2012) is a shining example far beyond its own borders:

> "The overall success of the European Union in regional integration, despite regular setbacks, has spurred regionalism worldwide as the EU demonstrates that regionalism can be instrumental in overcoming historical animosities, in embedding democracy and the rule of law, and in guaranteeing regional security which in turn fosters overall stability. This success challenges partners globally and inspires regional integration movements in all parts of the world" (Reiterer, 2006, 224).

However, while the EU overall has received much praise, specific features of the European integration process have drawn significant criticism. A particularly prominent line of critique argues that European integration is biased in favor of economic interests and neglects the social policy dimension (Leibfried and Pierson, 1995; Pollack, 2005; Rhodes, 1996; Streeck, 1996, 1997). Put differently, the process of European institutional integration is criticized for giving much more weight to market liberalization than to social regulation. Scholars have described this as an asymmetry between *negative integration*, which means the removal of trade barriers and market rigidities, and *positive integration*, that is social regulations which correct market dysfunctions. Scharpf (1996, 1999) identifies different actors as the main cause of this development. On the one hand, negative integration has mainly been driven by the European Commission (EC) and the European Court of Justice (ECJ), which both have been able to gradually expand their competences vis-à-vis EU member states. On the other hand,

positive integration has largely remained a member states' issue and as such depends on high levels of agreement among governments. Yet due to economic, ideological, and institutional differences, agreement is extremely hard to come by and so social policy remains by and large confined to national policy making. Many commentators fear that these diverging dynamics have enabled actors at the European level to promote an agenda of labor market deregulation and privatization (Kosonen, 1995; Offe, 2003). The few national options that remain are on the supply side and include flexibilization of employment conditions, increasing wage differentiation, and welfare state retrenchment (Scharpf, 2002).

Against the backdrop of this important body of literature, it is surprising that empirical research has paid relatively little attention to the distributional implications of European institutional integration. The seminal studies by Jason Beckfield (2006, 2009) are to my knowledge the first to systematically test the relationship between European integration and income inequality. He finds that both economic (trade within the EU) and political (number of cases referred from national courts to the ECJ) integration exhibit a positive correlational link with income inequality within countries as measured by Gini coefficients between 1972/3 and 1997. Later studies (Bertola, 2010; Busemeyer and Tober, 2015; Ochsenfeld, 2017) have focused more on the distributional effects of the Economic and Monetary Union (EMU). They, too, find a positive association with income inequality.

Despite being significant contributions to our understanding of how European integration affects inequality, all of these studies have their shortcomings. While Beckfield (2006, 2009) provides an extensive list of mechanisms through which the process of Europeanization might impact the distribution of income, he tests none of these causal channels explicitly. The later studies do a better job in this regard by either providing evidence for EMU's depressing effect on social spending (Bertola, 2010; Busemeyer and Tober, 2015), or by showing how the euro distorted real interest and exchange rates and how these distortions eventually reverberated to the wage distribution (Ochsenfeld, 2017). Yet given their narrow focus on the EMU, these contributions are inevitably limited across time and thus are not able to empirically test the longstanding socioeconomic criticism that has been leveled against European institutional

integration.

This paper attempts to address the shortcomings in existing research by spelling out and testing a major channel through which European institutional integration affects income inequality. The subsequent theoretical argument is based on two considerations. First, the fact that European institutional integration attaches much more importance to market liberalization than to social protection adversely affects trade unions because of the difficulties unions have in organizing effectively both on the national as well as European level. Second, empirical studies show that trade unions are a key factor in reducing income inequality. Especially the rise of top income shares seems to be related to the weakening of unions. Taken together, I derive a novel interactive hypothesis which claims that as European institutional integration increases, the dampening effect of trade unions on inequality declines. I test this interactive relationship using a time-series cross-section (TSCS) dataset, where the main model specification covers 15 EU members between 1955 and 2014. The analysis finds that there is an integration-varying impact of trade unions on income inequality. Consistent with the theoretical argument, the inequality-reducing effect of trade unions decreases in response to progressing European institutional integration. The conditioning influence of European institutional integration is substantial.

The rest of the paper is organized as follows. Section 2 presents the theoretical argument and derives empirical implications on the effects of European institutional integration, trade unions, and their interaction on top income inequality. Section 3 develops the empirical strategy based on data description and model specifications. In turn, Section 4 discusses the empirical results. Finally, Section 5 concludes.

2 Trade Unions in an Integrated Europe

I argue that European institutional integration conditions the negative impact of trade unions on income inequality. Thus, this section starts by reviewing the literature on the nexus between unions and inequality—especially inequality at the top. In the next step, I elaborate on

the conditioning role of European institutional integration.

2.1 The Impact of Trade Unions on (Top) Income Inequality

The literature provides much evidence that unions have an equalizing impact on the overall distribution of income through various channels (Ahlquist, 2017; Alderson and Nielsen, 2002; Bradley et al., 2003; Card, 1996*b*, 2001; Card, Lemieux, and Riddell, 2004; DiNardo, Fortin, and Lemieux, 1996; Rueda and Pontusson, 2000; Western and Rosenfeld, 2011). Some argue in contrast that both the decline in unionization and the corresponding increase in inequality are actually the result of skill-biased technological change (Acemoglu, Aghion, and Violante, 2001). However, empirical studies that examine the independent effect of technological change and declining union membership find that deunionization seems to be the more important driver behind the rise in inequality (Fernandez, 2001; Kristal and Cohen, 2017).

There are at least two channels through which trade unions should affect *top* income inequality as well. First, weak unions translate into reduced bargaining power of workers relative to capital owners, which in turn implies a reduction in the labor income share (Blanchard and Giavazzi, 2003; Kristal, 2013). It follows from the fact that capital incomes tend to be highly concentrated that higher capital income shares should lead to increased top income inequality (Jaumotte and Osorio-Buitron, 2015). Second, trade unions serve as a confining factor for executive management (Huber, Huo, and Stephens, 2017; Kristal and Cohen, 2017). A growing body of empirical research finds that union strength depresses executive compensation (Banning and Chiles, 2007; DeAngelo and DeAngelo, 1991; DiNardo, Hallock, and Pischke, 1997; Goldstein, 2012; Gomez and Tzioumis, 2006; Huang et al., 2017; Jensen and Murphy, 1990; Shin, 2014). The studies explain this finding in various ways including decreasing rents for managers and owners due to higher union rents, overall labor cost considerations (higher executive compensation might invite higher wage demands by unions), attempts to mitigate the chance of labor strikes, unions' shareholder activism (primarily through pension funds), and the efforts of unions to restrict stock options compensation. Furthermore, Goldstein (2012) shows that labor unions reduce the number of managerial employees overall.

In addition to these two explicit channels, the effect of trade unions on top income inequality has also been studied in a more general class-based framework (usually drawing on the power resource theory, for instance Huber, Huo, and Stephens, 2017). Here top incomes serve as an implicit proxy for the class of business actors, whereas the remaining bottom part of the income distribution serves as a proxy for workers. The argument—similar to the first channel from above—is that an increase in the strength of trade unions and left-wing parties empowers workers in their distributive conflict with employers and therefore should be associated with a decrease in top income inequality (Hager, 2018).

Based on these theoretical considerations, it comes as little surprise that extant empirical contributions on the impact of trade unions on top income inequality provide evidence for a moderating effect of the former (Huber, Huo, and Stephens, 2017; Jaumotte and Osorio-Buitron, 2015; Scheve and Stasavage, 2009; Volscho and Kelly, 2012). In fact, Hager (2018, 15) concludes in her review article on top incomes that "[...] union strength provides what is perhaps the most robust predictor of top incomes across time and space." Thus, I derive following first hypothesis on the relationship between trade unions and income inequality:

Hypothesis 1 *The strength of trade unions decreases inequality, including at the top of the income distribution.*

2.2 The Conditioning Role of European Institutional Integration

In February 2016, two weeks before David Cameron formally announced that a referendum would be held on the United Kingdom's membership of the EU, Paul Embery—a regional secretary of the Fire Brigades Union in London—called on fellow trade unionists to vote for leave with these words:

> "Instead of promoting investment, full employment and strong public services, EU leaders have forced through cuts, privatisation and liberalisation—the worst possible response to the economic crisis, and the reason why so many European economies have struggled to escape from it. This strategy of austerity is rooted

in the neoliberal ideology that has long lain at the core of the EU project and has been the driver for a set of laws inimical to the objectives of trade unions" (Embery, 2016).

Indeed, the process of European institutional integration has long been criticized for favoring market-making (negative integration) over market-correcting (positive integration) measures (see Crespy and Menz (2015) for a recent application of this critique). This theme also figures prominently in those studies on the distributional implications of European integration, which argue that integration decreases the bargaining power of organized workers (Beckfield, 2006, 2009; Busemeyer and Tober, 2015). How might European institutional integration affect the effectiveness of trade unions?

The main goal of European institutional integration has always been to strengthen economic ties between the participating countries. The institutional steps taken range from the early establishment of a customs union in the late 1950s to the adoption of the euro as common currency—the biggest step in European institutional integration so far (Martin and Ross, 2004*a*). This process of economic deepening has opened up domestic markets to European trade and has facilitated the flow of capital between European countries beyond expectations. Both of these developments should negatively affect the bargaining power of trade unions, which critically depends on available surplus that can be captured by unions resulting in higher wages or better working conditions, and the ability to control the supply of labor (Booth et al., 2000). First, increased trade is associated with increased product market competition. Badinger (2007) shows that competition in the Common Market has led to a significant reduction in firms' mark-ups over marginal costs both in manufacturing and construction industries. Hence, the rise in product market competition implies that there are fewer rents to share and firms pay market-determined wage rates. Increasing competition consequently weakens trade union power due to a decrease in capturable profits for unions (cf. Card, 1996*a*; Guadalupe, 2007).

Second, a significant portion of intra-EU cross-border capital flows like foreign direct investment (FDI) takes place in the form of outsourcing and offshoring (Egger and Egger, 2003;

Geishecker, 2006; Marin, 2006). In that sense, FDI is often motivated by labor market considerations. Having production units in different countries enhances the bargaining positions of firms, which can now—especially in the case of industrial dispute—credibly threaten with the relocation of production (Boeri et al., 2001). In the presence of these risks, "unions find themselves compelled to accept lower wages or less attractive employment conditions in order to save existing jobs" (Scharpf, 2002, 649).

In an influential article, Streeck and Schmitter (1991) explain why the increasing weakness of organized labor's bargaining position at the national arena has not been counterbalanced at the European level. To begin with, so these authors argue, trade unions as European actors face organizational difficulties that are usually not present at the national level and that affect business to a much lesser extent. These difficulties include problems posed by various national languages, ideological divisions between different political orientations, and the wide differences in economic geography causing diverging interests between national union representatives (see also Visser and Ebbinghaus, 1992).[1]

On the other hand, European capital is relatively well organized and promotes the interests of firms and industries in a coherent manner. The overriding goal of profit maximization, shared by all firms and industries, provides capital with a natural sense of coherence and group identity. Additionally, since capital has a long history of international business practices, it is not only better equipped but also more experienced in organizing at the supranational level (Greenwood, Grote, and Ronit, 1992). The ensuing imbalance between capital and labor allows business to prevent the Europeanization of regulatory capacity, which would be required to make binding commitments at the supranational level. "The result is growing interdependence between national economies due to progressing market integration without proportionate growth of regulatory institutions—with the consequence of integration and deregulation becoming one and the same" (Streeck and Schmitter, 1991, 142).

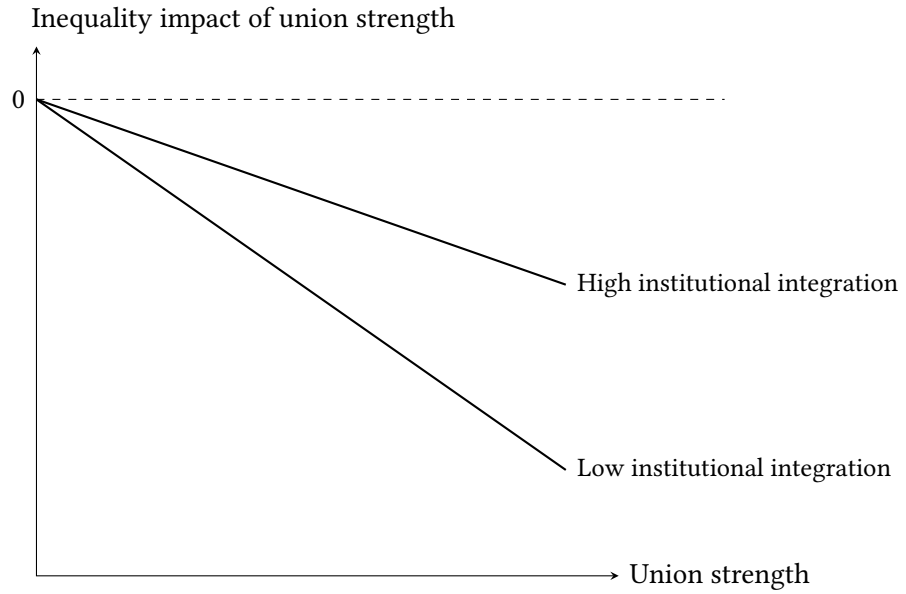
[1]The formation of the European Trade Union Confederation (ETUC) in 1973—despite being a significant improvement in labor's ability to organize at the EU level—has also not been sufficient to generally overcome these fundamental differences. In particular, the ETUC faces two trade-offs that seriously weaken its bargaining position (Bernaciak, Gumbrell-McCormick, and Hyman, 2014): broad representation versus goal-driven homogeneity, and political independence versus financial dependence on European institutions.

The deregulatory nature of the European integration process is further stimulated by the unanimity principle of decision making that generally favors those interest groups that want to prevent certain decisions. Along with the long tradition of supranational bodies like the EC or the ECJ to support negative over positive integration (Scharpf, 1996, 1999; Streeck, 1996), it is only logical that there is no European-centered collective bargaining between capital and labor. The fact that capital is more mobile than labor within the borders of the internal market, and the strategic product and labor market advantages that follow from this make future centralization highly unlikely. Recent research highlights the topicality of Streeck and Schmitter's analysis by showing that both employers and EU actors like the EC still stand firmly opposed to European-wide coordination of wage setting with trade unions (Pernicka and Glassner, 2014).

It is important to note that the distributional repercussions of decreasing union bargaining power because of increasing European integration are felt differently across different social groups. Wages of workers with low skill levels who are easier to replace than high-skilled workers or those with specific skill sets are particularly affected, as employers are more likely to base their hiring and firing decisions on cost considerations in these cases (Ridao-Cano and Bodewig, 2017). The relocation of production, too, has different wage effects across educational groups. Research on the wage implications of outsourcing and offshoring shows that both business strategies decrease the wages of unskilled labor and, at the same time, raise skilled labor wages (Egger and Egger, 2003; Geishecker, 2006; Hummels et al., 2014). On top of this, European integration has contributed to an increasing concentration of capital income and wealth at the top of the distribution (particularly in Northern and Continental Europe, see Ridao-Cano and Bodewig, 2017), which in turn has reverberated to the distribution of personal income as well (Schlenker and Schmid, 2015).

In short, European institutional integration weakens the bargaining power of trade unions by reducing the available surplus and by undermining union control over the supply of labor. At the same time, union weakness in the national political arena is not compensated at the European level, as labor is mainly organized nationally and capital (backed by major EU actors)

Figure 1: Trade Unions, European Institutional Integration, and Income Inequality



opposes successfully any kind of EU-centered collective bargaining. Consequently, the negative effect of trade union strength on income inequality decreases as European institutional integration increases. Combined with the specific distributional implications of European institutional integration, the result is increasing inequality. In summary, I derive following second hypothesis on the conditioning role of European institutional integration:

Hypothesis 2 *The dampening effect of trade unions on income inequality—especially inequality at the top—declines with increasing European institutional integration.*

2.3 Summary

Figure 1 summarizes the empirical implications of the theoretical argument. I expect that nonzero levels of trade union strength always exert a negative impact on inequality (below zero values on the *y*-axis), and that higher levels of trade union strength are associated with decreasing levels of inequality (negative slope of the lines). However, for the reasons explained above, the inequality-reducing impact of trade unions becomes less pronounced with progressing institutional integration (flatter slope in the case of high institutional integration).

3 Empirical Strategy

I test the key implications of the theoretical model using a country-level modeling strategy. Drawing on long-term TSCS data, the goal is to estimate how the effect of union strength on income inequality varies across different levels of European institutional integration. The theory predicts that the equality-enhancing effect of trade unions should decrease as European institutional integration increases.

3.1 Measurement

While information on trade union strength is relatively abundant both across space and time, a major challenge for the empirical analysis is to collect long-term cross-country data on income inequality and European institutional integration. Subsequently, I explain how these as well as additional control variables are measured. The main sample covers 15 European countries richly observed between 1955 and 2014.[2]

Income inequality. To measure income inequality, I draw on the World Inequality Database that was painstakingly put together using a combination of national accounts, survey, and fiscal data (Alvaredo et al., 2017). In particular, I use available estimates of the top decile (top 10% income share) and top percentile (top 1% income share) of the pre-tax national income distribution. The database is unique in that it covers a much longer period than other data sources. Furthermore, alternative inequality measures usually rely on household survey data, which suffer from top coding, small sample size, and undercoverage of top incomes. This may explain why these alternative inequality statistics frequently report significantly slower increases in inequality than top income share statistics since the mid-1990s (Jaumotte and Osorio-Buitron, 2015). Nevertheless, in an effort to compare the initial results to other (likely underestimating) inequality measures, I will repeat the empirical analysis with pre-fisc Gini coefficients from the Standardized World Income Inequality Database (Solt, 2018). Moreover,

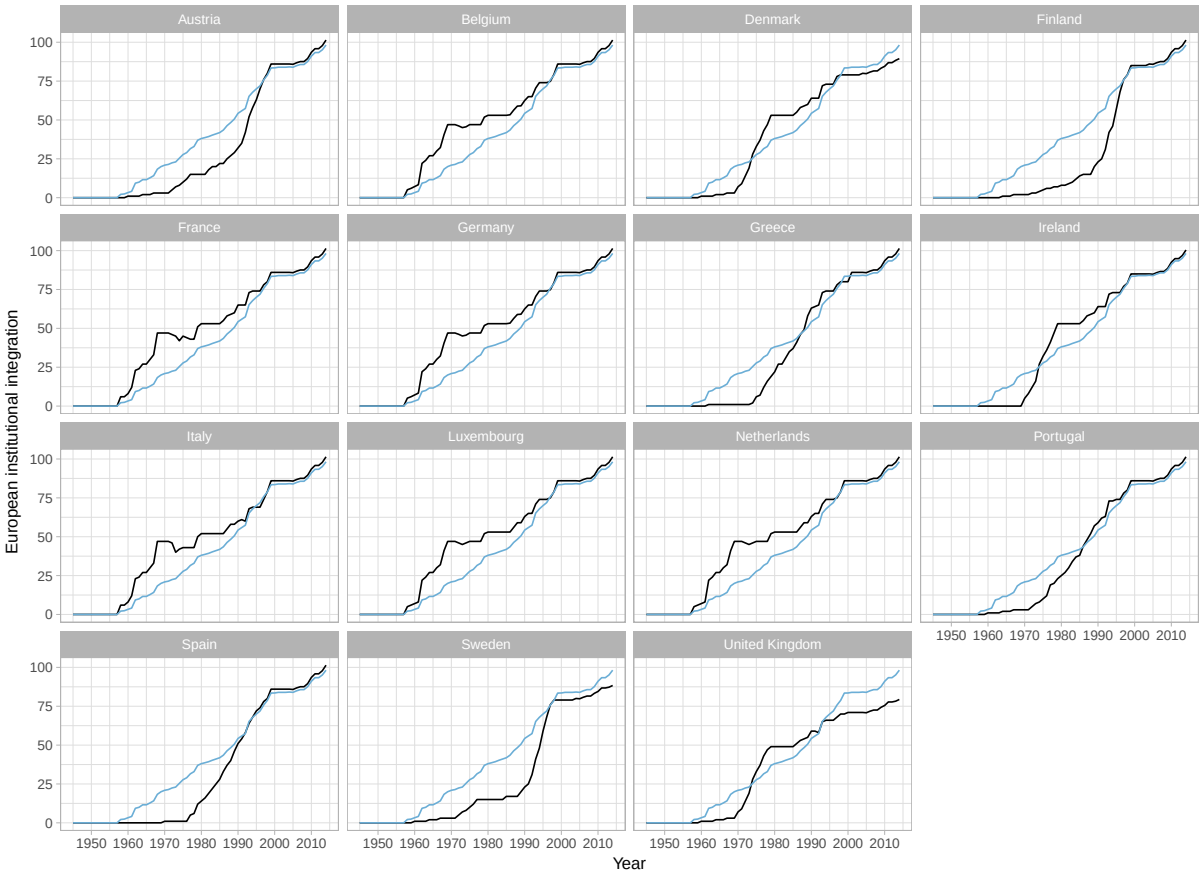
[2]The so-called EU15 that compromise the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

I will use pre-fisc 90-10, 90-50, and 50-10 percentile earnings ratios from the OECD (previous research finds a statistically negative association of these ratios with union strength, see Rueda and Pontusson, 2000; Rueda, 2008; Vlandas, 2018).

European institutional integration. Most extant measures of European integration do not explicitly capture the degree of institutional integration at the member states level. While some measure integration only at the entire EU level (Leuffen, Rittberger, and Schimmelfennig, 2013), others attempt to proxy for the institutional dimension (for example, in the form of nationally referred ECJ cases as in Beckfield, 2006, 2009) or focus merely on specific institutional steps like the EMU (König and Ohr, 2013). The measure used in this study—to my knowledge applied for the first time in the political economy literature—is an index of European institutional integration developed at the European Central Bank (ECB) (Dorrucci et al., 2002). The numerical composite index meticulously accounts for institutional change from the beginnings of the EU until 2004 by attributing scores to each single event of European institutional integration. The scores are grouped within five stages: (1) free-trade area where internal tariffs and quotas among member countries are abolished; (2) customs union where common external tariffs and quotas are set up; (3) common market where restrictions on internal factor movements are abolished; (4) economic union where a significant degree of policy coordination and law harmonization is achieved; (5) total economic integration where economic policies are conducted at a supra-national level. The first two stages are combined and each of the resulting four stages has a maximum score of 25 so that the total index ranges from 0 (no integration) to 100 (full integration). Dorrucci et al. (2002, 33-41) provide a detailed description of the measurement criteria, indicators, and scores of the index.

