

An structural-institutional explanation of the Eurozone crisis

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1. Introduction

The Eurozone crisis began with the financial crisis, but it did not end with the financial crisis. Europe has ushered in a state of austerity since 2008, and comparisons to Japan's Lost Decade look increasingly apt. It is not a recession; it is a perpetual low-growth equilibrium. This paper is intended to provide a framework for understanding the structural-institutional foundation of this crisis, and to suggest the implications for extant theories of European integration.

It is by no means obvious why the Eurozone crisis has proved so resilient. Many economists, especially on this side of the Atlantic, diagnose the crisis as a Keynesian demand shortfall with massive under-employment of productive factors and near zero inflation. As such, the crisis has a well-understood pathology with time-tested remedies. While there are some unique aspects of the Eurozone crisis – especially the fact that monetary union is not tied to fiscal union – it is a demand-shortfall recession that can be terminated by using reflationary policies, either within existing institutions or by tweaking them to match the new economic environment.

Krugman has led the charge policy failure, attacking the European Union -- Germany in particular -- for outmoded economic ideas bordering on madness. We agree that current debacle has important Keynesian elements, but we disagree its persistence is the result of policy mistakes. Instead we argue that the intractability of the crisis has deep-seated structural-institutional causes and that the rejection of Keynesian solutions in the north is based on a rational understanding of how macroeconomic policies work in the institutional context of those countries.

The fundamental problem with the Eurozone is that it is not an optimal currency area. We explain the assumptions of optimal currency theory and why the Eurozone does not satisfy them. In particular the interaction between macroeconomic policies and national institutions works very differently for different parts of the union, rendering policies that are appropriate for southern Europe dysfunctional for northern Europe, and vice versa. This does not necessarily mean that the eventual outcome is a breakup of the Eurozone, but if the union is to stay intact and prosper it will most likely require major domestic reforms in the south coupled with large north-south transfers; and this is a bargained outcome that is subject to intractable holdout and war of attrition dynamics. Perpetual austerity is a feasible outcome in this game.

How then did the EMU members end up in this suboptimal situation? By and large they did so because each government pursued goals that served their own immediate interests well, yet paid little heed to the long-term difficulties of achieving high economic performance in a monetary union of such disparate parts. In the words of Andy Moravcsik (2012), everyone got what they wanted, but no one aimed to create a viable macroeconomic union.

The origin of the EMU looks very much like an elite bargain of the sort that is emphasized by Moravcsik and Katzenstein (1998) and others in the intergovernmentalist tradition of European integration research. Since its creation, the EMU has spun multiple crises that have preoccupied

EU policy-makers since 2008, and in that sense the neo-functional emphasis on “unintended consequences” also resonates with the history of the Eurozone. Contemporary neofunctionalists like Schimmerfennig (2014) even argues that responses to the crises -- including quantitative easing by the ECB, the emergence of the European Stability Mechanism, banking reform, and strengthening of fiscal supervision -- is evidence that the crisis has fueled a new round of successful European integration. But to us these initiatives look rather feeble and ad hoc, and they have not turned the Eurozone into an optimal currency area.

The reason we suggest, is that doing would require deep domestic reforms for which there is no political appetite in either the north or the south. In this assessment we come close to what Hooghe and Marks (2008) call a “postfunctionalist” approach to European integration, in which a closer union runs up against anti-European domestic public opinion and divisive identity politics. Our account does emphasize public opinion or national identity, but we agree that the required domestic reforms stir opposition from groups with a strong stake in the status quo. What distinguishes our approach is the notion that the status quo is undergirded by the very political-economic institutions that would need to be reformed.

The rest of the paper is organized into four sections. First, we briefly review the basic logic of optimal currency area theory, which forms the backdrop for assessing the EMU experience. In the second section we explain the role of macroeconomic policies in the distinct structural-institutional environments of the northern and southern European economies, and we suggest why these different forms of capitalism are not part of a single optimal currency area. Third, we discuss how the EMU came into being as the result of an intergovernmental bargain in which the monetary union solved immediate political and economic problems, yet did not carve a political path to arriving at an optimal currency area. Finally, we capture European efforts to solve the crisis in the form of a war of attrition bargaining game between the north and south, and we assess different scenarios for resolving the crisis.

2. Optimal currency area theory

3. Structural-institutional tensions in the EMU

The European economic and monetary union (EMU) and its key institutions -- especially, of course, the common currency (the euro), the European Central Bank (ECB), and the (now amended) Stability Pact -- were built around a northern European model of capitalism. There may have been some hope that the functioning of these institutions would ultimately reflect a measure of compromise between the interests of northern and southern European governments, with France playing the role of broker, but the reality is different. ECB policies have been every bit as restrictive as the Bundesbank's, and one of the first decisive post-crisis actions of the Eurozone governments was to affirm the tight fiscal rules in the Stability Pact and strengthen the

hand of the European Commission in enforcing them. The changes of ECB policies under Draghi to purchase government debt and quantitative easing show that the bank is indeed independent, but they are very modest measures in desperate times. Unemployment in the Eurozone has only come down from a peak of 12 percent in 2013 to 11.5 percent at the end of 2014. Even more striking is the regional variation with youth unemployment is over 50 percent in