While the original version of the index included only the six founding members, it was later expanded to the nine countries that joined the EU between 1973 and 1995. Krieger-Boden and Soltwedel (2013) improved the index by time-smoothing data over accession periods as well as taking into account pre-accession membership of the European Free Trade Association and exemptions of some acceding countries like Denmark and the UK from Schengen and the

Figure 2: European institutional integration, 1945-2014.



EMU. In order to update the index for the most recent years, I rely on another novel index by the ECB, which measures the depth of integration for the entire Union (Dorrucci et al., 2015). In the data appendix of this index, all important institutional integration steps for the time period 2005-2014 are listed. I expand the country-level index based on this list (Table A2 summarizes all integration steps, values assigned to each step, and exempted countries). In the wake of the Lisbon treaty and the Eurozone crisis, the period in question saw a large number of institutional reforms. To give these steps appropriate weight, I discard the arbitrary limit of 100 such that higher numbers of the additive index indicate deeper integration without upper bound. The resulting index (see Figure 2, where the light blue lines indicate average integration across all countries) closely tracks all important events of the European integration process. Moreover, as the index captures exclusively institutional progress based upon events that are exclusively European, this measure is clearly distinct from the process

of globalization.[3]

Trade union strength. To capture union strength, I employ the standard measure of trade union membership drawing on data from Visser (2016) from 1960 onwards and Golden (2009) for the years between 1950 and 1959. Using membership data to measure union strength is sometimes contentious. France is a case in point, where membership is low but unions are still strong due to extensive statutory powers. However, on a more general note, the main source of union strength is the capacity to organize as many workers as possible. If trade union density is high, unions effectively control the supply of labor and thus can potentially inflict substantial damage on firms and employers by withdrawing their members.

Control variables. A series of standard controls enters the models (cf. Huber, Huo, and Stephens, 2017; Jaumotte and Osorio-Buitron, 2015). Data on the bargaining level at which wages are determined are again taken from Visser (2016) and Golden (2009) for earlier years (the literature suggests that centralized bargaining reduces inequality, see Wallerstein, 1990). To control for economic development, I use data on GDP per capita (in thousands) and the share of employed to total population. Moreover, previous work suggests that globalization affects both trade union strength and inequality (Dreher and Gaston, 2007, 2008). Thus, I include trade openness (sum of exports and imports as share of GDP) as a proxy for globalization. Since some argue that higher levels of formal education weaken trade unions (fewer incentives to organize in high-skilled jobs/sectors) and increase income differentials (Acemoglu, Aghion, and Violante, 2001), the models control for average years of schooling. All these variables come from the Penn World Table (Feenstra, Inklaar, and Timmer, 2015). A measure of the ideological composition of governments from the Party Government data set (Seki and Williams, 2014) accounts for the possibility that rising inequality is the result of certain policy preferences. Finally, I will test the sensitivity of the results to three relatively shorter time series (due to data availability across time and space). First, an index for finan-

[3]Besides time (concrete institutional steps) and location, Europeanization differs from globalization in another important respect. As European integration reduces transaction costs between member states, it discriminates against all non-EU countries by increasing relative transaction costs (Krieger-Boden and Soltwedel, 2013).

cial reforms from the IMF (Abiad, Detragiache, and Tressel, 2008) controls for the potentially inequality-enhancing effect of financial liberalization. Second, I include top marginal tax rates (Genovese, Scheve, and Stasavage, 2016) assuming a negative relationship with top income inequality. Third, female labor force participation (LFP) collected from different sources (for detail, see Ortiz-Ospina and Tzvetkova, 2017) accounts for a relevant demographic feature, which may contribute to a decline in inequality. Section 1 of the online appendix gives detailed descriptive statistics for these factors and the main variables of interest.

3.2 Statistical Specification

I now describe how I model inequality, and how it is shaped by union strength and European institutional integration. To address the main research hypotheses, I test the following two statistical specifications:

$$\begin{aligned} \text{INE}^*_{ct} = \alpha_0 + \beta_1 \overline{\text{UNION}}_{ct-1,\ldots,t-5} + \beta_2 \text{EUII}_{ct} + \beta_3 (\overline{\text{UNION}}_{ct-1,\ldots,t-5} \cdot \text{EUII}_{ct}) \\ + x'_{ct}\gamma + \delta_1 t + \delta_2 t^2 + \nu_c + \epsilon_{ct}. \end{aligned}$$

Let INE^*_{ct} represent inequality in country c $(c = 1, \ldots, n_t)$ at time point (year) t $(t = 1, \ldots, T)$. $\overline{\text{UNION}}_{ct-1,\ldots,t-5}$ is the country-specific trade union density. I average the variable over the preceding five years to account for the fact that changes in union strength should translate into changes in inequality with a delay (Volscho and Kelly, 2012). This strategy is agnostic about the pace with which union strength affects top income inequality and does not rely on an arbitrary time lag. Additionally, the procedure reduces the influence of unusual observations in the data (smoothing), which might arise because the data on trade union density for the years 1950-1959 were collected from a different source than later years (see Figure A2). EUII_{ct} is the country-specific level of European institutional integration. The theoretical argument predicts that the interaction $(\overline{\text{UNION}}_{ct-1,\ldots,t-5} \cdot \text{EUII}_{ct})$ is positive, indicating that the effect of trade union membership on inequality declines as integration increases. A vector of controls is added by x'_{ct}. Applying Im-Pesaran-Shin panel-unit root tests to my main measure

of inequality, top income shares, fails to reject the null hypothesis of all panels containing unit roots ($p_{\text{top10\%}} = .80$, $p_{\text{top1\%}} = .50$). However, the panel-unit root tests also demonstrate that the data turn into white noise once I include a linear time trend ($p_{\text{top10\%}} = .01$, $p_{\text{top1\%}} = .00$). This suggests that time has a simple, systematic effect on both measures of top income inequality. Moreover, the graphical representations of Figures A3 and A4 show that while top inequality decreased in most countries until the late 1970s, it gradually increased afterwards. Hence, I include common linear t and quadratic t^2 time trends. I will check the robustness of this specification to the inclusion of year indicators, which control for year-specific shocks to all countries in the sample. Finally, to control for unobserved confounders, country fixed effects (FE) v_c are used.

Given the relatively long TSCS dataset ($T > N$) in use, more efficient estimation is feasible by additionally accounting for the likely autocorrelation in the error term ϵ_{ct}. To this end, I use a FE estimator with Driscoll and Kraay standard errors (Driscoll and Kraay, 1998), which are allowed to be correlated serially between residuals from the same country in different time periods, spatially between countries within the same time period, and cross-serially between different countries in different time periods. While this non-parametric technique of estimating standard errors is based on large T asymptotics, the cross-sectional dimension does not constrain feasibility. Comparing subsequent model results with an alternative standard error estimator—panel-corrected standard errors (Beck and Katz, 1995), the de facto standard in comparative political economy—shows that the Driscoll-Kraay estimator produces considerably larger standard errors and thus seems to be a more conservative, that is to say more demanding test of the argument.

4 Model Results

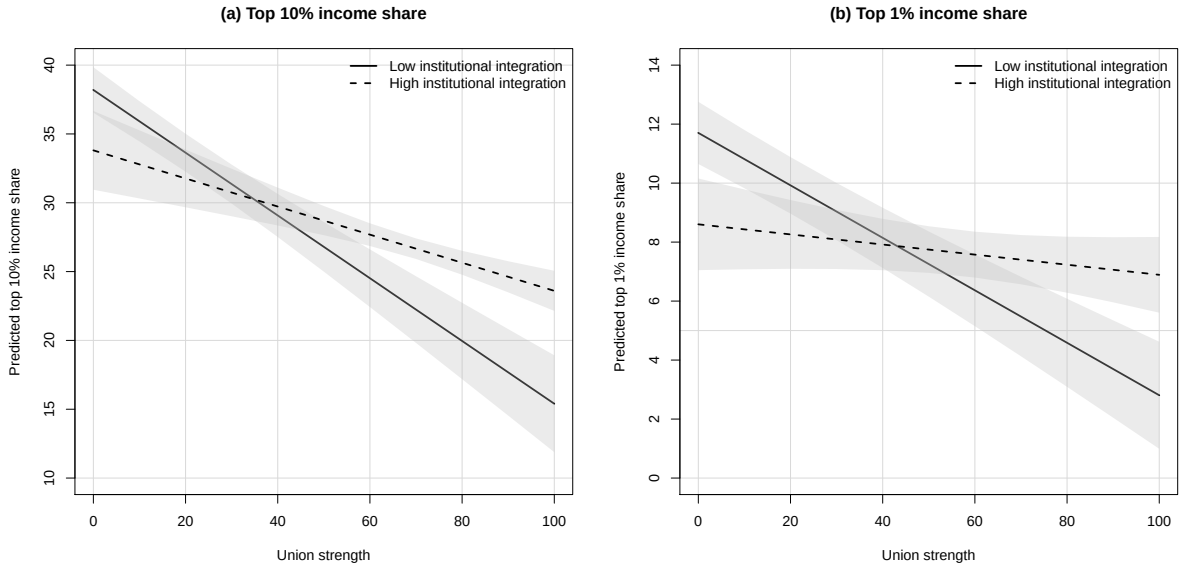
In order to save space, I only present coefficient estimates for the main variables of interest (Table A3 in the appendix contains full results for all control variables). Table 1 shows parameter estimates and standard errors under various model specifications with top 10% (Models

Table 1: Discroll-Kraay FE estimation of the impact of union strength, European institutional integration, and their interaction on top income inequality, 1950–2013.

	Model 1 Top 10%	Model 2 Top 10%	Model 3 Top 10%	Model 4 Top 10%	Model 5 Top 1%	Model 6 Top 1%	Model 7 Top 1%	Model 8 Top 1%
Union strength	−.242*	−.265*	−.188*	−.257*	−.097*	−.128*	−.072*	−.122*
	(.021)	(.026)	(.024)	(.029)	(.011)	(.015)	(.020)	(.018)
Institutional integration	−.049*	−.085*	−.079*	−.087*	−.034*	.036*	−.058*	−.062*
	(.020)	(.022)	(.010)	(.017)	(.013)	(.010)	(.006)	(.016)
Interaction	.001*	.002*	.001*	.001*	.001*	.001*	.001*	.001*
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Long series	✓		✓		✓		✓	
Short series		✓		✓		✓		✓
Time trends	✓	✓			✓	✓		
Year indicators			✓	✓			✓	✓
Countries	15	12	15	12	15	12	15	12
Observations	516	285	516	285	516	285	516	285
Within R^2	.551	.718	.710	.783	.469	.703	.618	.754

* Zero outside the confidence interval. Driscoll-Kraay standard errors (in parentheses) robust to a generalized form of spatial and serial autocorrelation. Intercept term and coefficients of control variables not reported to save space.

Figure 3: Predicted top income inequality by union strength and European institutional integration with 95% confidence intervals.



1-4) and top 1% (Models 5-8) income shares as response variables. For each measure of top income share, the respective first model includes a set of richly observed controls. The second model adds three less frequently observed control series (index of financial reforms, female LFP, and top marginal tax rates). The third and fourth model modify the two previous specifications by including year indicators instead of linear and squared time trends. Based on the theoretical argument, I expect the interaction term between union strength and institutional integration to be statistically significant with a positive sign.

The parameter estimates for union strength, institutional integration, and their interaction are statistically significant. Most importantly, I find that higher union strength is associated with lower top income shares (when there is zero institutional integration), and that this relationship decreases with a country's level of institutional integration. To gain a more intuitive understanding of the role of European institutional integration, I calculate quantities of interest: predicted values of top income inequality for increasing union strength and marginal effects of union strength on top income inequality conditional on different levels of institutional integration.

Figure 3 compares predicted values of top 10% income shares in Panel (a) and predicted

Table 2: Marginal effect of union strength on top income inequality conditional on low and high institutional integration.

(a) Top 10% income share

	Marginal effect of union strength			
	Beta	SE	95% CI	
Low	−.228	.021	−.270	−.186
High	−.102	.020	−.142	−.062

(b) Top 1% income share

	Marginal effect of union strength			
	Beta	SE	95% CI	
Low	−.089	.010	−.109	−.069
High	−.017	.012	−.041	.007

top 1% income shares in Panel (b) based on Models 1 and 5 of Table 1. With all control variables held constant, the only factors that change are union strength (in the x-axis) and the two levels of European institutional integration (in the solid and dashed lines). High institutional integration refers to a value of 100 (roughly the average level of integration at the end of the observation period), while low institutional integration refers to a value of 10 (roughly the average level of integration in the mid-1960s). The resulting graphs strongly correspond to the theoretical argument as summarized by Figure 1. At low levels of union strength, predicted levels of top income inequality are generally high and do not differ much across different levels of institutional integration. Yet, as union strength increases, the difference between low and high institutional integration becomes more pronounced. In line with my theoretical expectations, the inequality-reducing effect of union strength is lower at high levels of institutional integration compared to low levels.

Table 2 lends further support to the theoretical argument by calculating marginal effects of union strength with their respective standard errors and 95% confidence intervals conditional on low and high institutional integration (again based on Models 1 and 5 of Table 1). Both for top 10% (left panel) and top 1% (right panel) income shares, a move from low to high institutional integration decreases the negative marginal effects of union strength substantially. In the case of top 10% income shares, the marginal effect decreases by 55 percentage points. As expected, the effect of union strength on top income inequality does not become statistically insignificant at high levels of institutional integration, but the size of the effect

becomes significantly smaller. In the case of top 1% income shares, the marginal effect does not only decrease by 81 percentage points, but also becomes statistically indistinguishable from zero.

The theory predicts that the conditioning effect of European institutional integration increases inequality especially at the top. Thus, the previous analysis tested the argument by looking at top income shares. To see how other types of inequality are affected, Table 3 repeats the analysis with alternative distributional measures. The results show that the interaction term has the expected positive sign across all specifications. In case of the Gini index and the 50-10 ratios, the moderating influence of institutional integration is statistically detectable in the models with linear and squared time trends (Models 1 and 3), but not when the time trends are substituted by year indicators (Models 2 and 4). In the models that use 90-50 and 90-10 ratios, the interaction effect is always statistically significant. The size of the interaction coefficients in the income ratio models suggests that European institutional integration diminishes especially the ability of trade unions to reduce inequality between the top and the bottom (90-10 ratios). This finding provides further evidence for the argument that the depressing effect of European institutional integration on the effectiveness of trade unions particularly promotes inequality at the top end of the income distribution.

Robustness and diagnostics. I conduct a series of robustness tests, which are summarized by Table A4 in the appendix. First, my theoretical argument implies that the constraining effect of European institutional integration on the effectiveness of trade unions results in a decrease in the labor income share, which in turn helps to explain the increase in top income inequality. Thus, the first test uses the adjusted wage share from the Ameco database instead of top income shares as response variable. Second, Pontusson (2013) argues that union strength has generally become less closely associated with inequality since the early 1990s in OECD countries. To check whether the interaction effect is confounded by global trends, I expand the sample to five non-European countries (Australia, Canada, Japan, New Zealand, and the US) with zero level of institutional integration. The third test studies whether the results

Table 3: Discroll-Kraay FE estimation of the impact of union strength, European institutional integration, and their interaction on alternative measures of inequality.

	Model 1 Gini index	Model 2 Gini index	Model 3 50-10 ratio	Model 4 50-10 ratio	Model 5 90-50 ratio	Model 6 90-50 ratio	Model 7 90-10 ratio	Model 8 90-10 ratio
Union strength	−.171*	−.161	−.750*	−1.083*	−1.004*	−1.089*	−3.176*	−3.904*
	(.070)	(.085)	(.231)	(.281)	(.164)	(.177)	(.587)	(.522)
Institutional integration	.008	.040	−.564	.183	−.822*	−1.175*	−2.429*	−1.740*
	(.046)	(.058)	(.337)	(.275)	(.182)	(.373)	(.629)	(.600)
Interaction	.001*	.001	.008*	.003	.010*	.013*	.031*	.027*
	(.001)	(.001)	(.004)	(.003)	(.002)	(.003)	(.007)	(.008)
Long series	✓	✓	✓	✓	✓	✓	✓	✓
Time trends	✓		✓		✓		✓	
Year indicators		✓		✓		✓		✓
Time period	’60–’14	’60–’14	’70–’14	’70–’14	’70–’14	’70–’14	’70–’14	’70–’14
Observations	615	615	241	241	241	241	241	241
Number of countries	15	15	15	15	15	15	15	15
Within R^2	.712	.698	.268	.526	.424	.516	.396	.501

* Zero outside the confidence interval. For specification details see Table 1. Results in Models 1 and 2 are based on 100 multiply imputed datasets. Note that the R^2 computation for panel multiple imputation models is not supported by the standard `mi` estimate command in `Stata`. To obtain the R^2, I use the user-written `mibeta` command which provides the R^2 for pooled OLS models only. The R^2 is obtained by running the pooled OLS model with added country dummies (least squares dummy variable model), which is analytically and empirically tantamount to the within (fixed effects) estimator.

are sensitive to my updated index of European institutional integration by limiting the time period to the original timeframe (prior to 2005). The fourth robustness test captures union strength by non-overlapping, lagged five-year averages. Fifth, the economic dimension of the KOF Globalization Index (Dreher, 2006) replaces trade openness as a proxy for globalization. In order to account for potentially persisting shocks, the sixth tests includes the lagged dependent variable on the right-hand side of the regression equation. The main findings remain valid under all these specifications.

Finally, I address two recent methodological contributions on the correct application of interactions in (FE) regressions. First, Hainmueller, Mummolo, and Xu (2019) emphasize a crucial problem with multiplicative interaction models, which existing research rarely considers: a potential violation of the linear interaction effect (LIE) assumption. Applied to the present case, the LIE assumption implies that the effect of union strength on top income inequality can only linearly change with European institutional integration. Thus, as European institutional integration increases by one unit, the effect of union strength on top income inequality needs to change by β_3 (i.e., the slope of the interaction term) and this change needs to be constant across the whole range of institutional integration. To check whether this assumption holds, the authors recommend a series of diagnostic tools. Figures A5 and A6 in the online appendix apply two of these tools: diagnostic plots based on generalized additive models and a kernel smoothing estimator. I describe the methodological rationale and results in detail in the online appendix. Suffice it to say here that I find no reason to suspect a violation of the LIE assumptions. Hence, the use of the standard linear interaction model seems appropriate. In addition, these results further substantiate the main conclusions of this paper.

Second, Giesselmann and Schmidt-Catran (2018) show that an interaction term in a FE regression model actually captures three terms. In the context of this paper, these are the product of the between-variation in union strength and the within-variation in European institutional integration, the product of the between-variation in European institutional integration and the within-variation in European institutional integration, and the product of the within-variation in European institutional integration and the within-variation in union

strength (for a formal proof, see the online appendix). According to the authors, the FE estimator controls for effect heterogeneity across countries in the last term, but not in the terms that include between-variation and thus the results of the interaction might be biased if the random effects assumption is violated. To yield unbiased results, they propose to include only the within-part of the interaction in the FE regression model (Giesselmann and Schmidt-Catran call this the 'double-demeaned' estimator). I apply this specification in Table A5 in the only appendix. The results corroborate my initial findings.

5 Conclusion

This paper has studied the linkage between European institutional integration, union strength, and income inequality. I have argued that union strength has a dampening effect on income inequality, including inequality at the top. However, this inequality-reducing effect of trade unions varies with European institutional integration. I have distinguished two channels through which European institutional integration weakens the bargaining position of unions. First, as competitive pressures lead to a reduction in firms' mark-ups over marginal costs, trade unions can capture less surplus. Second, FDI in the form of outsourcing and offshoring undermines union control over the supply of labor. Trade unions have also not been able to compensate their increasing weaknesses at the national level at the European level, since unions have a hard time organizing effectively at the EU level and business and major EU actors are opposed to a European-wide collective bargaining process. The distributional implications of the conditioning effect of European institutional integration should particularly increase top income inequality.

In line with the theoretical model, I find that the marginal effect of union strength on inequality—especially at the top of the income distribution—varies substantially at different levels of European institutional integration. When union strength is low, the difference between high and low institutional integration is negligible. Yet, as union strength increases, the difference becomes more pronounced. In case of top 10% income shares, a one-unit increase

in union strength still reduces inequality at high institutional integration but the size of the reduction is substantially smaller than in the case of low institutional integration (less than half). In the case of top 1% income shares, the effect of union strength on inequality becomes even statistically insignificant. These findings are corroborated both by models that use alternative indicators of income inequality and various robustness tests. Moreover, using new diagnostic tools and a recently proposed FE estimation strategy, I cannot detect any alarming violations of the critical assumptions underlying the linear multiplicative interaction term in my model.

This research speaks to a couple of existing bodies of work. First, a longstanding theoretical critique of the European integration process has argued that European integration favors market-making over market-correcting mechanisms (Scharpf, 1996) and this tendency may weaken the bargaining position of trade unions (Streeck and Schmitter, 1991). I have attempted to strengthen this argument by clearly spelling out how European institutional integration affects union bargaining power and which empirical implications the conditioning effect of European institutional integration has on the distribution of income. Second, extant empirical research that probes the relationship between European integration as a whole and income inequality has only looked at correlational evidence without explicitly testing the causal channels through which the former might affect the latter (e.g., Beckfield, 2006, 2009). While such an approach is essential for getting a first look at the world, this paper goes beyond it by emphasizing a major mechanism that links European institutional integration to income inequality.

The core focus of this paper has been European institutional integration and the way in which it affects the effectiveness of trade unions. At the same time, I have treated the negative impact of trade unions on inequality—in particular inequality at the top—as an established fact in the literature. Even though the empirical evidence on this relationship is compelling, the strong depressing effect of unions on top income inequality is prima facie surprising given that trade unions do usually not bargain over top incomes. As reviewed above, extant research has detected multiple channels through which organized labor might still directly affect top

income shares. Explicit empirical tests of these channels, however, have so far largely focused on the US (Ahlquist, 2017; Hager, 2018). The results of this study suggest that the application of such tests to the European context should be a promising undertaking for future research.

Finally, let us remember Paul Embery, the union representative from London, who vigorously called for Brexit on the alleged behalf of unionized workers. The United Kingdom's departure from the EU—an unprecedented event in the history of European integration—might open up new avenues for future research to further substantiate my findings by establishing stricter causality. The causal story of this paper would lead us to expect that Brexit could potentially lead to an improved bargaining position of trade unions. Whether such hopes materialize will, of course, not only depend on the concrete configurations of the UK's exit, but equally (if not more) importantly on the domestic circumstances in which British trade unions will have to operate.

Appendix

This appendix provides supporting information for the paper "*European Institutional Integration, Trade Unions, and Income Inequality*". Section A1 focuses on descriptive statistics and measurement details. Section A2 provides full model results, robustness tests, and diagnostics.

A1 Descriptive Statistics

Table A1 contains descriptive statistics of the variables included in the main analysis. Figure A1 presents a correlation matrix of these variables. Figures A2–A4 show trends for union strength and top income inequality both across time and space. For union strength, light blue lines are added indicating the moving average of the five preceding years (as used in the regression analysis). Table A2 lists the institutional integration steps that were used to expand the integration index between 2005 and 2014, their respective index values, and the exempted countries.

Table A1: Descriptive statistics.

Variable	Obs	Mean	SD	Min	Max
Top 1% income share	526	7.87	1.97	3.25	13.09
Top 10% income share	526	29.23	3.71	21.97	39.21
Pre-fisc gini (100 multiply imputed datasets)	615	46.18	4.43	33.24	56.78
90-10 ratio	241	2.90	0.60	1.88	4.65
90-50 ratio	241	1.82	0.24	1.43	2.84
50-10 ratio	241	1.60	0.21	1.28	2.33
European institutional integration	900	46.97	33.62	0	101.4
Union strength	785	43.28	18.97	7.61	86.24
Bargaining level	839	3.40	1.14	1	5
Trade openness	900	72.90	50.47	9.60	374.15
GDP per capita (in thousands)	900	50.36	80.92	2.96	389.37
Employed (share of total population)	900	44.18	5.96	30.61	75.90
Years of schooling	900	8.75	2.36	1.80	13.55
Government ideology	846	3.03	0.85	0.09	4
Financial reforms	462	0.68	0.27	0.05	1
Female labor force participation	591	47.76	12.07	13.30	73.21
Top income tax rate	667	55.05	14.57	20	96.3

Note: Numbers are based on main panel consisting of 15 European countries.

Figure A1: Correlation matrix.

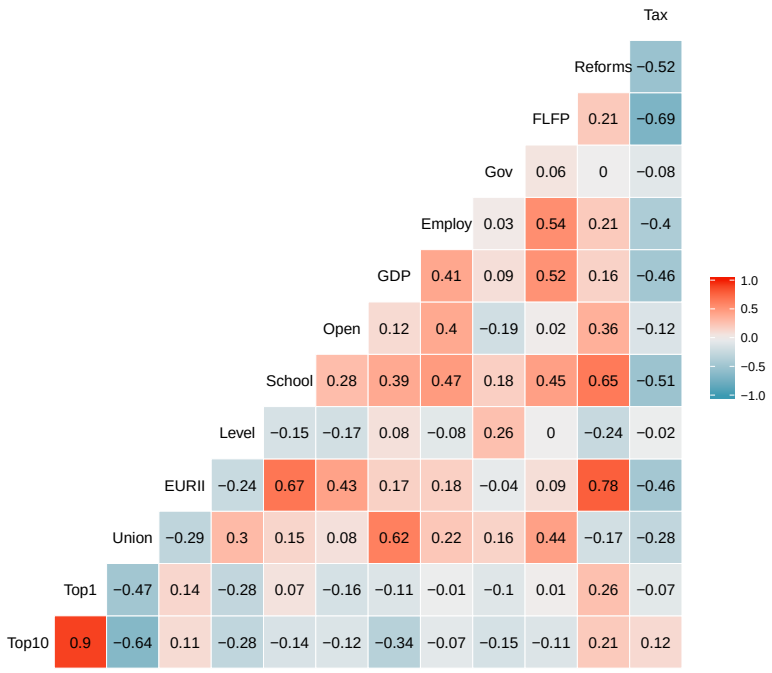


Figure A2: Trade union membership in 11 European and 5 non-European countries, 1950-2013. Light blue lines indicate moving average of five preceding years.

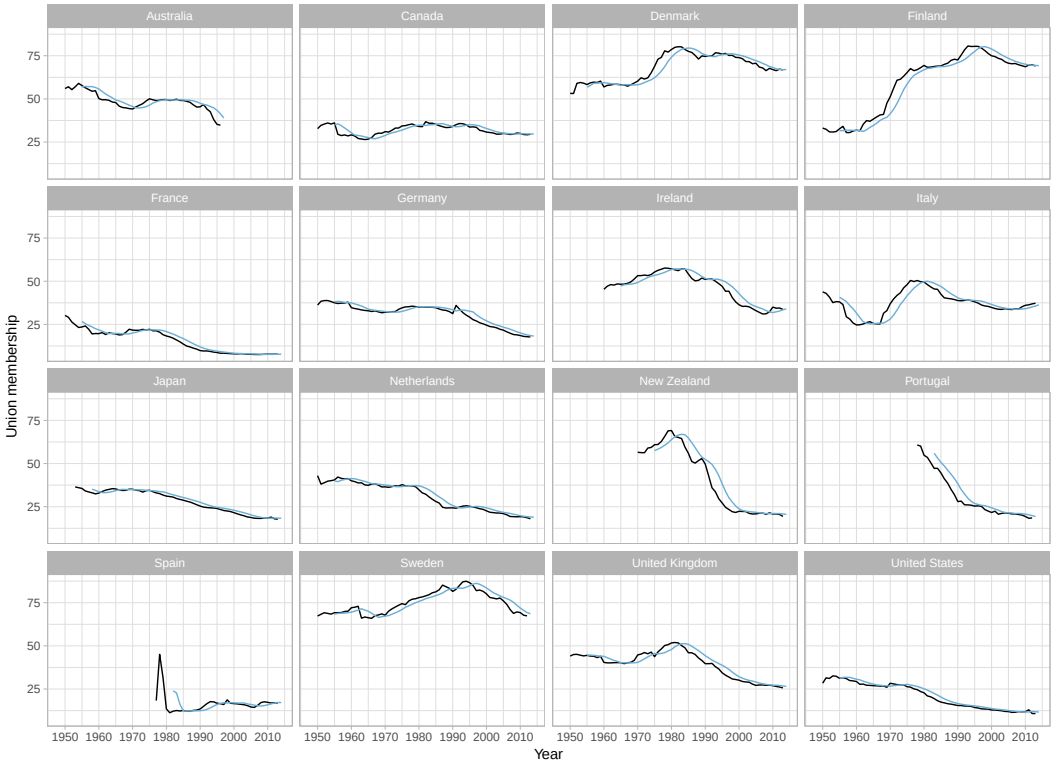


Figure A3: Top 10% income share in 11 European and 5 non-European countries, 1945-2014.

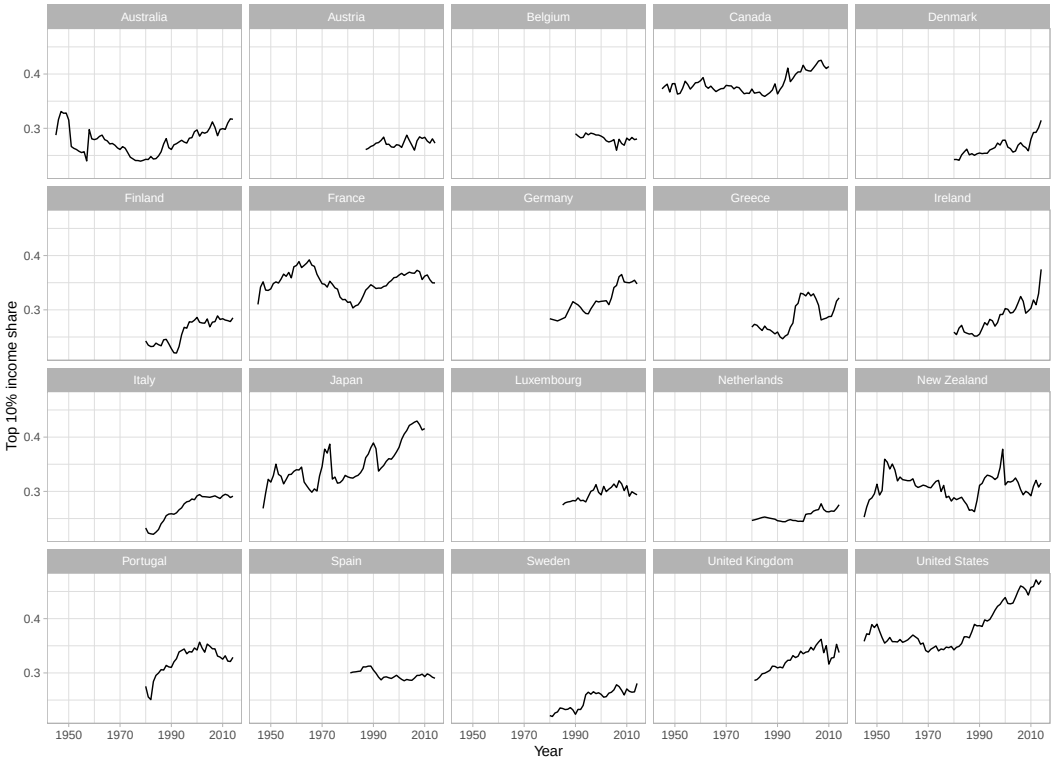


Figure A4: Top 1% income share in 11 European and 5 non-European countries, 1945-2014.

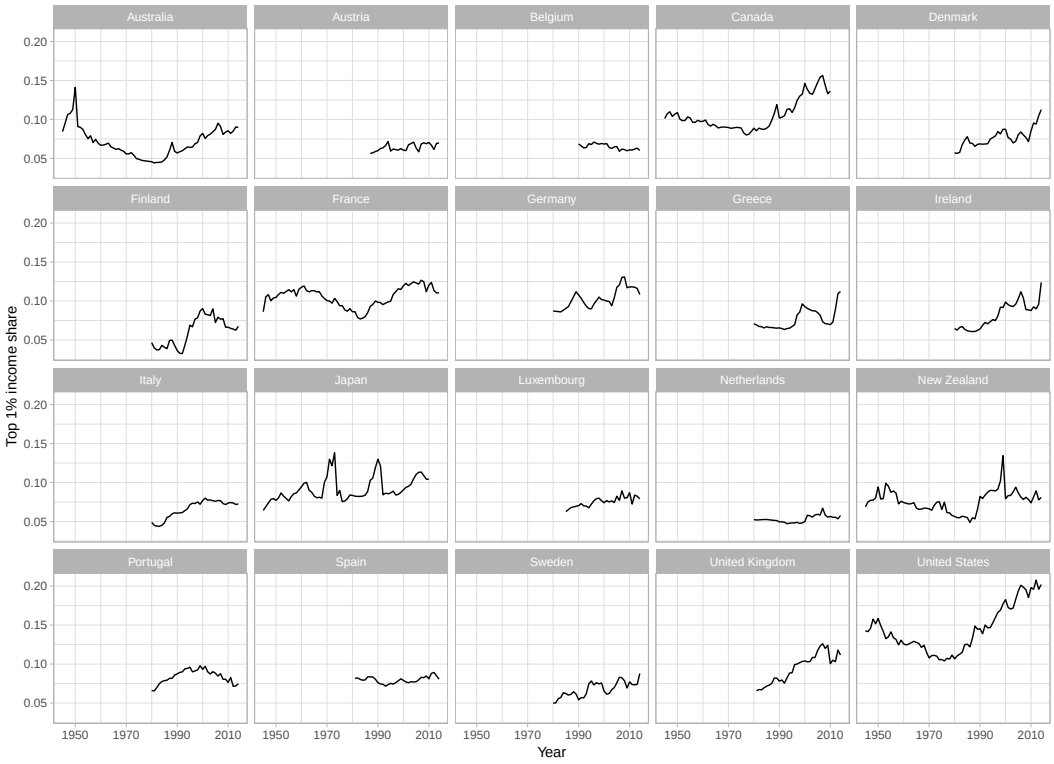


Table A2: Extension of European institutional integration index for the years 2005-2014.

Integration step	Value	Date	Exempted
Growth and Jobs (Reform of the Lisbon strategy)	0.05	01.02.05	
Weakening of the SGP	-0.25	01.03.05	
"Bolkenstein" directive on services in the internal market (2006/123/EC)	1.00	01.12.06	
CRD implementing the Second Basel Accord (Basel II)	0.25	01.01.07	
Payment Services Directive	0.50	01.12.07	
CRD II	0.25	01.09.09	
Treaty of Lisbon: allow for a simplified treaty revision procedure and passarelle clauses	0.50	01.12.09	
Eurogroup in the Treaty (Protocol) with permanent President (Lisbon Treaty)	0.25	01.12.09	Denmark, Sweden, United Kingdom
Treaty of Lisbon: EP expands its control of the EU budget, expands the role of national parliaments	0.25	01.12.09	
Treaty of Lisbon: co-decision is extended, Citizens' initiative established, EP on same footing as Council	0.25	01.12.09	
Establishment of the European Council as a legal entity in the Treaty with a permanent President	0.50	01.12.09	
EU 2020 Strategy / European Semester created	0.15	01.03.10	
Greek Loan Facility (GLF) is set up (bilateral emergency loans)	0.25	01.05.10	Denmark, Sweden, United Kingdom
Establishment of EFSM (EU-budget based fiscal backstop; small scale but QMV)	0.25	01.05.10	
Undertakings for the collective investment in transferable securities	0.05	01.07.10	
Establishment of EFSF (Intergovernmental (IG) fiscal backstop)	1.00	01.07.10	Denmark, Sweden, United Kingdom
Establishment of ESM (linked to Treaty, less IG, large scale fiscal backstop)	1.50	01.09.10	Denmark, Sweden, United Kingdom
European System of Financial Supervirors: ESRB (macro)	0.75	01.12.10	
European System of Financial Supervisors: EBA, ESMA, EIOPA	0.50	01.01.11	
Europlus pact	0.10	01.03.11	Sweden, United Kingdom
Macroeconomic Imbalance Procedure (instituted by the "Six-Pack")	1.00	01.12.11	
Stregthening of the SGP (Six-pack)	0.50	01.12.11	
Directive on national fiscal frameworks (Six-pack)	0.25	01.12.11	
"Fiscal compact": IG Treaty on Stability, Coordination and Governance (TSGC)	1.00	01.01.13	Sweden, United Kingdom
"Two-pack": far reaching fiscal surveillance	0.50	01.05.13	Denmark, Sweden, United Kingdom
CRD IV/CRR (implementing Basel III)	0.50	01.07.13	
EC President candidates to be indicated ahead of the EP elections by EP groups (Lisbon treaty)	0.10	01.05.14	
Deposit Guarantee Scheme Directive - DGSD	0.50	01.06.14	
SEPA	0.50	01.08.14	
Single Supervisory Mechanism	2.00	01.11.14	Denmark, Sweden, United Kingdom
Limited ESM Direct Bank Recapitalisation (DBR)	0.25	01.11.14	Denmark, Sweden, United Kingdom
SSM accountability (to EP & Council)	0.20	01.11.14	Denmark, Sweden, United Kingdom

A2 Model Details, Robustness, and Diagnostics

Model details. Table A3 supplements Table 1 in the main text by presenting full results for the included control variables.

Table A3: Discroll-Kraay FE estimation of the impact of union strength, European institutional integration, and their interaction on top income inequality, 1955– 2014. Control variables.

	Model 1 Top 10%	Model 2 Top 10%	Model 3 Top 10%	Model 4 Top 10%	Model 5 Top 1%	Model 6 Top 1%	Model 7 Top 1%	Model 8 Top 1%
Bargaining level	−.109	−.153	−.111	−.076	−.058	−.112*	−.069	−.072
	(.101)	(.077)	(.083)	(.092)	(.084)	(.034)	(.072)	(.042)
Trade openness	.003	.009	.020*	.003	−.000	.009	.008*	.005
	(.006)	(.007)	(.005)	(.013)	(.003)	(.006)	(.004)	(.012)
GDP per capita	−.014*	−.041*	−.022*	−.041*	−.008	−.037*	−.014*	−.037*
	(.003)	(.005)	(.004)	(.006)	(.004)	(.005)	(.004)	(.006)
Share employed	−.017	.011	−.128*	.019	.005	.111*	−.055	.128*
	(.020)	(.046)	(.042)	(.030)	(.016)	(.022)	(.031)	(.045)
Years of schooling	−.324	−1.144*	−.358	−1.431	.222	−.384	.111	−.601
	(.527)	(.559)	(.624)	(.750)	(.205)	(.537)	(.256)	(.720)
Government	.186	.132	.151	.098	.142	.154	.088	.129*
	(.176)	(.149)	(.117)	(.109)	(.094)	(.079)	(.058)	(.054)
Female LFP		−.091*		−.123*		−.092*		−.116*
		(.014)		(.017)		(.021)		(.030)
Financial reforms		3.485*		2.357*		1.745*		.954
		(.996)		(.807)		(.664)		(.580)
Top tax rate		−.023		−.021*		.003		.005
		(.015)		(.010)		(.008)		(.007)
Time trend	−.204	−.256			−.078	−.101		
	(.114)	(.256)			(.068)	(.170)		
Time trend squared	.003*	.005			.001	.002		
	(.001)	(.003)			(.001)	(.002)		
Observations	424	262	424	262	459	274	459	274
Within R^2	.586	.641	.700	.758	.573	.722	.609	.772

* Zero outside the confidence interval.

Table A4: Discroll-Kraay FE estimation of impact of interaction between union strength and European institutional integration on top income inequality. Robustness tests.

	Adjusted wage share			
	Interaction			
	Beta	SE		
(1) Adjusted wage share	$-.002^{*}$	.000		
	Top 10% income share		Top 1% income share	
	Interaction		Interaction	
	Beta	SE	Beta	SE
(2) Non-European countries	$.001^{*}$	.000	$.001^{*}$	.000
(3) Pre-2005 years	$.001^{*}$	.000	$.001^{*}$	.000
(4) Non-overlapping averages	$.002^{*}$	.000	$.001^{*}$	.000
(5) KOF economic index	$.002^{*}$	.001	$.002^{*}$	.000
(6) LDV	$.0004^{*}$	.0000	$.0003^{*}$	.0000

* Zero outside the confidence interval. Models include the constitutive terms of the interaction and control variables. The models use linear and squared time trends. The results remain substantially unchanged when year fixed effects are used instead.

Robustness tests. Table A4 summarizes the results of the robustness tests. Presented are only the parameter estimates and standard errors of the interaction term. Six specifications are tested. First, I use the adjusted wage share as response variable. Second, I add five non-European countries (Australia, Canada, Japan, New Zealand, and the US) that exhibit zero level of institutional integration. Third, I limit the observation period to the original time-frame of the integration index. Fourth, I replace the initial measure of union strength by non-overlapping, lagged five-year averages. Fifth, I add the economic dimension of the KOF index of globalization as an alternative to trade openness. Sixth, I include the lagged dependent variable (LDV) on the right-hand side. The results of all specifications are in line with my main findings. The negative sign in the model that uses the adjusted wage share indicates that the more a country integrates in the EU, the less capable are trade unions of increasing the labor income share. Thus, the negative sign of the coefficient confirms my theoretical expectations. Finally, the fact that the LDV model produces much smaller coefficient estimates does not refute the substantial claims of the paper, as it is well-known that the LDV suppresses the explanatory power of other independent variables (Achen, 2000).

Diagnostics. As discussed in the main text, Hainmueller, Mummolo, and Xu (2019) explain that the classical linear multiplicative interaction model relies on two assumptions, which are usually overlooked and—as their replication results show—often violated. First, the standard model assumes a linear interaction effect (LIE) that changes at a constant rate with the moderator. Second, estimates of the conditional effects of the independent variable can be misleading if there is a lack of common support of the moderator. To test whether these assumptions are met, the authors recommend a series of diagnostic tools (beyond the subsequent discussion, see their article for more technical details). In the following, I apply two of these tools.

As a diagnostic plot, Hainmueller, Mummolo, and Xu (2019) suggest to visualize interactions using a three-dimensional surface plot generated by a generalized additive model. This tool explicitly allows to include other variables as well as fixed effects. Figure A5 plots two generalized additive models with my two measures of top income inequality as response variables. Both of these models include the long series of controls and use fixed effects. The graphs show that the LIE assumption is not violated by the data. Holding institutional integration constant, top income inequality is decreasing in union strength and holding union strength constant, top income inequality is increasing in institutional integration. Second, the slope of top income inequality on union strength is smaller with higher institutional integration than with lower institutional integration. Third, the surface of top income inequality over union strength and institutional integration is fairly smooth, with a gentle curvature in the middle but devoid of drastic humps, wrinkles, or holes.

Figure A5: Diagnostic plots of two generalized additive models with controls and FEs.

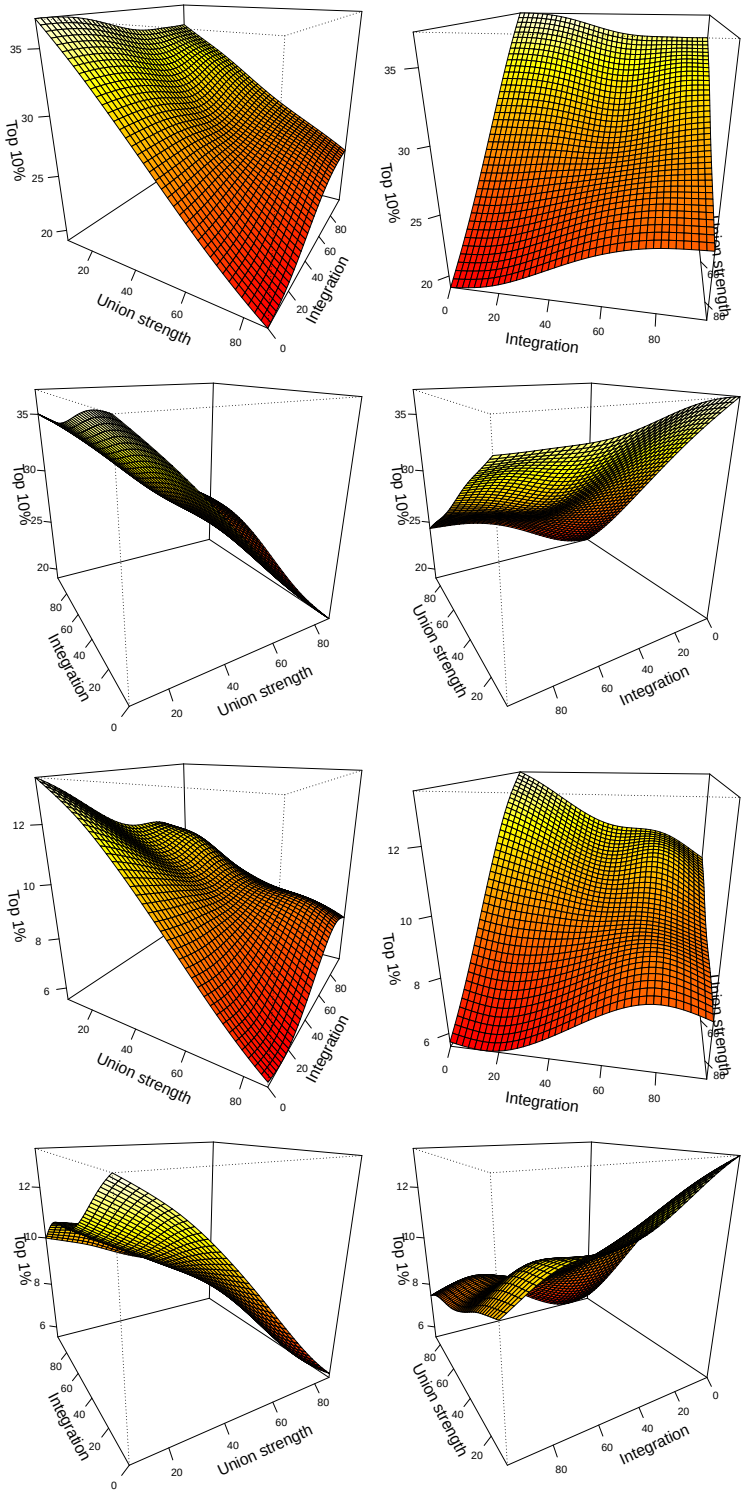
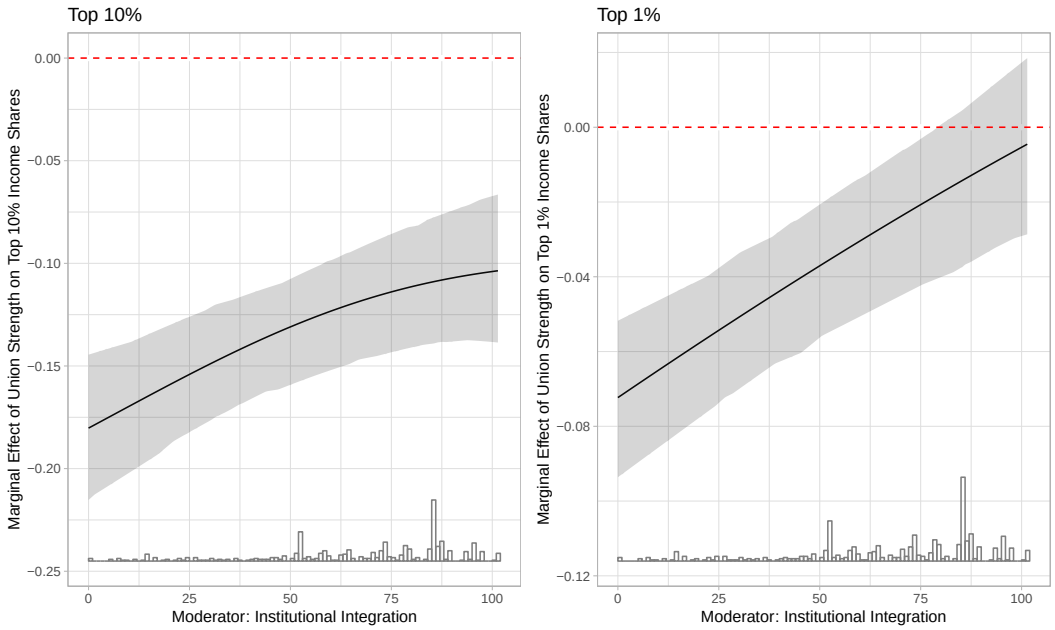


Figure A6: Kernel smoothing estimator with controls and FEs.



A further diagnostic tool is a kernel smoothing estimator of the marginal effect, which estimates a series of local effects with a kernel reweighing scheme (the number of evaluation points was set to 200). This estimation strategy allows to flexibly estimate the functional form of the marginal effect of union strength on top income inequality across the range of institutional integration. Thus, by utilizing a more flexible estimator, the marginal effect can be closely approximated regardless of potential violations of the LIE assumption. Figure A6 presents results from the kernel smoothing estimator. The negative marginal effect of union strength on top 10% income shares substantially declines as institutional integration increases. The slope of the line flattens slightly at higher levels of European institutional integration but always increases (when I use the short series of controls, the increase is fully linear). In case of 1% income shares, the linear effect is even more apparent. In the line with Table 2 in the main text, the kernel smoothing estimator finds that the marginal effect of trade union strength on top 1% income shares becomes statistically insignificant at higher levels of European institutional integration.

Giesselmann and Schmidt-Catran (2018) show that an interaction term in a fixed-effects model captures three product terms: the product of the between variation in the first constitutive term and the within variation in the second constitutive term, the product of the within variation in the first constitutive term and the between variation in the second constitutive term, and the product of the within variations of both constitutive terms. This can be seen by expanding a simplified version of my statistical model:

$$ine_{ct} = \beta_1 u_{ct} + \beta_2 i_{ct} + \beta_3 u_{ct} i_{ct} + \alpha_c + \epsilon_{ct},$$

where ine_{ct} is the level of inequality in country c ($c = 1, \ldots, n_t$) at time point (year) t ($t = 1, \ldots, T$), u_{ct} is the level of trade union density, i_{ct} is the level of European institutional integration, and $u_{ct} i_{ct}$ is the interaction term between trade union density and European institutional integration. The country fixed effects demean the variables, which yields

$$ine_{ct} - \overline{ine_c} = \beta_1(u_{ct} - \overline{u_c}) + \beta_2(i_{ct} - \overline{i_c}) + \beta_3(u_{ct} i_{ct} - \overline{(ui)_c}).$$

I only expand the interaction term $u_{ct} i_{ct} - \overline{(ui)_c}$, which is crucial to this discussion:

$$\begin{aligned}
&u_{ct} i_{ct} - \overline{(ui)_c} = u_{ct} i_{ct} - \frac{\sum_{t=1}^{T_c} u_{ct} i_{ct}}{T_c} = \\
&[\overline{u_c} + (u_{ct} - \overline{u_c})][\overline{i_c} + (i_{ct} - \overline{i_t})] - \frac{\sum_{t=1}^{T_c}[\overline{u_c} + (u_{ct} - \overline{u_c})][\overline{i_c} + (i_{ct} - \overline{i_c})]}{T_c} = \\
&\overline{u_c i_c} + \overline{u_c}(i_{ct} - \overline{i_c}) + \overline{i_c}(u_{ct} - \overline{u_c}) + (u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c}) \\
&- \frac{\sum_{t=1}^{T_c} \overline{u_c i_c} + \overline{u_c}(i_{ct} - \overline{i_c}) + \overline{i_c}(u_{ct} - \overline{u_c}) + (u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c})}{T_c} = \\
&\overline{u_c i_c} + \overline{u_c}(i_{ct} - \overline{i_c}) + \overline{i_c}(u_{ct} - \overline{u_c}) + (u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c}) - \overline{u_c i_c} - \overline{u_c}\frac{\sum_{t=1}^{T_c}(i_{ct} - \overline{i_c})}{T_c} \\
&- \overline{i_c}\frac{\sum_{t=1}^{T_c}(u_{ct} - \overline{u_c})}{T_c} - \frac{\sum_{t=1}^{T_c}(u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c})}{T_c} = \\
&\underbrace{\overline{u_c}(i_{ct} - \overline{i_c})}_{\text{term 1}} + \underbrace{\overline{i_c}(u_{ct} - \overline{u_c})}_{\text{term 2}} + \underbrace{(u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c})}_{\text{term 3}} - \frac{\sum_{t=1}^{T_c}(u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c})}{T_c}.
\end{aligned}$$

Thus, the interaction is based on three terms: the product of the between variation in

Table A5: Double-demeaned estimator (see Giesselmann and Schmidt-Catran, 2018).

	Model 1 Top 10%	Model 2 Top 10%	Model 3 Top 1%	Model 4 Top 1%
Union strength	−.302*	−.233*	−.121*	−.086
	(.037)	(.055)	(.021)	(.043)
Institutional Integration	.011	−.021*	.002	−.019*
	(.013)	(.007)	(.008)	(.007)
$(u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c})$	.004*	.003*	.002*	.002*
	(.000)	(.001)	(.000)	(.001)
Long series	✓	✓	✓	✓
Time trends	✓		✓	
Year indicators		✓		✓
Countries	15	15	15	15
Observations	516	516	516	516
Within R^2	.576	.716	.477	.614

* Zero outside the confidence interval. Driscoll-Kraay standard errors (in parentheses) robust to a generalized form of spatial and serial autocorrelation. Intercept term and coefficients of control variables not reported to save space.

the union density rate and the within variation in integration, the product of the between variation in integration and the within variation in the union density rate, and the product of the within variation of both variables (the final term subtracts the country-specific mean of the third term). Put more simply, the interaction is based on between variation (terms 1 and 2) and within variation (term 3). My theoretical argument is about the moderating influence of within-country differences in European institutional integration on within-country variation in trade union strength, i.e., term 3.

Giesselmann and Schmidt-Catran (2018) argue that the terms that capture between variation (terms 1 and 2) might yield biased results in a fixed effects regression, as these terms do not control for unobserved heterogeneity. Thus, the authors propose to specify the interaction term only as defined by term 3 (they call this a 'double-demeaned' estimator). Giesselmann and Schmidt-Catran claim that this proposed estimator is less efficient than the standard estimator but produces unbiased results. Table A5 applies the proposed estimator to my data. The results show that the theoretically relevant within-term, $(u_{ct} - \overline{u_c})(i_{ct} - \overline{i_c})$, is always statistically significant and has the expected positive sign across different specifications. In

terms of statistical variation, the within-country dimension of European institutional integration (SD = 34.5) is also much more important than its cross-country dimension (SD = 7.3), which illustrates that the moderating influence of within-country differences in European institutional integration drives the result of the overall interaction term.

4

Breaking the Link? How European Integration Shapes Social Policy Demand and Supply

Coauthored with Marius R. Busemeyer

Abstract

How does European integration affect the welfare state? This paper argues that European integration has non-complementary consequences for the political economy of welfare spending: European economic integration increases popular demand for social spending, whereas European political integration decreases the supply of social spending. Thus, the conflicting implications of European integration essentially break the link between social policy preferences and social policy. Using statistical models that deal with the multilevel structure of the theoretical argument, we provide evidence for a positive relationship between economic integration and support for social policy. In the second part of the empirical analysis, we find that—based on dynamic model specifications at the country level—higher levels of political integration are associated with lower levels of social spending. Furthermore, we show that social policy responsiveness declines as political integration increases.

1 Introduction

Policy-making in democracies is expected to be responsive to the concerns of citizens in order to be legitimate. Earlier research showed that policy-making in liberal democracies broadly follows the dynamics of public opinion, as political representatives depend on public support for re-election (Erikson, Mackuen, and Stimson, 2002; Jennings, 2009; Page and Shapiro, 1983; Soroka and Wlezien, 2004, 2005; Stimson, Mackuen, and Erikson, 1995; Wlezien, 1996). Since conflicts about redistribution and the welfare state are a politically salient issue, empirical studies suggest that the democratic mechanism of opinion representation works particularly well in this policy area (Hobolt and Klemmensen, 2008; Soroka and Wlezien, 2010; Wlezien, 1995). As a consequence, different social policy preferences across countries are found to account for persistent cross-national differences in welfare spending (Brooks and Manza, 2006*a*,*b*, 2007; Rehm, 2011).

This favorable assessment on the functioning of democracy has been challenged by more recent research that identifies significant biases in the responsiveness of policy-makers to public demands (Gilens, 2005, 2012; Gilens and Page, 2014; Hacker and Pierson, 2010; Page, Bartels, and Seawright, 2013). According to this body of work, both the preferences of the rich and the demands from powerful interest groups are more fully reflected in policy-making than the demands from low-income citizens. Most of this work focuses on the US. Peters and Ensink (2015) apply the argument to the European context. They, too, find significant differences in the responsiveness of European governments to public concerns (see also Bernauer, Giger, and Rosset, 2015; Giger, Rosset, and Bernauer, 2012).

This paper is inspired by these contributions but takes a somewhat different road. The responsiveness literature and its critiques focus on the political representation of public opinion and whether policy-makers weigh the demands from different constituencies unequally. However, this perspective neglects the possibility that policy-makers could be externally constrained in their actions. In other words, politicians—even if willing—might be simply not able to respond to public demands due to external forces. In the long term, this could become a se-

rious threat to the legitimacy of decision-making in liberal democracies. The problem should be particularly severe if the same constraints tying the hands of policy-makers fuel public demands for more governmental action. In this case, the ability of policy-makers to deliver gets compromised exactly when the public expects governments to do more to help them cope with a changing socioeconomic environment.

Some existing contributions have implicitly applied this line of reasoning by testing separately the demand and supply effects of economic globalization on welfare state spending. Building on the logic of the classical compensation thesis (Cameron, 1978; Katzenstein, 1985), research by Walter (2010) shows that economic globalization fuels public demand for compensation, i.e., support for higher levels of redistribution and a larger welfare state. On the macro level of policy-making, however, there are indications that economic globalization has become a constraining force for social and public spending (Busemeyer, Goerres, and Weschle, 2009; Jahn, 2006).

We believe that the contradictory mechanisms of the public demanding more social spending from the government and policy-makers not being able to deliver should be even more relevant in the context of the European Union (EU). We argue that the logic of *European economic integration*—the process of creating a comprehensive Single Market in the EU—increases public demand for compensatory social policies, as workers are exposed to more uncertainty and higher labor market risks in the integrated European market. At the same time, *European political integration*—the parallel process of increasingly replacing national with EU-level policies—constrains the ability of EU member states to respond to public demands for social compensation policies by obliging them to meet stricter budgetary rules. Put differently, European integration has increased public demands for social intervention at the same time as it has made it harder for policy-makers to respond to these concerns. The result is a situation that may further contribute to the legitimacy crisis of the EU.

To test the empirical implications of the theoretical model we use a two-step approach. First, we apply a Bayesian mixed-effects within-between modeling strategy of individual preferences, employing five waves of the European Social Survey (ESS) for 22 EU member states

observed every two years between 2004 and 2012. We find that within-country changes in economic integration and compliance with economically relevant EU law are systematically related to more support for welfare spending. Second, we examine the determinants of policy output on the macro level in two-way fixed-effects models, which control for average social policy preferences of the general public, the rich, and the poor. We cannot detect any statistical relationship of public preferences with social spending, indicating a lack of responsiveness of policy-making to popular demands for social compensation. However, we find that higher levels of political integration are associated with lower levels of social spending and that policy responsiveness declines as institutional participation in the EU intensifies. We therefore conclude that—first—citizens do in fact respond to intensified economic competition by demanding more compensation as suggested in the classical compensation thesis. But—second—there is no systematic evidence that policy-makers actually respond to these demands. Our results indicate that this lack of responsiveness is at least partly a consequence of the current institutional set-up of the EU.

The paper proceeds as follows. The next section elaborates on the theoretical argument in detail. We then describe the data, methodology, and statistical specifications used in the analysis. Subsequently, we present empirical findings of our logistic mixed-effects and time-series-cross-section (TSCS) models. Finally, we conclude by summarizing the main contributions and discussing how they link to current political and scholarly debates.

2 The Argument

In this section, we first discuss the association between economic integration and social policy demand on the micro-level of preferences. We then turn to the macro-level link between political integration, social policy output, and government responsiveness.

2.1 Economic integration and demand for social policy

By now, there is a large literature on the determinants of individual-level policy preferences towards the welfare state (for a fairly recent overview, see Svallfors, 2012). While a wide range of individual and contextual explanatory factors has been identified by this literature, European integration is notoriously absent. We can draw, however, on a body of research that studies the implications of economic globalization for public opinion on the welfare state. Much of this work is inspired by the 'compensation thesis' that goes back to Cameron (1978) and Katzenstein (1985). The basic premise is this: intensified economic integration triggers increased public demand for social insurance and redistributive compensation from the welfare state.

Recent studies have largely confirmed the validity of the compensation thesis on the micro-level of preferences. These contributions show that globalization increases worker insecurity in advanced economies (Scheve and Slaughter, 2004) and this insecurity, in turn, provokes higher demand for redistribution and social insurance via the welfare state (Walter, 2010, 2017). In a similar vein, Hays, Ehrlich, and Peinhardt (2005) show that compensatory welfare spending can mitigate the opposition of affected workers against trade liberalization. As corollary, country-level research has also found a positive association between trade openness and welfare state generosity (Rodrik, 1998).

We argue that the individual-level logic of the compensation thesis is particularly relevant in the context of the EU. We highlight two major channels through which European economic integration may contribute to more economic insecurity among workers. First, the creation of the Single Market has increased economic competition and has created new exit options for mobile capital. This exerts significant downward pressure on wages and employment conditions of many workers. Second, compared to the national political arena, it is much more difficult for labor unions to organize effectively on the European level, which further fuels demand for state intervention. We hasten to add that both of these channels represent stylized facts, leaving aside potential differences across countries, sectors, or type of workers. However, while we do not want to negate such differences, we believe that the decisive feature

of the EU—which we wish to emphasize in this paper—is this: once you are in it, you are in it. Put differently, even though the specific implications may differ to a certain degree, the unique economic and institutional structure of the EU exerts effects that are commonly felt across the entire Union.

Coming back to the first point, there is solid evidence that economic integration in the form of the Single Market has defragmented markets and has increased competition, as a growing number of (usually smaller and less efficient) firms are squeezed out of the market, while fewer (usually bigger and more efficient) firms compete with each other (Allen, Gasiorek, and Smith, 1998; Baldwin and Wyplosz, 2019). Badinger (2007) and Chen, Imbs, and Scott (2009) show that competition in the Single Market has led to a significant reduction in firms' mark-ups over marginal costs in crucial industries (e.g., construction and manufacturing). This rise in product market competition implies that there are fewer profits to share, thus providing incentives to firms to lower wages to market-determined rates. At the same time, the Single Market of the EU has created a huge labor pool and has opened up new avenues for investment in other European countries. Faced with wage demands from domestic workers, business can now more credibly threaten with using the exit option (Boeri et al., 2001). This can be done either by substituting domestic workers with imported cheap labor from other EU countries or by moving entire business processes to these countries (for EU-specific empirical evidence on this, see Egger and Egger, 2003; Geishecker, 2006; Hassel, Knudsen, and Wagner, 2016; Marin, 2006). These features of the Single Market have far-reaching implications for the development of wages, as employers have become more likely to base their hiring and firing decisions on cost considerations.

Second, European economic integration has decreased the bargaining power of organized workers and as a result weakened their ability to shield workers from described market forces. Growing firm and wage competition across borders weakens the power of unions in collective wage bargaining, which critically depends on available profits that can be captured by unions resulting in higher wages or better working conditions (Booth et al., 2000; Guadalupe, 2007). Moreover, since business is more mobile than labor within the borders of the Single Mar-

ket and the asymmetric threat of an exit on the part of employers is permanent (Streeck and Schmitter, 1991), unions increasingly lose control over the supply of labor (Tober, 2019*a*). In this situation, "unions find themselves compelled to accept lower wages or less attractive employment conditions in order to save existing jobs" (Scharpf, 2002, 649). Streeck and Schmitter (1991) already argued that organized workers' weakness at the national level will also not be compensated at the European level, since unions are mainly organized nationally and capital opposes any kind of EU-centered redistributive collective bargaining in order not to lose competitive advantages (see also Scharpf, 1999; Streeck, 1996). By and large, this assessment is still true today (Pernicka and Glassner, 2014).

In principle, these mechanisms by which economic integration affects labor market outcomes are valid both for the process of European integration as well as economic globalization. However, the former differs from the latter not only in terms of location, but in addition European economic integration reduces transaction costs only among member states and, by implication, raises relative transaction costs for non-EU countries (Krieger-Boden and Soltwedel, 2013). As a result, the relative importance of transactions within the Single Market increases as opposed to trade relations outside the EU (Caporaso, 1976). More importantly, economic integration within the EU's Single Market is a much more intensified form of economic integration because it is institutionally and legally reinforced by the process of *political integration*, which is heavily geared to promote the removal of trade barriers and the creation of harmonized markets rather than market-correcting rules (Mongelli, Dorrucci, and Agur, 2005; Scharpf, 1996, 1999, 2010).

Taken together, these considerations suggest that higher levels of economic integration should be associated with more demand for compensation, i.e., demand for redistribution or social insurance (Rehm, 2009; Rehm, Hacker, and Schlesinger, 2012). Thus, our first hypothesis (H_1) on the demand effect of European integration is:

Hypothesis 1 *European economic integration is positively associated with public support for social spending.*

2.2 Political integration and supply of social policy

If policy-makers are indeed responsive to public opinion (Brooks and Manza, 2006*a*,*b*, 2007; Rehm, 2011; Soroka and Wlezien, 2004, 2005; Stimson, Mackuen, and Erikson, 1995; Wlezien, 1996), increasing public demand for compensation policies should go along with an expansion of welfare states at the national level or with a strengthening of the social dimension of the integration process at the EU level. This would, in the long term, ensure the legitimacy of the European integration project. Extant research suggests that the opposite is occurring. On the level of national welfare states, retrenchment and consolidation are more common policy trajectories than welfare state expansion (Pierson, 2001, 2011). On the EU level, the social dimension remains institutionally underdeveloped compared to the economic dimension of European integration (Ferrera, 2017). The crucial question we address in the following is whether these developments simply reflect worsening socioeconomic conditions or whether they also indicate a genuine lack of responsiveness of policy-makers to public demands for compensation.

The process of political integration—in particular as it relates to the euro as the common currency—introduced a set of rules for fiscal policy-making at the national level. With the signing of the Treaty on the European Union (also known as Maastricht Treaty) in 1992, EU member states obliged themselves to meet the so-called Maastricht convergence criteria before entering the EMU. These criteria require compliance with specific inflation targets, annual government budget deficit and debt-to-GDP (gross domestic product) limits, exchange rate rules, and interest rate levels. To ensure compliance not only at the time of adopting the euro but also in the following years, the Stability and Growth Pact (SGP) entered into force in 1998. In 2011, against the backdrop of the European sovereign debt crisis (Lane, 2012), the so-called Sixpack reformed the SGP by tightening its regulations.[1] The Sixpack also introduced greater macroeconomic surveillance by the European Commission and the Council of Ministers (Leuffen, Rittberger, and Schimmelfennig, 2013). More recently, the Treaty on Stability,

[1]For instance, the agreement reinforced the so-called Excessive Deficit Procedure, which defines the steps for penalizing member states that fail to meet either the deficit or the debt criterion.

Coordination and Governance in the Economic and Monetary Union—informally known as European Fiscal Compact—was signed by all but two (Czech Republic and the United Kingdom) member states in 2012. The ratifying partners agreed that government budgets need to be balanced (3 percent or less of GDP) and a country's annual structural deficit must not exceed 0.5 percent of GDP (1 percent of GDP for member states with a debt ratio significantly below 60 percent of GDP). Furthermore, the treaty requires that all countries adopt budget rules through means of high-level legislation in order to ensure that fiscal discipline is a national obligation.

Despite the tightening of EMU's fiscal rules, critics have questioned both their effectiveness and their successful implementation (e.g., De Grauwe, 2008; Hallerberg, Strauch, and Hagen, 2009). Prima facie, history seems to corroborate their point of view. Already at the time of the start of the euro, eight of the 11 countries failed to meet the debt criterion (Austria, Belgium, Germany, Greece, Italy, Malta, the Netherlands, and Spain). In the early 2000s, Germany and France obtained a temporary suspension of the criteria due to their bad fiscal performance. In the recent past, the Great Recession and the subsequent European developments have even more shaken confidence in the functioning of the EMU's fiscal instruments.

Empirical research, however, consistently shows that the EMU has had a considerable constraining impact on fiscal policy in member states. Using a quasi-experimental design based on a synthetic control approach, Koehler and König (2015) find that "the aggregate level of government debt in the euro countries today would be *higher* without the introduction of the euro" (ibid., 331). The authors estimate that EU countries would have increased their level of debt by 36 billion € more per year if they had not introduced the euro. The combined debt in 2010 would have been approximately 397 billion € higher. Altough these results are mainly driven by core member states, a similar effect can be detected for Ireland and Spain but not for Greece, Italy, and Portugal. Filippin and Nunziata (2019) show that social spending decreased in all but one (Luxembourg) of the 12 first euro-adopting countries compared to non-adopting EU member states. While the largest spending cuts occurred in the years immediately before the official introduction of the euro (likely as result of the entry criteria), the SGP appears

to have ensured that these differences persist even after the monetary changeover. Several other studies confirm this negative effect of political integration—especially membership in the EMU—on social spending (Bertola, 2010; Busemeyer, 2009; Busemeyer and Tober, 2015; Herwartz and Theilen, 2014).

Taken together, we posit that the constraints of political integration severely affect the fiscal ability of policy-makers to respond to public demands for more generous welfare state policies. There might be some room for fiscal spending in response to worsening socioeconomic conditions—especially rising unemployment—due to automatic stabilizers built into the fabric of European welfare states, but there is little leeway for fiscal expansion beyond that.[2] These constraints help to explain why there is no systematic association between public support for social policy compensation on the one hand and actual policy output in terms of social spending on the other hand.

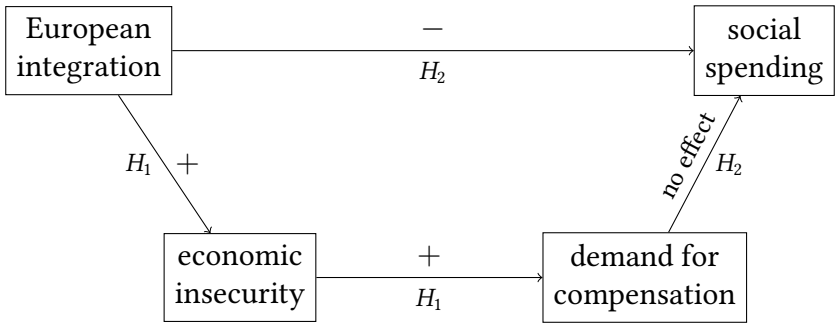
Additionally, as suggested by Gilens (2005; 2012; 2014) and others, the responsiveness of policy-makers might be biased in favor of the preferences of the rich. As is well-known from the literature on welfare state attitudes cited above, the rich are more likely to oppose additional spending on the welfare state. Hence, the apparent non-responsiveness of policy-makers to public demands could also reflect their particular responsiveness to the concerns of the rich. In our empirical analysis below, we try to account for this additional explanation too.

In sum, the second hypothesis (H_2) on the supply effect of European integration is:

Hypothesis 2 *European political integration is negatively associated with social spending. The fiscally constraining influence of political integration helps to explain why policy-makers are not responsive to increasing public demands for social policy, in particular in member states which exhibit high levels of institutional participation.*

[2]This is even more true, as European integration seems to fuel tax competition—aimed at attracting mobile capital—between member states (Redoano, 2014) and as a result induces lower effective corporate taxes (Streif, 2015).

Figure 1: European integration and the political economy of welfare spending.



2.3 Summary

Figure 1 is a graphical depiction of our argument. In the first step, European economic integration is hypothesized to fuel economic insecurity. This is mainly explained by the rising elasticity of labor demand to wage fluctuations and the declining market power of organized workers. Growing insecurity, in turn, provokes higher demand for more social spending, since workers want to be compensated for the risks they face in the Single Market (H_1).

At the same time, European political integration is expected to exert a depressing effect on the supply of social policy. The EMU and its budgetary rules constrain the leeway of policy-makers at the member-state level, forcing them to curtail social spending. Consequentially, the fiscal implications of EMU membership effectively inhibit policy responsiveness of governments, which explains why there is no systematic association between public demands for more social spending and actual policy output (H_2).

In short, European integration affects social policy demand and supply simultaneously but in contradictory ways. On the one hand, economic integration fuels public demand for compensation. On the other hand, political integration delimits the fiscal possibilities of national-level policy-makers to respond to these demands. European integration therefore provokes a mismatch between supply and demand, essentially breaking the opinion-policy link.

3 Empirical Strategy

We test the key implications of the theoretical model in two steps. First, to estimate how individual demand for compensation responds to country-level variation in economic and political integration, we apply a Bayesian mixed-effects within-between modeling strategy. The mixed-effects models draw on five waves of the European Social Survey (ESS) and cover up to 153120 individuals in 22 member states for the time period from 2004 until 2012. The ultimate size of the sample is delimited by the availability of data for the index on European integration (see next section).

Second, to assess the macro-level impact of political integration on both welfare spending and the policy responsiveness of governments, we employ time-series cross-sectional (TSCS) two-way fixed-effects models. The TSCS analysis is based on 24 countries annually observed for those 9 years for which the European integration index is available. Thus, we end up with a maximum of 216 country-year observations.

3.1 Measurement

In what follows, we discuss the measurement of key dependent and independent variables used in the analysis.[3]

European integration. Different attempts have been made to measure the extent of European integration (e.g., Leuffen, Rittberger, and Schimmelfennig, 2013), but few are specifically concerned with measuring differences in the extent of integration across member states. Recently, however, an index was released that captures economic and political indicators of European integration (König and Ohr, 2013). The index consists of 25 items grouped into four dimensions, which contribute with different weights to the overall index. Two of these four dimensions are of particular interest for this study. The 'Single Market dimension' can be understood as an indicator of economic integration, whereas the 'Conformity dimension' captures political integration. More specifically, the first dimension—the degree of market

[3]See the appendix for detailed descriptive statistics on all variables.

relations in the Single Market—is measured by the sum of a country's intra-EU imports and exports as a percentage of GDP (openness to EU trade) and as a percentage of its total sum of imports and exports (importance of EU trade compared to trade relations outside the EU). The indicator of political integration combines information on institutional participation in the Schengen area and membership in the EMU (floating exchange rates; in Exchange Rate Mechanism (ERM) II; in Eurozone) with data on member states' compliance with EU law (counting infringement proceedings of the European Commission and European Court of Justice verdicts). The component of institutional participation is particularly relevant for our argument on the spending-depressing effect of European political integration (H_2), as it captures both important examples of the institutional manifestation of negative integration (Schengen, ERM) and the effect of the EMU directly. For ease of comparability, the data are normalized to a scale ranging from 0 to 100, where 100 represents maximum integration. The indicators are weighted on the basis of a principal component analysis (for more information on the index, see König and Ohr 2013). While the first version of this index contained only 14 countries, we make use of an updated version that includes 24 member states annually observed between 2004 (i.e., the time of the EU Eastern enlargement) and 2012.

Social policy preferences. From a theoretical perspective, we are interested in measuring individual-level demand for compensation policies. This entails aspects of redistribution and social insurance. Unfortunately, the basic module included in all ESS waves only contains a general question about demand for redistribution. Respondents are given this statement: *Government should reduce differences in income levels.* Individuals are then asked whether they (1) disagree strongly, (2) disagree, (3) neither agree nor disagree, (4) agree, or (5) agree strongly.

As Rehm (2009, 863) points out, this survey item has several weaknesses: "the question does not include a budget constraint; the question does not remind people of higher taxes in case they opt for redistribution; there is no mention of specific policy instruments used to achieve redistribution." We largely agree with Rehm's assessment and thus argue that—due to

its broad character—this question measures support for welfare policy more generally rather than specific areas of spending. We turn this measure into a dichotomous variable that takes on a value of 1 in case of strong agreement and 0 otherwise. We apply this strategy because the weakness of the survey item seems to have incentivized respondents to almost never oppose the statement and instead disproportionately frequently settle on general agreement (category 4), resulting in a suspicious cross-country similarity in the density distribution of this answer category (see Figure A7 for detail). By focusing only on those who strongly agree with the statement, we hope to uncover true cross-national differences and mitigate against the general weakness of the survey item.

Social policy preferences will also enter the dynamic macro-level analysis examining whether average support for social policy systematically affects levels of social spending. For that purpose, we simply take the arithmetic mean of respondents' preferences (on the original scale) of a given country in a given year. We also include average levels of support for different income classes.

Social policy. To capture government social policy efforts we employ social spending data provided by Eurostat, which measure total expenditure on social protection as a percentage of GDP. While the use of social spending as an indicator of welfare state effort is frequently practiced in existing political economy research (e.g., Hinnerich and Pettersson-Lidbom, 2014; Iversen and Soskice, 2015), this practice has also become subject of severe criticism in the welfare state literature (for instance, Clasen and Siegel, 2007; Scruggs, 2006). We nonetheless (have to) rely on it for two reasons. First, compared to alternatives, information on government expenditure is richly available—both with regard to time and space. Particularly small countries like Cyprus and member states of Eastern Europe are not or only very sparsely included in alternative measures of welfare entitlements. Second, given that Eurostat data on public spending is harmonized across member states, data quality is likely to be very high.

Controls. The mixed-effects and TSCS specifications use different sets of control variables. In the mixed-effects models, we include a number of micro-level control variables in order

to capture systematic differences between individuals. These controls are age (in years), a gender variable, education (in years), binary information on the respondent's occupation (in education, in paid work, unemployed), union membership, a measure of subjective religiosity, self-placement on a political left-right scale, and subjective income[4]. On the country level, we control for social spending and income inequality before taxes and transfers (pre-fisc Gini index) from Eurostat. Additionally, we include GDP per capita calculated from the Penn World Table (Feenstra, Inklaar, and Timmer, 2015).

In the TSCS models, we expect that—besides European integration—the following factors might influence welfare spending: GDP growth, unemployment, pre-fisc inequality, public debt as percentage of GDP (all from Eurostat), annual deficit as percentage of GDP, and a measure of partisan control of government (where higher values indicate a higher percentage of left-wing cabinet posts, see Armingeon et al., 2014). As these control variables are pretty standard, we will not discuss them in more detail.

3.2 Statistical specifications and methods

Mixed-effects models. To empirically test the argument that economic and political integration affects support for social policy (H_1), we employ a Bayesian logistic mixed-effects within-between modeling strategy.

We denote by Preferences_{ict} the binary response—support for social policy—of individual i ($i = 1, \ldots, N_c$) living in country c ($c = 1, \ldots, 22$) in year t (t = 2004, 2006, 2008, 2010, 2012). x_{ict} is a vector of individual-level controls. The country- and time-specific constants are denoted by α_{ct}. Hence, the individual-level mixed-effects logistic regression equation is given by:

$$\Pr(\text{Preferences}^*_{ict} = 1) = \text{logit}^{-1}\big(x_{ict}\beta + \alpha_{ct} + \epsilon_{ict}\big), \tag{1}$$

where ϵ_{ict} is the error term.

[4]ESS main income variable lacks comparability over time as its coding was changed after wave three. Therefore, we use a subjective measure of income that was included in all waves (see variable "hincfel"). A value of 1 indicates that respondents are living comfortably or coping on their present income and 0 otherwise.

Treating the varying intercepts as a function of the country-level factors, the country-level equation is:

$$\alpha_{ct} = \psi_\alpha + \lambda_B \bar{z}_c + \lambda_W (z_{ct} - \bar{z}_c) + \eta_c + \delta_t + \xi_{ct}, \tag{2}$$

where ψ_α is the grand mean of all individual social policy preferences across countries and years. z_{ct} is a vector of country-level variables, in particular economic and political integration. We use a within-between model specification that allows us to estimate within- and between-country effects simultaneously (Bell, Fairbrother, and Jones, 2018; Fairbrother, 2014). The between-country effect λ_B is calculated as the cross-time mean of each country-level variable, $\bar{z}_c$. Subtracting this term from the original vector z_{ct} gives the within-country effect λ_W. To take account of the cross-classified (non-nested) structure underlying our longitudinal data, we include variance components at all relevant levels: country (η_c), year (δ_t), and country-year (ξ_{ct}) (Rasbash and Browne, 2008).

Maximum likelihood estimation of mixed-effects models can produce severely biased coefficients and confidence intervals when the number of countries is small. The problem is particularly serious for country-level estimates and non-linear models (Bryan and Jenkins, 2016). In contrast, Bayesian estimation yields much more robust and conservative results (Stegmueller, 2013). Thus, we estimate our models in a Bayesian framework using the R package *brms* (Bürkner, 2018). Given that the number of groups is relatively small, we assign weakly informative half-*t* priors on the variance components (Gelman, 2006).[5] Furthermore, we center all continuous variables and scale them by two times their standard deviation so that the resulting coefficients can be roughly interpreted in the same way as the unscaled binary indicators (Gelman, 2008).

[5]A weakly informative prior supplies some direction but still allows inference to be driven by the data. We set all population parameters to be a priori normally distributed with mean zero and a standard deviation of 1. For the variances in the model we use half-*t* priors, $t(4, 0, 1)$. Gelman (2006) shows that noninformative priors can lead to an improper or unrealistic posterior distribution in mixed-effects models, especially when the number of groups is small and the group-level variance is close to zero. In contrast, the half-*t* family of prior distributions—particularly the special case of a half-Cauchy distribution, i.e., a half-*t* distribution with one degree of freedom—is more flexible and exhibits better behavior near zero.

TSCS models. We examine the argument that European political integration suppresses the supply of social policy and thus prevents aggregated social policy preferences from being translated into policy (H_2) by using a TSCS approach.

Given that our dependent variable—social spending—is a trend-ridden indicator, we employ a Prais-Winsten estimator where the serially correlated residuals are modeled as a first-order autoregression or AR1 process. In order to control for groupwise heteroskedasticity and contemporaneous correlation of errors, we apply panel-corrected standard errors (Beck and Katz, 1995, 1996). Additionally, we include country- and time-fixed effects (two-way fixed-effects specification) which account for unobserved country (e.g., the historical strength of the left might affect both European integration and social spending) and time effects (e.g., the economic and fiscal crisis). This is a quite rigorous test of the argument, as much of the variation in the dependent variable will be accounted for by the fixed effects. The basic TSCS regression equation is given by:

$$\text{SocialSpending}^*_{ct} = \gamma_1 \text{PoliticalIntegration}_{ct} + \gamma_2 \text{Preferences}_{ct-1} + z_{ct}\beta + \alpha_0 + \epsilon_{ct}. \quad (3)$$

Finally, to test the argument that institutional participation in the EMU reduces social policy responsiveness, we estimate following interaction model:

$$\begin{aligned} \text{SocialSpending}^*_{ct} = {} & \gamma_1 \text{Participation}_{ct} + \gamma_2 \text{Preferences}_{ct-1} \\ & + \gamma_3 \text{Participation}_{ct} \cdot \text{Preferences}_{ct-1} \\ & + z_{ct}\beta + \alpha_0 + \epsilon_{ct}. \end{aligned} \quad (4)$$

4 Model Results

We argue above that European integration increases citizens' demand for social compensation and at the same delimits the leeway of policy-makers to respond to these public concerns. In this section, we present empirical evidence for our theoretical claims.

4.1 Demand for social policy

Table 1 presents standardized coefficients (posterior means) and standard errors (posterior standard deviations) from Bayesian logistic mixed-effects models. To save space, we only present and discuss the estimates of our measures of European integration (see Table A4 in the appendix for complete results of all controls).

The results in Models 1-4 show that within-country economic and political integration have a positive and statistically significant impact on demand for social policy. In other words, within-country increases in European integration are systematically associated with stronger popular demand for social spending. The between-country effects are not statistically significant. This suggests that the relationship between European integration and demand for social policy runs through changes within countries rather than cross-national differences. None of the other macro-level variables reaches statistical significance (see Table A4). These findings are not sensitive to our specific prior choice. Furthermore, they are robust to an ordered logit specification (see Table A5 for these sensitivity tests).

In Model 5, we include each subindicator of the economic and political integration indices separately. We find that the effect of economic integration depends on how open a country is to EU trade and not on how important that kind of trade is to trade with the rest of the world (the latter would have contradicted the globalization literature). As for political integration, the effect on demand for social policy is driven by the measure of legal compliance. The pivotal element of this measure (see Table A3 for details) are European Court of Justice verdicts pertaining to the Single Market. This suggests that the more a country complies with the laws of the Single Market, the higher is demand for compensation among its citizens. In short, we find strong evidence for our first hypothesis: European economic integration exhibits a positive association with public support for social spending. Furthermore, we are able to show that the logic of the compensation thesis is particularly relevant in the context of the EU due to the legal framework provided by European political integration.

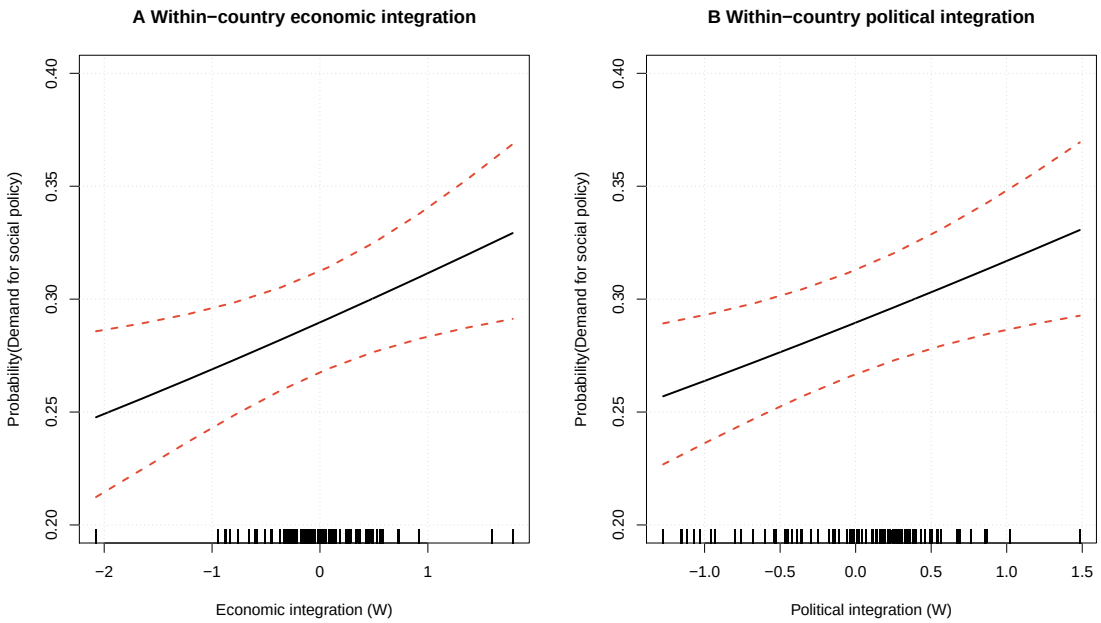
To make these effects more tangible, we calculate average marginal predicted probabilities based on Model 1 in Figure 2 (Hanmer and Kalkan, 2013). We take the range of economic and

Table 1: Bayesian logistic mixed-effects estimation of the impact of economic integration on demand for social policy.

	Model 1	Model 2	Model 3	Model 4	Model 5
Economic integration (B)	−0.28	−0.36	−0.31	−0.33	
	(0.24)	(0.24)	(0.24)	(0.26)	
Economic integration (W)	0.11*	0.12*	0.11*	0.11*	
	(0.04)	(0.05)	(0.05)	(0.05)	
Openness (B)					−0.23
					(0.33)
Openness (W)					0.14*
					(0.05)
Importance (B)					−0.04
					(0.31)
Importance (W)					0.00
					(0.04)
Political integration (B)	0.04	0.06	0.11	−0.02	
	(0.26)	(0.24)	(0.25)	(0.27)	
Political integration (W)	0.14*	0.14*	0.14*	0.13*	
	(0.05)	(0.05)	(0.05)	(0.05)	
Participation (B)					0.07
					(0.31)
Participation (W)					0.06
					(0.04)
Compliance (B)					−0.10
					(0.28)
Compliance (W)					0.15*
					(0.06)
Social spending (B+W)		✓			
GDP per capita (B+W)			✓		
Market inequality (B+W)				✓	
Individual-level controls	✓	✓	✓	✓	✓
Standard deviations					
Country	0.55	0.53	0.54	0.52	0.57
Year	0.10	0.11	0.10	0.07	0.08
Country-Year	0.18	0.18	0.18	0.18	0.18

* Zero outside the credible interval. Estimates (posterior means) with standard errors (posterior standard deviations) in parentheses. Based on two chains run for 3000 iterations after a burn-in of 1000. (B) indicates the between-country effect and (W) the within-country effect of a variable.

Figure 2: Average marginal predicted probability of demand for social policy by within-country economic and political integration with 95% credible intervals.



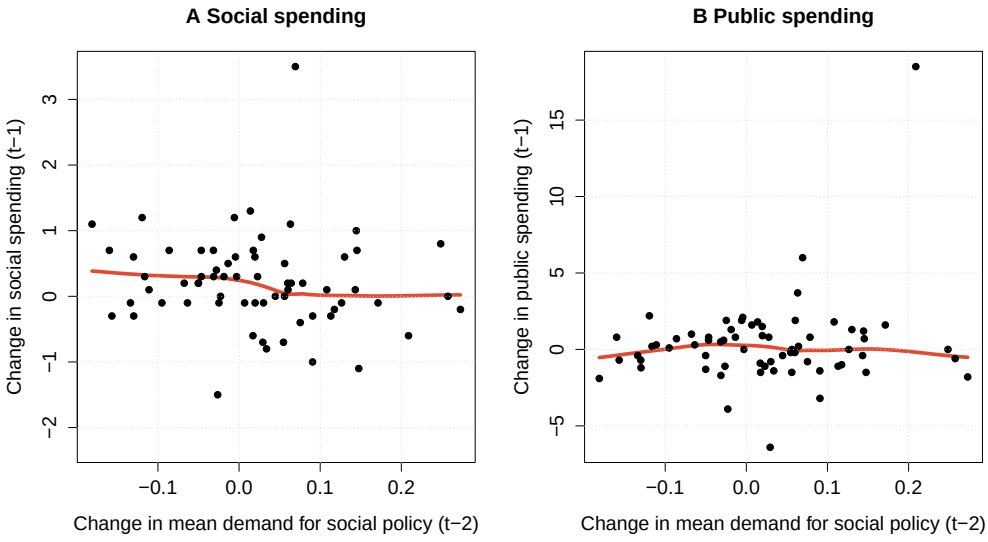
political integration respectively, and draw 10 evenly spaced values from that range. Then we hold each of these values constant, while allowing all other variables and variance components to take on all observed values in the data. Taking the mean of the resulting predictions leaves us with average marginal predicted probabilities. These average probabilities can then be plotted against the value economic and political integration was held at. Additionally, we present 95% credible intervals. Simulating changes in within-country integration from the lowest to the highest observed value[6] increases the probability of demanding more compensation by eight percentage points for economic integration (A) and seven percentage points for political integration (B). In both cases, a one standard deviation increase is associated with an increase in the predicted probability by about one percentage point.

4.2 Supply of social policy

To get a first impression of the role of social policy preferences in shaping public policy in recent years, Figure 3 plots changes (to previous observation in the different waves of the ESS)

[6]For economic integration, this is Ireland in 2004 (lowest) and Belgium in 2008 (highest). For political integration, this is Spain in 2008 (lowest) and Estonia in 2012 (highest).

Figure 3: Responsiveness to average social policy preferences, 2006-2012.



in aggregated social policy preferences on changes (to previous year) in social spending and public spending, respectively. If governments are responsive, we should observe a positive relationship between support for welfare spending and social government expenditure. Panel A of Figure 3 suggests that this is not the case. The loess curve is essentially flat with an even slightly negative trend, clearly indicating that there is no positive association between changes in popular demand for social policies and changes in welfare spending in the sample of European countries we observe. Panel B corroborates this finding for changes in public spending.[7]

We argue above that one reason for this lack of social policy responsiveness is European integration and the contradictory ways in which it affects social policy demand and supply. We now look at the second step of the analysis, employing a series of TSCS models to identify the determinants of policy output on the macro level. We first examine the evidence for a direct relationship between political integration and social spending, then the link between political integration, public demand, and social spending.

[7]The outlier at the top of each panel reflects Ireland in 2008 (A) and 2010 (B). The sharp increase in social and public spending was caused by a steep decline in GDP rather than actual changes in spending.

Political integration. Table 2 presents unstandardized coefficients and panel-corrected standard errors from TSCS two-way fixed-effects models. The dependent variable is social spending. In a previously fitted training model (see Table A6 in the appendix), public debt, the annual deficit, and market inequality were not systematically related to social spending. Thus, we exclude these variables from the subsequent analysis.

Looking at Model 1, we find that the estimated coefficient of political integration is negative and the confidence interval does not include zero. Simulating an increase of political integration from the lowest observed value—United Kingdom in 2006—to the highest—Estonia in 2012—is associated with a decrease in social spending as a percentage of GDP by about 1.2 percentage points (from 26.3 to 25.1). This difference might sound modest, but in real value terms it is significant. For instance, taking the GDP of the United Kingdom in the last quarter of 2006, a decrease of 1.2 percentage points amounts to £4.327.492.195. An increase of one standard deviation from the mean value of political integration—roughly similar to an increase from the level of Portugal in 2007 to the level of Portugal in 2012—is accompanied by a decrease of approximately 0.26 percentage points in social spending. Taking the case of Portuguese GDP in the last quarter of 2012, this is equivalent to 112.866.452 €.

Model 2 decomposes our measure of political integration in its two subcategories, i.e., compliance with EU law and participation in steps of institutional integration. The results suggest that both dimensions of political integration contribute to its aggregate effect. However, the estimated upper bond of the confidence interval of the compliance variable gets very close to zero and its estimated coefficient is smaller in comparison. This suggests that institutional participation—especially EMU membership—is the more important driver of the negative relationship between political integration and social spending.[8] Economic integration exhibits no statistically significant association with social spending in either of these two models (nor do its two underlying subcategories; not shown). The interpretation of this find-

[8]Our measure of institutional participation does not exhibit within-country changes for every country in the sample. We observe changes for Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia (see Figure A5). However, we dot not believe that our results are a statistical artifact of an unrepresentative group (see Aronow and Samii, 2016), since they align closely with previous research that has corroborated the same finding for earlier time periods and longstanding EU member countries (Bertola, 2010; Busemeyer and Tober, 2015; Filippin and Nunziata, 2019; Herwartz and Theilen, 2014).

Table 2: TSCS two-way fixed-effects estimation of impact of political integration on supply of social policy.

	Model 1	Model 2	Model 3	Model 4
Political integration	-0.02^*			
	(0.01)			
Participation		-0.02^*	-0.03^*	-0.03^*
		(0.00)	(0.01)	(0.01)
Compliance		-0.01^*	-0.02	-0.02
		(0.01)	(0.02)	(0.02)
Economic integration	0.01	0.01	0.02	0.02
	(0.04)	(0.04)	(0.08)	(0.08)
GDP growth	-0.14^*	-0.14^*	-0.16^*	-0.16^*
	(0.02)	(0.02)	(0.04)	(0.04)
Unemployment	0.21^*	0.19^*	0.17^*	0.16^*
	(0.02)	(0.02)	(0.05)	(0.05)
Left government	0.10^*	0.11^*	0.31	0.33
	(0.04)	(0.04)	(0.17)	(0.18)
Popular support for social policy$_{t-1}$			-0.39	
			(1.66)	
Support, lower income groups$_{t-1}$				-1.58
				(1.72)
Support, higher income groups$_{t-1}$				1.17
				(2.06)
Constant	27.33^*	27.41^*	30.05^*	30.99^*
	(1.96)	(1.99)	(7.42)	(7.70)
Observations	213	213	77	76
Countries	24	24	22	22

* Zero outside the confidence interval. Models 3 and 4 use robust standard errors. Since it is not clear what the R^2 actually measures in the context of a Prais-Winsten transformation, we abstain from reporting it (Wooldridge, 2015, 384).

ing is straightforward. Although both dimensions of European integration are systematically related to demand for social policy, only political integration and in particular the budgetary constraints of the EMU affect government spending. This finding underscores that economic and political integration are two intertwined but independent empirical phenomena.

Policy responsiveness. Figure 3 above provides indicative evidence that social policy preferences may play an insignificant role in determining levels of social spending. We confirm this finding in more sophisticated statistical models. When we include aggregated social policy preferences[9] (see Models 3 and 4), estimates are not distinguishable from zero. This result holds regardless of whether we look at all respondents or individual income groups.

Furthermore, our second hypothesis also predicts that this lack of responsiveness is due to institutional participation and, in particular, follows from EMU membership and the fiscal constraints of the SGP. Table 3 tests this argument explicitly. Beside the average preferences of all respondents, we also look at support for social policies among lower (value of 0 on our income perception variable), higher (value of 1 on our income perception variable), and top income groups (those respondents who claim to live 'well' on their current income).

The table produces two remarkable results. First, it shows the constraining effect of institutional participation in the EU on policy responsiveness. The interaction term between institutional participation and public preferences is negative and statistically significantly different from zero in each model. This suggests that an increase in demand for social policy is associated with lower levels of social spending in EMU countries than in non-EMU countries. Second, we find that this relationship is not equally distributed across income groups. As income increases, the size of the interaction term becomes smaller. Thus, while it appears to be the case that institutional integration reduces policy responsiveness towards all income groups, it seems to do less so with regard to the wealthier strata of the population.

The general bias in favor of high-income groups is also reflected by the constitutive term of the preference variable in each model. Generally speaking, these estimates tell us how the

[9]Aggregated social policy preferences enter the models lagged by one year, accounting for the fact that preferences should not turn immediately into policy (cf. Brooks and Manza, 2006*a*,*b*, 2007).

Table 3: Institutional participation and policy responsiveness.

	Model 5	Model 6	Model 7	Model 8
Participation	0.25*	0.28*	0.18*	0.05
	(0.11)	(0.12)	(0.09)	(0.03)
Popular support for social policy$_{t-1}$	5.25			
	(2.65)			
Interaction (all)	−0.07*			
	(0.03)			
Support, lower income groups$_{t-1}$		4.26		
		(2.67)		
Interaction (lower)		−0.07*		
		(0.03)		
Support, higher income groups$_{t-1}$			4.19	
			(2.19)	
Interaction (higher)			−0.05*	
			(0.02)	
Support, top income groups$_{t-1}$				2.74
				(1.39)
Interaction (top)				−0.03*
				(0.01)
Constant	6.71	10.25	11.56	20.98*
	(10.77)	(11.36)	(8.60)	(3.86)
Controls	✓	✓	✓	✓
Observations	77	76	76	76
Countries	22	22	22	22

* Zero outside the confidence interval.

relationship between support for social policy and social spending would look like if there was no institutional integration (equivalent to the United Kingdom and Hungary in the early years of the observation period). Although all of the estimated confidence intervals include zero, the positive association of demand for social policy with social spending seems to become more clear-cut as income increases ($p_{\text{support,lower}} = 0.117$, $p_{\text{support,higher}} = 0.062$, $p_{\text{support,top}} = 0.056$).

We acknowledge that including the aggregated preferences into our models leads to a significant decrease in the number of observations. Yet, we take the fact that—particularly in the context of country- and time-fixed effects—the remaining variation in the data still bears out

the theorised relationship between political integration and policy responsiveness as strong suggestive evidence for our argument. In the appendix, we estimate the same interaction models using either total political integration or its compliance subindicator instead of institutional participation (see Table A7). With these modifications, the results of Table 3 cannot be replicated, which shows that institutional participation is the main driver behind the decrease in government responsiveness. Furthermore, in order to single out the impact of EMU more directly, we repeat the same statistical exercise with a dummy for EMU membership (see Table A8). Finally, we employ a flexible Kernel smoothing estimator (see Figure A10). Our findings remain valid under these alternative specifications.

We thus summarize: institutional participation—especially membership in the EMU—is negatively associated with social policy output in terms of social spending. This result corroborates the confining effect of European political integration on the fiscal leeway of member states. Moreover, there is no systematic association between public preferences and policy output. Our analysis suggests that the fiscal constraints at the EU level help to explain this lack of government responsiveness.

5 Conclusion

In this paper, we have analyzed the contradictory implications of European integration for welfare states and the legitimacy of democratic decision-making in the EU. Based on large-scale analysis of survey and aggregate-level data, we found that European economic integration—reinforced by the legal framework of political integration—is positively associated with increased demand for compensation via social policies. However, our analysis also shows that European political integration confines the fiscal leeway of member states and therefore the degree of responsiveness to public demands for compensation.

This paper goes beyond existing work in three respects. First, while models on the political economy of welfare spending are numerous, European integration has not received much attention. To our knowledge, the explanatory approach in this study is the first that explic-

itly accounts for the multidimensional implications of European integration on social policy supply and demand. If at all, existing research has mainly used simple binary indicators as control variables without clearly specifying the underlying theoretical mechanisms or even considering the multidimensionality of European integration (e.g., Busemeyer, 2009; Schmitt and Starke, 2011).

Second, this paper provides several new perspectives for the literature on policy responsiveness. This literature has so far looked at responsiveness of domestic policy-makers to national audiences, neglecting the potential impact of external constraining forces on the ability of policy-makers to comply with public demands. In contrast to Brooks and Manza (2006*a*,*b*, 2007), whose work suggests that the opinion-policy link was working in European countries in the 1980s and 1990s, we do not find support for an association between social policy preferences and policy output. However, in some sense going beyond Gilens (2005, 2012), we do not even find conclusive evidence that policy-makers are responsive to the concerns of the rich. Instead, in the context of the EU, the actions of policy-makers seem to be disconnected from public opinion to a significant extent.

Third, while there are some studies on the consequences of economic globalization for individual-level demand for social policy (for instance Walter, 2010, 2017), this perspective has not been applied to European integration. Furthermore, our approach is more comprehensive compared to others as we have also investigated the linkage between public preferences and actual policy output. While we consider this comprehensive approach a major strength of this paper, we also realize that more research is needed to substantiate the individual claims of our theoretical argument in more detail.

Finally, this study has important implications for current political debates. In the wake of the European sovereign debt crisis, various austerity measures have been taken aimed at reducing government budget deficits. These measures can be understood as a stricter continuation of the fiscal rules of the EMU. At the same time, the economic crisis of 2008 and following years together with a continuous lack of economic growth have led to escalating levels of unemployment and a significant reduction in wages in some of the member states

(Scharpf, 2014). These developments suggest that the contradictory implications of European integration persist and will potentially intensify in the future, resulting in an even larger divergence between social policy demand and supply. This mismatch may contribute to low levels of trust between Europe's citizens and the project of European integration, in particular if the social dimension of the European integration process continues to be neglected.

Appendix

This appendix provides supporting information for the paper "*Breaking the Link? How European Integration Shapes Social Policy Demand and Supply*". We present both descriptive statistics with a focus on the variables of interest and full model results, diagnostics, and robustness tests.

A1 Descriptive statistics

This section provides more details on the data. Tables A1 and A2 report summary statistics for the standardized data used in the mixed-effects models (A1) and the unstandardized data used in the time-series cross-section (TCSC) models (A2). Table A3 summarizes the indicators and weights used to construct the index of European integration. Figures A1-A9 show trends for the theoretically most relevant variables across time and space.

Table A1: Standardized data in mixed-effects models.

Variable	Minimum	Median	Mean	Maximum	SD
Support for social policy (1=strong support)	0	0	0.29	1	0.45
Economic integration (W)	−2.08	−0.05	0	1.79	0.50
Economic integration (B)	−0.86	−0.19	0	1.79	0.50
Political integration (W)	−1.27	0.04	0	1.48	0.50
Political integration (B)	−1.23	0.06	0	0.69	0.50
Age	−0.94	−0.01	0	2.06	0.50
Gender	0	1	0.52	1	0.50
Years in education	−1.53	−0.06	0	5.33	0.50
In education	0	0	0.09	1	0.29
In paid work	0	1	0.53	1	0.50
Unemployed	0	0	0.06	1	0.24
Religiosity	−0.78	0.06	0	0.89	0.50
Union membership	0	0	0.44	1	0.50
Left-Right scale	−1.18	−0.02	0	1.13	0.50
Income	0	1	0.76	1	0.43
Social Spending (W)	−1.36	−0.04	0	0.96	0.50
Social Spending (B)	−1.02	0.27	0	0.68	0.50
GDP per capita (W)	−3.74	0.01	0	3	0.50
GDP per capita (B)	−0.17	−0.15	0	2.30	0.50
Market inequality (W)	−1.34	0.01	0	1.16	0.50
Market inequality (B)	−1.26	0.02	0	0.87	0.50

Table A2: Unstandardized data in TSCS models.

Variable	Minimum	Median	Mean	Maximum	SD
Social spending	10.30	22.40	22.45	31.70	5.21
Political integration	46.79	77.62	77.27	97.96	11.55
Compliance	23.51	86.34	81.45	98.48	14.76
Participation	0	68.22	68.77	100	35.12
Economic integration	21.68	38.02	41.10	75.89	10.42
GDP growth	−14.80	2.25	1.72	11.60	4.12
Unemployment	3.10	7.80	8.65	24.80	3.95
Left government	1	2	2.45	5	1.42
Debt	3.70	53.45	57.64	172.10	30.25
Deficit	-32.13	-3.09	-3.29	5.13	4.07
Market inequality	27.30	34.65	35.28	46.80	3.72
Preferences (all)	2.99	3.93	3.88	4.43	0.33
Preferences (lower)	3.14	4.16	4.11	4.54	0.26
Preferences (higher)	2.98	3.87	3.82	4.42	0.33
Preferences (top)	2.77	3.63	3.62	4.38	0.38

Table A3: Index of European integration (König and Ohr, 2013): Weights of indices and indicators.

Indices	**Indicators**	**Weights in the indices (%)**
Economic Integration		
Openness		*(56)*
	Goods	(33)
	Services	(16)
	Capital	(27)
	Labor	(25)
Importance		*(44)*
	Goods	(29)
	Services	(31)
	Capital	(11)
	Labor	(28)
Political Integration		
Participation		*(33)*
	EMU membership	(64)
	Schengen participation	(36)
Compliance		*(67)*
	Infringement proceedings	(20)
	ECJ verdict: Single Market	(38)
	ECJ verdict: Environment and consumer	(19)
	ECJ verdict: Other sectors	(23)

Figure A1: Economic integration across countries and time.

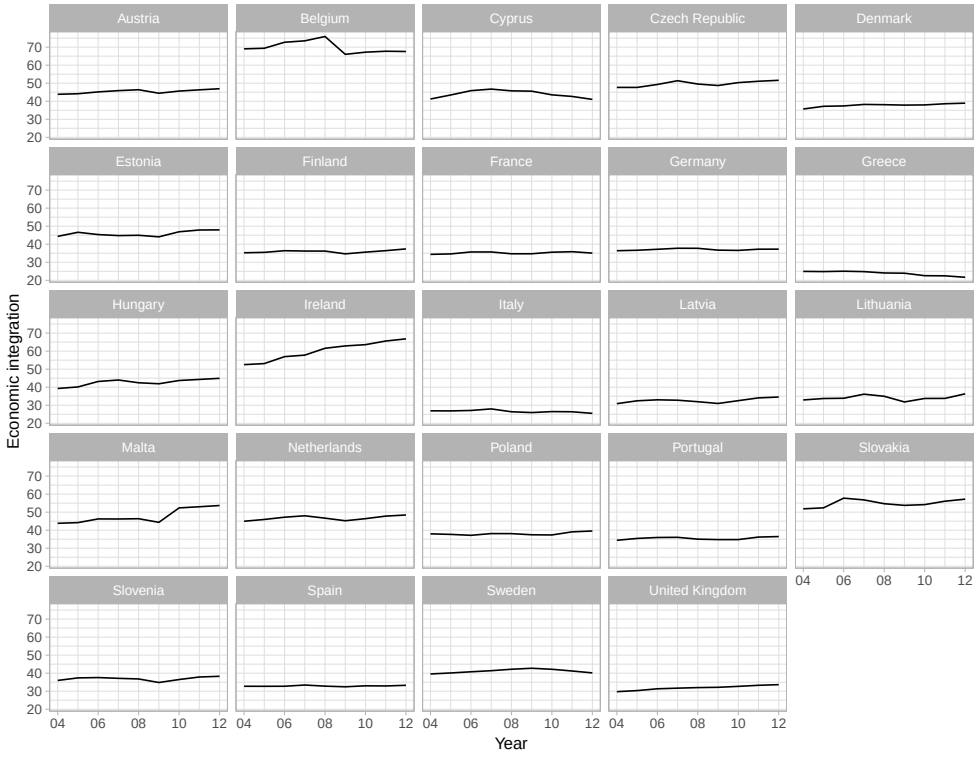


Figure A2: Political integration across countries and time.

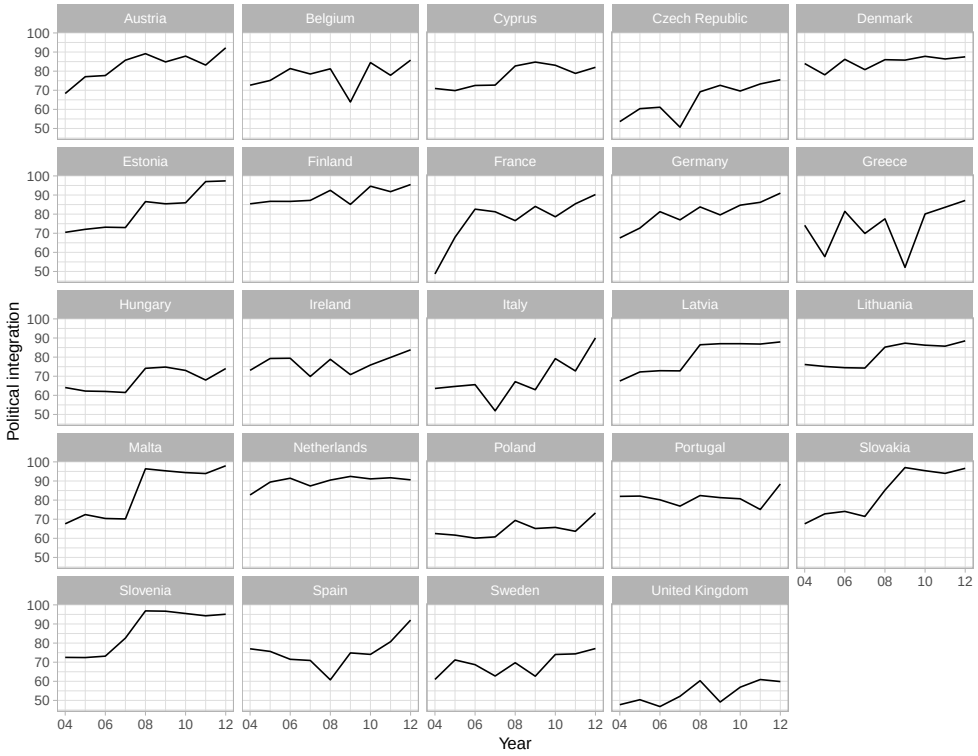


Figure A3: Openness to EU trade across countries and time.

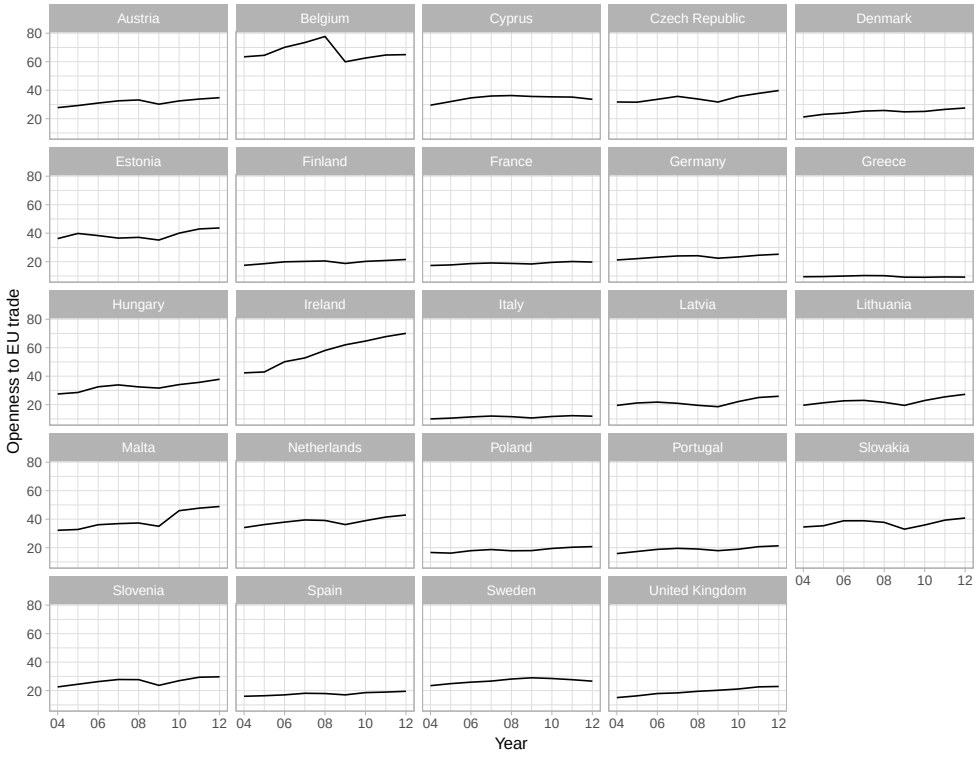


Figure A4: Importance of EU trade across countries and time.

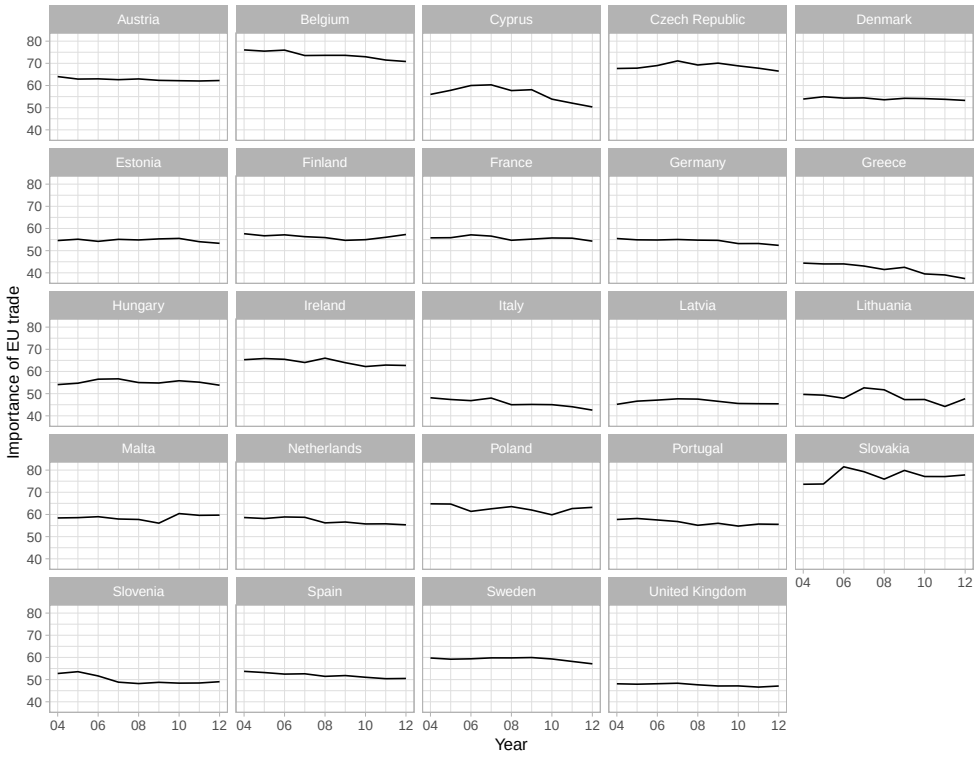


Figure A5: Institutional participation across countries and time.

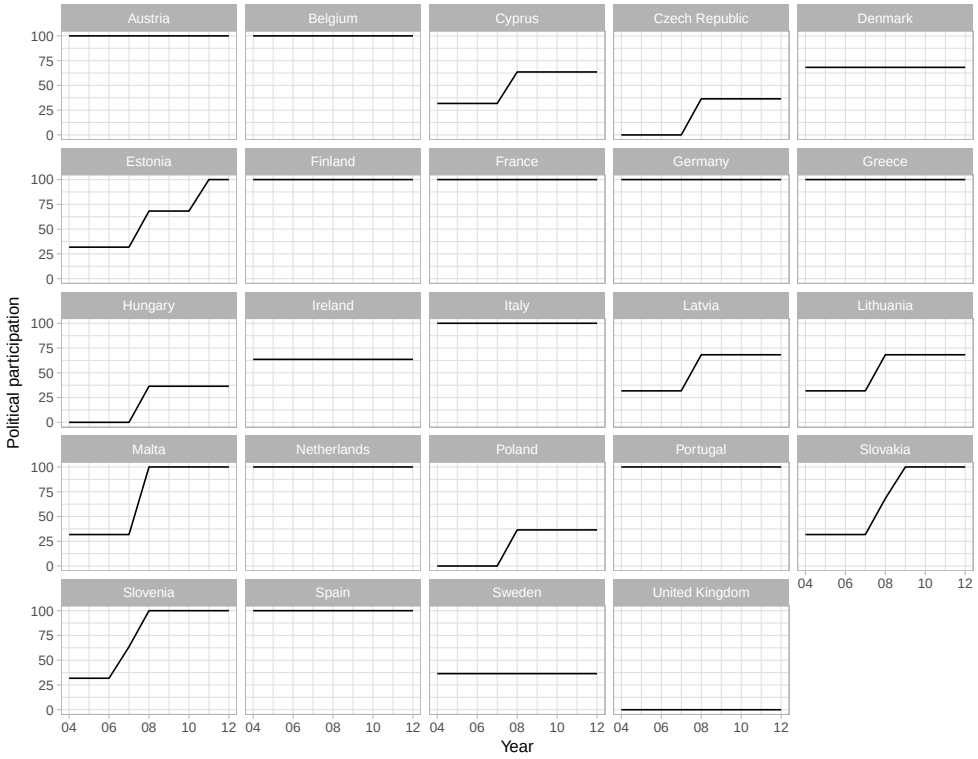


Figure A6: Political compliance across countries and time.

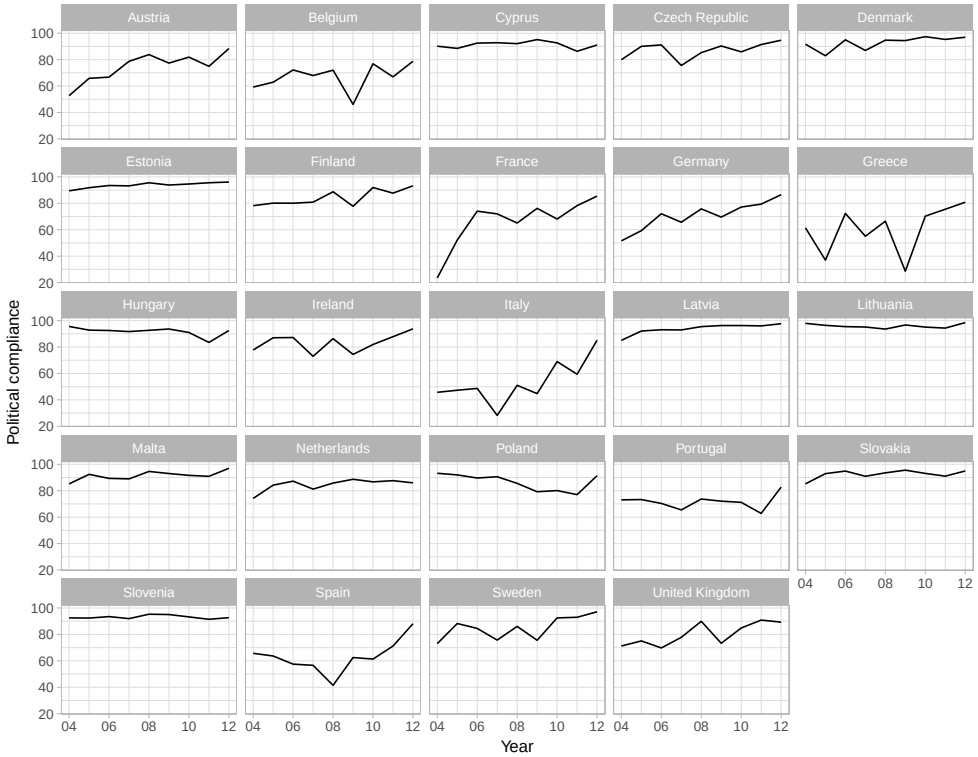


Figure A7: Density of social policy preferences across countries.

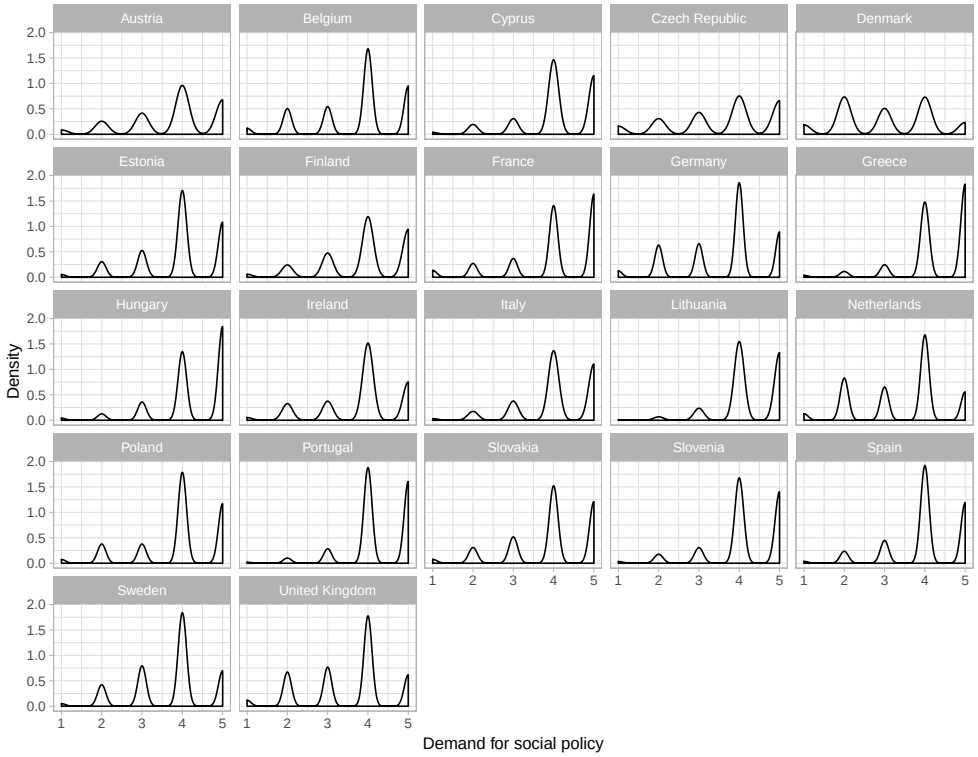


Figure A8: Average demand for social policy across countries and time.

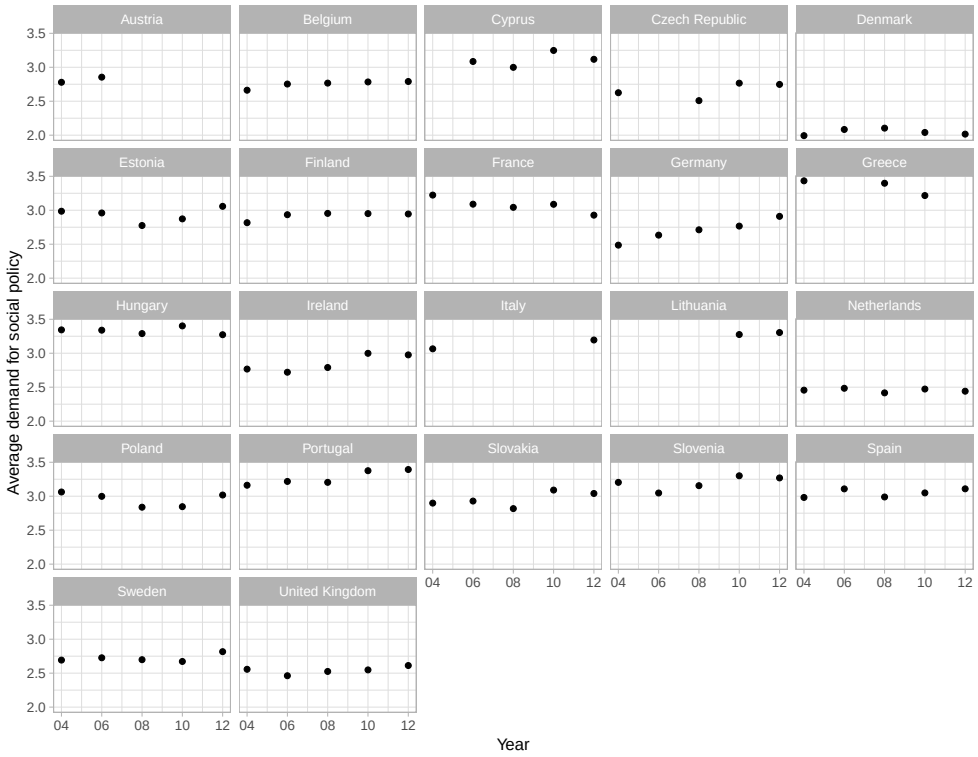
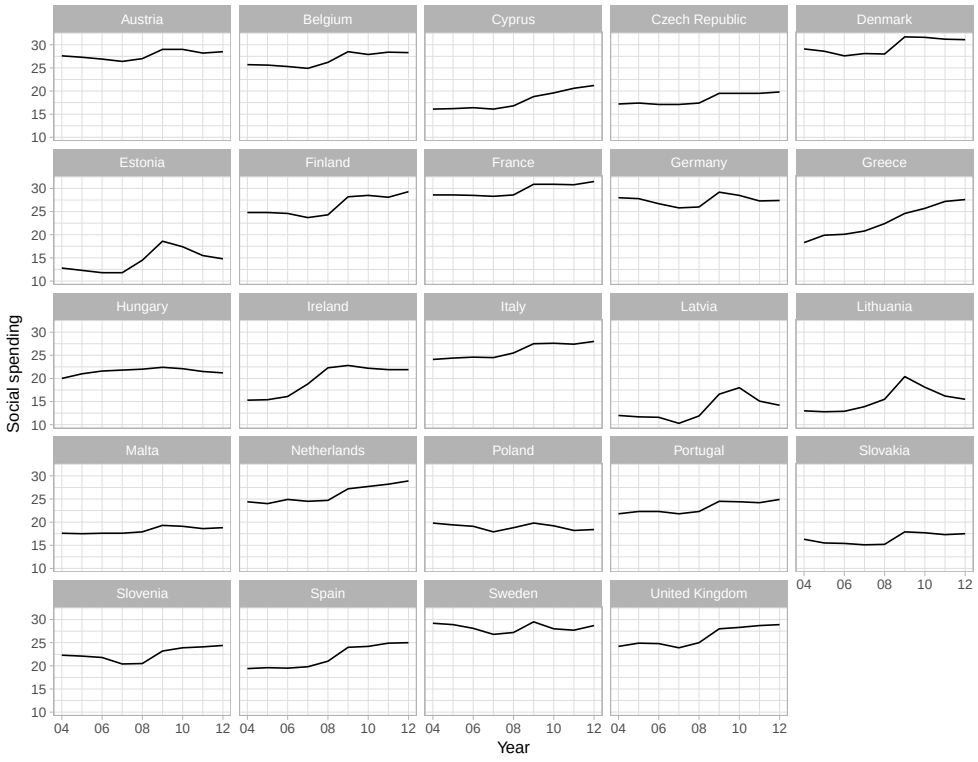


Figure A9: Social spending across countries and time.



A2 Full Model Results, Diagnostics, and Sensitivity

A2.1 Mixed-effects models

Full model results of Table 1 in the main text. To save space, Table 1 in the main text does not present intercepts and control variables. Table A4 contains information on these estimates for each of the four model specifications.

Table A4: Bayesian logistic mixed-effects estimation of the impact of European integration on demand for social policy. Intercepts and individual-level control variables.

	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	−0.63*	−0.67*	−0.65*	−0.67*	−0.64*
	(0.13)	(0.13)	(0.13)	(0.14)	(0.14)
Age	0.16*	0.16*	0.16*	0.16*	0.16*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Gender	0.09*	0.09*	0.09*	0.10*	0.09*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Years in education	−0.22*	−0.22*	−0.22*	−0.21*	−0.22*
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
In education	−0.36*	−0.36*	−0.36*	−0.34*	−0.36*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
In paid work	−0.07*	−0.07*	−0.07*	−0.06*	−0.07*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed	0.17*	0.17*	0.17*	0.18*	0.18*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Religiosity	−0.04*	−0.05*	−0.04*	−0.05*	−0.05*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Union membership	0.23*	0.23*	0.23*	0.23*	0.23*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Left-right scale	−0.57*	−0.57*	−0.57*	−0.58*	−0.57*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Subjective income	−0.49*	−0.49*	−0.49*	−0.49*	−0.49*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Social spending (B)		−0.35			
		(0.22)			
Social spending (W)		−0.01			
		(0.06)			
GDP per capita (B)			0.30		
			(0.23)		
GDP per capita (W)			0.00		
			(0.04)		
Market inequality (B)				−0.15	
				(0.24)	
Market inequality (W)				0.05	
				(0.04)	

* Zero outside the credible interval. Estimates (posterior means) with standard errors (posterior standard deviations) in parentheses. Based on two chains run for 3000 iterations after a burn-in of 1000.

Table A5: Bayesian logistic mixed-effects estimation of the impact of European integration on demand for social policy. Sensitivity tests.

	t-priors on betas	ordered logit
Economic integration (B)	−0.28	−0.32
	(0.24)	(0.25)
Economic integration (W)	0.11*	0.08*
	(0.04)	(0.04)
Political integration (B)	0.04	0.02
	(0.26)	(0.27)
Political integration (W)	0.14*	0.12*
	(0.05)	(0.05)
Controls	✓	✓

* Zero outside the credible interval. Estimates (posterior means) with standard errors (posterior standard deviations) in parentheses. Based on two chains run for 3000 iterations after a burn-in of 1000.

Results are not sensitive to prior choice and coding of dependent variable. Table A5 performs two sensitivity tests. First, Gelman et al. (2008) suggest to put independent *t*-priors on the coefficients of logistic regressions in order to prevent potential problems associated with complete separation[10]. Hence, we place *t*-prior distributions, $t(4, 0, 1)$, on the regression-type parameters (see the first column of Table A5). The resulting coefficients do not differ from the estimates in the main text.

Second, we test whether the main findings depend on our coding of the dependent variable by estimating a Bayesian mixed-effects ordered logit model with flexible thresholds (see the second column of Table A5). The findings remain substantially unchanged. The within effects of both economic and political integration continue to be positive and statistically different from zero.

[10]We speak of complete separation when the dependent variable separates an explanatory variable or a combination of explanatory variables completely.

A2.2 Time-series cross-section models

Training model. As briefly mentioned in the paper, the TSCS analysis (see Tables 1 and 2 in the paper) was preceded by the estimation of a training model, which contains a number of potentially relevant explanatory factors. Table A6 shows the results of this training model. Since the levels of debt, the annual deficit, and market inequality seem not to exhibit a statistically detectable relationship with social spending, we excluded these variables from the subsequent analysis.

Table A6: TSCS training model.

	Social spending
Political integration	-0.02^*
	(0.01)
Economic integration	-0.03
	(0.04)
GDP growth	-0.13^*
	(0.02)
Unemployment	0.15^*
	(0.02)
Left government	0.10^*
	(0.04)
Debt	0.02
	(0.01)
Deficit	-0.05
	(0.03)
Market inequality	0.02
	(0.05)
Constant	26.78^*
	(2.36)
Two-way FEs	✓
Observations	202
Countries	24

* Zero outside the confidence interval

Political integration and policy responsiveness. Table 2 of the paper provides evidence for a responsiveness-depressing effect of institutional participation. Table A7 repeats the same

Table A7: Political integration, compliance, and policy responsiveness.

	Political integration	Compliance
All_{t-1}	2.19	−1.96
	(4.69)	(2.96)
Political integration	0.10	
	(0.24)	
$\text{All}_{t-1} \times$ Political integration	−0.04	
	(0.06)	
Compliance		−0.15
		(0.16)
$\text{All}_{t-1} \times$ Compliance		0.04
		(0.04)
Constant	20.70	33.87*
	(19.25)	(12.38)
Two-way FEs	✓	✓
Controls	✓	✓
Observations	77	77
Countries	22	22

* Zero outside the confidence interval

statistical exercise for both our overall measure of political integration as well as the the compliance dimension of political integration. In both cases the interaction coefficients are indistinguishable from zero. This corroborates our argument that institutional integration is the main reason for the lack of policy responsiveness and not other aspects of the political integration process.

Negative association between institutional participation and policy responsiveness robust to alternative indicator. The measure of institutional participation in the paper does not only capture membership of the EMU, but also counts whether a country is in the Schengen area or enters the European Exchange Rate Mechanism (ERM). We consider this feature useful because it reflects other institutional manifestations of negative integration besides EMU membership, which—as we argue—may also affect social spending. Nevertheless, our main argument centers on the depressing effect of EMU on social policy. Thus, Table A8 uses a simple dummy indicator for EMU membership in order to single out the fiscal implications

Table A8: EMU membership and policy responsiveness.

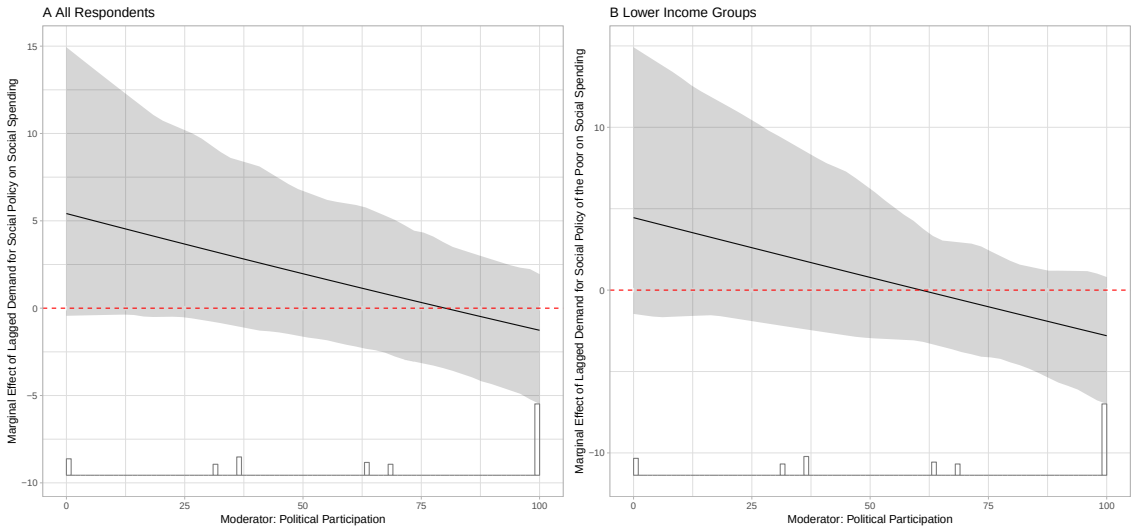
	All	Lower	Higher	Top
All_{t-1}	0.48			
	(1.55)			
$\text{All}_{t-1} \times \text{EMU}$	-0.42^{*}			
	(0.16)			
Lower_{t-1}		-0.44		
		(0.96)		
$\text{Lower}_{t-1} \times \text{EMU}$		-0.32^{*}		
		(0.10)		
Higher_{t-1}			0.54	
			(1.20)	
$\text{Higher}_{t-1} \times \text{EMU}$			-0.35^{*}	
			(0.10)	
Top_{t-1}				1.16
				(0.93)
$\text{Top}_{t-1} \times \text{EMU}$				-0.40^{*}
				(0.12)
Constant	27.00^{*}	28.03^{*}	25.16^{*}	23.68^{*}
	(4.29)	(3.08)	(3.41)	(2.47)
Two-way FEs	✓	✓	✓	✓
Controls	✓	✓	✓	✓
Observations	115	113	113	113
Countries	22	22	22	22

* Zero outside the confidence interval.

of EMU and to check the robustness of the initial results. Since this indicator is not limited across time (as compared to the original measure of institutional participation), it allows us to take advantage of the full range of social policy preferences—including the 2002 ESS wave. Following the practice for slow moving or time-invariant institutional covariates in interactions pioneered by Blanchard and Wolfers (2000), we omit the constitutive term of EMU from the right hand side of the regression equation, as the effect of this term is already captured by the fixed effects.

The results corroborate our previous findings. The interaction term is consistently neg-

Figure A10: Kernel smoothing estimator: Institutional participation and policy responsiveness.



ative and statistically significantly different from zero. Different from the initial results in the paper, we do not find noticeable differences between income groups. This could suggest that, while other steps of institutional integration mainly limit policy responsiveness towards lower income groups, membership of EMU hampers policy responsiveness across the board.

Kernel smoothing estimator corroborates mediating effect of institutional participation. Finally, we employ a kernel smoothing estimator that estimates a series of local effects with a kernel reweighing scheme. This estimation strategy allows to flexibly estimate the functional form of the marginal effect of demand for social policy on social spending across the range of institutional participation. Thus, by utilizing a more flexible estimator, the marginal effect can be closely approximated regardless of potential violations of the linear interaction effect assumption (see Hainmueller, Mummolo, and Xu, 2019). Figure A10 presents results from a kernel smoothing estimator with controls and two-way fixed effects (for the preferences of all respondents, Panel A, and the preferences of lower income groups, Panel B). A couple of interesting findings emerge. First of all, the marginal effect of demand for social policy on social spending linearly declines with increasing institutional participation. This not only corroborates the mediating effect of institutional participation, but also shows that a linear interaction model is a reasonable specification given the data. Second, as in other spec-

ifications, the marginal effect itself never becomes statistically significant. However, when institutional participation is low, the point estimates are clearly positive and the 95% confidence intervals narrowly include zero. Under EMU membership (institutional participation = 100), on the other hand, the point estimates are negative and, especially in the case of lower income groups, almost reach statistical significance.

Conclusion

The papers in this thesis examine the political and social economy of the Eurozone. The main premise of the thesis is that in order to gain an encompassing understanding of how the EMU affects European societies, we need to analyze both its political economic and its socioeconomic effects on individual member states and national actors like businesses, trade unions, workers, and governments. The political economic part of the thesis investigates why some Eurozone countries flourish and others falter in terms of economic growth, and who the actors behind the remarkable success in Germany are. In the second part, I examine how the process of European institutional integration more generally affects distributional outcomes and why countries in the EMU have a hard time countering these trends by means of social spending.

More specifically, Chapter 1 compares the two main explanations for the Eurocrisis in the political economy literature. While the first argues that the crisis was caused by differences in labor market institutions, the second claims that the divergence in competitiveness across EMU countries was the result of cross-border finance flows and private lending. For the first time, the paper empirically tests both of these explanations simultaneously. The empirical results show that the finance view does a better job than the labor market view in explaining wage dynamics in the Eurozone. However, there are some notable exceptions to which the logic of labor market view appears to apply. Looking at these cases in more detail reveals that only in Germany wage moderation based on wage bargaining coordination seems to have translated into competitiveness gains (i.e., higher exports).

Chapter 2 studies what makes Germany so exceptional in this regard. Drawing on the

political economy of exchange rate preferences, the paper looks at the attitudes of the German business community—especially the export sector—before the euro was introduced. The empirical findings demonstrate that, following a large real appreciation of the deutsche mark in the first half of the 1990s, large exporters were very much aware that the EMU will be beneficial for their competitive position inside and outside of the Eurozone. After an early period of opposition to the common currency, Germany's peak business association thus came out in full support for the euro. Since other businesses were considerably more skeptical of the implications of the EMU, large exporters used their dominant position to advance their own interests. Similar developments occurred in Germany's peak labor association. These results show that German success in the Eurozone is based on a tight-knit relationship between major export enterprises and their organized workers.

In Chapter 3, I investigate the distributional implications of progressing European institutional integration of which the EMU is the most important step to date. I argue that progressing institutional integration has made it increasingly difficult for trade unions to organize effectively both on the national and the European level. At the same time, trade unions play a central role in counteracting income inequality. Thus, the paper contends that the inequality-depressing effect of trade unions should decrease with increasing institutional integration. In accordance with the theoretical argument, I find that the inequality-reducing effect of trade unions becomes substantially lower the more a country integrates in the EU. Moreover, I show that institutional integration has a negligible effect when union strength is low but that this effects becomes more pronounced as union strength increases.

Finally, Chapter 4 analyzes how the EMU affects the social policy responsiveness of governments. The paper makes the argument that while advancing market integration increases economic insecurity among workers who demand more social policy compensation in response, political integration and in particular membership in the EMU fiscally ties the hands of national governments, effectively reducing social spending. Thus, the conflicting implications of European integration inhibit effective social policy responsiveness. The paper employs a two-part empirical strategy. First, we show that progressing economic integration

is associated with growing demand for social policy. Second, we demonstrate that membership in the EMU depresses social spending and hence prevents social policy preferences from translating into social policies.

In the remainder of this concluding chapter, I discuss the substantive contributions of my four papers and highlight their importance for the current and future state of the Eurozone. I bring the thesis to a close by discussing the limitations of my research and suggesting possible avenues for future research.

Policy Implications for the Eurozone

The findings of the political economic part of the thesis have important implications for our understanding of the Eurocrisis and our assessment of the policies that have been implemented in its aftermath. At the core of the EU's response to the crisis is the belief that it was caused by a divergence in cost competitiveness between the core and the periphery, which in the case of the latter was the result of structural weaknesses and labor market rigidities. Mario Draghi, President of the European Central Bank, expressed this point of view clearly in a speech in March 2012:

> "Overall, looking at competitiveness within the euro area, there have been substantial differences across countries. Indeed, the strains in some sovereign debt markets have been compounded by the severe competitiveness differentials that have emerged within the euro area. [...] If we compare countries with an external surplus and countries with an external deficit, we see that, since the introduction of the euro, unit labor costs have increased by 28 percent in deficit countries, 2.5 times as much as in surplus countries. [...] Restoring competitiveness is vital for a number of countries within the euro area. Policies to ensure sufficient responsiveness in wages and prices, as well as to boost productivity, are crucial ingredients in the re-balancing" (Draghi, 2012).

Consequently, European policymakers—in particular the European Central Bank, the Eu-

ropean Commission (together with the International Monetary Fund, these two compose the *troika*), and the European Council—have enforced upon peripheral countries internal devaluation by wage restraint and structural reforms that promote the downward flexibility of wages (see the several memoranda of understanding with those countries that needed financial assistance or other strategic programs like the so-called Five Presidents' Report, Juncker et al., 2015). In order to reduce levels of national debt, this approach has been combined with strict fiscal austerity, based on the idea that fiscal discipline will revive the confidence of investors and consumers, which in turn will create growth and employment (see Chapter 11 in Krugman, 2012). In short, the EU has adopted an economic view of the world "in which the economy adjusts through the reduction of wages, prices and public spending to restore competitiveness" (Blyth, 2013, 2).

Yet, the results of Chapter 1 suggest that this economic understanding of the Eurozone is a fallacy. The diverging trends in nominal wages were not the result of labor market institutions, but were provoked by a domestic credit boom in peripheral countries, which itself was caused by low (relative to the EMU-average) real interest rates and the flow of private credit from the core to the periphery. Eurozone imbalances arose as a result of strong growth in domestic demand in the periphery, where high debt-financed domestic demand translated into higher imports (and vice versa in core countries). Thus, differences in the capital account drove the current account imbalances, not differences in wage bargaining institutions as the labor market view claims. Moreover, the findings of Chapter 1 indicate that growth in exports is largely determined by foreign demand and not by nominal unit labor costs.

There is, however, one important exception to this diagnosis: Germany. In Germany, wage bargaining coordination depressed nominal wages and, due to the wage sensitivity of German exports, the resulting gains in cost competitiveness indeed translated into higher exports. Chapter 2 demonstrates that this exceptional road to success—which can be referred to as a strategy of competitive disinflation—was initiated in Germany because large exporters and their organized workforce dominate the country's economic discourse, and they understood that the improved cost competitiveness of their products will lead to export expansion. The

tragic irony is that European authorities have implemented and promoted a Eurozone-wide policy plan that is modeled around this exceptional case of Germany.

Since external devaluation (i.e., the adjustment of exchange rate parities) is ruled out in a system of fixed exchange rates like the EMU, they argue that internal devaluation is the only viable solution. As a condition for their financial assistance, European authorities have therefore imposed policy packages upon the crisis countries that include measures like public expenditure cuts and the flexibilization of employment conditions and collective bargaining practices (Leschke, Theodoropoulou, and Watt, 2015; Schulten and Müller, 2015). However, as one would expect from the findings of this thesis, the mix between fiscal austerity and internal devaluation has not had the desired effect of increasing competitiveness in the periphery of the Eurozone. In fact, it has precipitated peripheral countries into enduring recessions. Commentators fear that the EU's exclusive focus on cost competitiveness, which is based on an incorrect understanding of the roots of the Eurocrisis, "will only be slowing down the rate of labor-saving technological progress and stifling initiatives to diversify and technologically upgrade exports—thus locking the Southern Eurozone into low-wage, relatively nondynamic export specialization patterns and tourism (as employment option of last resort)" (Storm and Naastepad, 2016, 64).

The second part of thesis suggests that a European economic policy regime that continues to be built on false premises—especially the believe that cost competitiveness is more important than domestic demand—will (continue to) have detrimental social and political implications that in the long-run can seriously undermine the democratic legitimacy of both national and European institutions. Chapter 3 shows that the longstanding process of European institutional integration has already significantly diminished the power of trade unions to protect workers from the adverse effects of market integration, resulting in an increasingly unequal distribution of income. The EMU in general and the Eurocrisis in particular have exacerbated these trends because trade unions find themselves in a vicious circle of organizational weakness and external pressures to succumb to a reform agenda of further deregulation of labor and product markets. Especially in peripheral countries after the crisis, trade unions have

been frequently confronted with a choice between agreeing to painful concessions or seeing the government act unilaterally (Armingeon and Baccaro, 2012). Moreover, since many of the reforms were implemented by social democratic governments (e.g., in Greece and Spain), trade unions face the strategic dilemma of either supporting their traditional political allies or opposing the proposed policies (Lehndorff, 2015). These union predicaments, however, are by no means limited to peripheral countries but also exist in core countries, as the example of the so-called 'Agenda 2010' in Germany shows (Hassel and Schiller, 2010).

The findings of Chapter 4 indicate what the joint dynamics of decreasing trade union power, increased labor and product market liberalization, and fiscal austerity will mean for the democratic process of opinion representation. While growing economic insecurity among workers will lead to higher demand for social policy compensation, the combined effects of EMU's fiscal rules and the politics of austerity will prevent national governments from responding to these demands in the form of more social spending. In other words, social policy responsiveness will decline further. However, policy responsiveness lies at the heart of democratic governance. In fact, the primary justification for the election of political representatives is the idea that elected officials act in the interest of their constituency. It is this feature of modern democracies that distinguishes it from dictatorships and earlier, less representative forms of democracy. As Adam Przeworski noted: "We know that founders of representative government spoke of self-government, equality of all, and liberty for all, but established institutions that excluded large segments of the population and *protected the status quo from popular will*" (emphasis added, Przeworski, 2010, 11). With its current emphasis on fiscal austerity and internal devaluation, the EMU does not only undermine the democratic legitimacy of domestic political institutions in many member states, but also undermines the foundations of its own legitimacy (Scharpf, 2013).

How would an empirically based reform agenda for the Eurozone look like? While there are many aspects that would need to be considered (and some important steps like the creation of the Banking Union have already been initiated), one clear theme that emerges from the first part of the thesis is the following: the Eurozone needs more convergence and demand-

driven growth. As explained in Chapter 1, the cross-country capital flows preceding the crisis did not—as was initially thought—lead to convergence, but rather cemented and even aggravated differences within the EMU because investments in peripheral countries were mostly in low-productivity sectors. Thus, what is required is an investment strategy that transparently focuses on productivity-enhancing areas (e.g., digitalization, education, public infrastructure, research and technology development). Chapter 4 has shown, however, that public investment is considerably constrained by the rules of the Stability and Growth Pact and that member states have little fiscal room to maneuver. In their comprehensive reform proposal for the EMU, Enderlein et al. (2016) therefore suggest to grant "public investments more favourable treatment in the context of EU fiscal surveillance and accounting rules" (ibid., 30).

To achieve this, these authors put forward several proposals. First, public investment spending should be recognized under the rules of the SGP by granting the opportunity to fully discount or amortize it. This would require a process in which corresponding investment expenditures are agreed upon in advance and member states know that failing to deliver the agreed reforms will carry a penalty. Second, the SGP keeps national governments from using the European Structural and Investment Funds because the required co-financing of projects often cuts across its deficit rules. Hence, the SGP should be amended so that it no longer conditions the financing of these Funds, which support economic development across the EU. Third, the European Semester—especially the Country Specific Recommendations (CSRs)—should be used to identify areas in which a country has the greatest need for action and specify a minimum level of investment in these areas.

In order to reduce imbalances between euro area countries, it is important that the CSRs focus as much on core countries as on countries at the periphery. The European Commission's (2019) recent report on Germany serves as a good example because it highlights the country's low investment ratio compared to the Eurozone average and explicitly identifies areas that require more public spending. At the same time, the report is void of any concrete recommendations regarding the level of investment. Without such specific guidelines, however, it seems unlikely that both the macroeconomic imbalances in the Eurozone and the strategic

rationale of German economic actors (see Chapters 1 and 2) will be significantly altered in the near future (see also Walter et al., 2019).

Moreoever, Bénassy-Quéré et al. (2018) propose to allow for greater fiscal risk-sharing by creating a Eurozone fund that helps countries in case of large economic downturns. The proposed Eurozone stabilization fund has following characteristics. First, participation in the scheme would be conditional on compliance with fiscal rules and the CSRs. Second, payouts would be triggered based on pre-defined changes in the (un)employment rate. Third, the size of the transfers would depend on how much the (un)employment rate falls (rises) below (above) the pre-set threshold. Fourth, mechanisms would be in place ensuring that the payouts are used in relevant areas. Fifth, to prevent that the stabilization fund turns into a permanent transfer system, contributions to the fund would be based on the probability of receiving payouts. The higher the probability that a certain country falls below (exceeds) the threshold, the more would this country pay in contributions.

In addition, promoting macroeconomic convergence will also require to further strengthen and deepen the Single Market. The service sector is a special concern in this context, as services remain insufficiently integrated despite the fact that they are the largest contributors to GDP in the EU and hence are key to job creation. Integrating the service sector will ensure that divergences in competitiveness and inflation rates between countries of the EMU will be less pronounced (especially due to the real exchange rate channel, see auf dem Brinke, Gnath, and Haas, 2015). Yet, Chapters 3 and 4 have also shown that further market integration will likely increase both the economic risks of many workers and the gap between the rich and the poor. It is thus of critical importance that any reform proposal is thoroughly vetted for its socioeconomic repercussions and simultaneously accompanied—i.e., this must not be just a secondary thought—by effective measures that particularly protect the most vulnerable.

The recently presented European Pillar of Social Rights (European Commission, 2018) sets the broad framework along which these measures should be organized. First, access to the labor market needs to be ensured through educational and training programs for the young and the elderly, and active labor market policies for the unemployed. Second, wage levels need

to guarantee a decent standard of living. This should be achieved by, among other things, an adequate minimum wage (ideally indexed to median wage growth, see Schulten, Müller, and Eldring, 2015) and a stronger role of trade unions both in the national social dialogue and at the European level (in its new 'Action Programme 2019-2023', the European Trade Union Confederation makes several proposals on how to reinforce collective bargaining and promote cross-border wage coordination, for instance by facilitating transnational negotiations with multinational enterprises; see ETUC, 2019). Finally, social protection must be provided to the most vulnerable individuals and households. This should include access to childcare and child benefits, affordable healthcare, a pension system ensuring old age in dignity, and unemployment benefits. The corresponding national programs should be supported by European programs that help to cover the costs, for instance in the form of a European unemployment insurance scheme (Enderlein et al., 2016, 35) or direct transfers to the un- and underemployed from a Eurozone stabilization fund (Bénassy-Quéré et al., 2018, 15).

In sum, the essential policy-takeaway of my thesis is this: the political economy and the social economy of the Eurozone should always be considered jointly.

Limitations and Future Research

It is important to acknowledge the limitations of my thesis, as this helps to identify interesting avenues for future research. The theoretical discussion in Chapter 1 uncovers a complex relationship of macroeconomic factors. While we attempt to sort them out both conceptually and empirically, it is clear that these variables are mutually interdependent and evolve together. Put differently, as in almost all comparative research, endogeneity is a real concern. We try to alleviate this deficiency by thoroughly spelling out the theorized causal chains that connect these variables and by combining descriptive analyses with clearly specified regression modeling. However, empirically, we are not able to establish strict causality. Again, the problem becomes clear by quoting Przeworski: "The better we specify our models, the more endogenous loops we consider, the more difficult it becomes to identify their causal structure"

(Przeworski, 2009, 168). Future research should therefore try to empirically unpack the causal argument in more detail. This could be achieved by looking at a longer time horizon (including the years before the introduction of the euro), expanding the dataset across countries (including countries outside the Eurozone), or by examining the developments in individual countries. Beyond purely qualitative analysis, the latter could for example imply the use of synthetic control methods (see Abadie, Diamond, and Hainmueller, 2010), where a certain EMU country is compared to an artificial counterfactual constructed from similar countries outside the EMU.

The theory-guided process tracing approach in Chapter 2 does a better job of establishing the underlying causal mechanisms. However, the increase in internal validity (i.e., the degree to which the results are attributable to a certain explanatory factor and not others) comes at the cost of external validity (i.e., the extent to which the results are generalizable). In the specific context of the paper, this means in particular that its conclusions cannot necessarily be generalized to later time periods. Put differently, the finding that major German exporters and their organized workers valued the benefits of a competitive exchange rate and thus supported the EMU in the run-up to the currency union does not necessarily imply that their preferences have not changed since the introduction of the euro. While the results of Chapter 1 suggest that the attitudes of the German export coalition have remained stable, other research argues that exchange rate preferences have become less important for the German industry in recent years (Kinderman, 2008). Hence, a fruitful avenue for future research is to study the development of German business preferences on the exchange rate/EMU since 1999. Furthermore, another interesting question is whether similar business preferences can be found in other countries as well and how important—especially when compared to Germany—export interests are in the these countries' national economic dialogues.

Chapter 3 is different from the first two papers in the sense that it takes a long-term perspective looking at roughly 60 years of European institutional integration. This implies that the statistical power of the results is likely high. In other words, the likelihood that the paper detects an effect when there actually is an effect is high and the probability that the paper con-

cludes that there is no effect when there actually is one (so-called type II error) is low. While the study is based on a long temporal dimension, it is somewhat limited cross-sectionally. The reason is that data on top income inequality are only available for a limited set of countries. As it is to be expected that these data limitations will be remedied in the foreseeable future, follow-up studies should broaden the comparative perspective of the paper and in so doing check the robustness and the external validity of my findings. Theoretically, as already mentioned earlier, the paper builds on a growing body of work that strongly suggests that trade unions affect top incomes despite the fact that they are not directly involved in the corresponding pay negotiations. Most of this research focuses on the US. The results of the paper demonstrate that an examination of these processes in the European context is a promising endeavor for researchers.

Different from Chapter 3, Chapter 4 suffers from the fact that its findings are based on a relatively small sample, which is caused by a relatively short time-series dimension. The problem is again data availability. Future research should thus look for indicators covering a longer period of time in order to examine whether the mismatch between public demands and policy output is a recent phenomenon, a long-standing fact, or has intensified over time. The above discussion about the policy implications of this thesis suggests that the depressing effect of the EMU on policy responsiveness in peripheral countries has grown since the crisis. This shows the importance of widening the analysis to the most recent years. It also opens up the opportunity to employ a more developed strategy of causal inference. Given that some Eurozone countries were hit harder by the crisis than others and thus the former have experienced enduring recessions while the latter recovered quickly, we would expect to see a stronger increase in social policy demand in crisis countries. At the same time, European authorities have imposed on these countries a policy doctrine of fiscal austerity, which can be understood as a stricter continuation of the Maastricht rules. Consequently, southern governments' fiscal room to maneuver has likely narrowed even more than that of their counterparts in core countries. As the papers of this thesis demonstrate, the joint political economic and socioeconomic effects of these trends on policy responsiveness and related issues are of great

importance and merit further research.

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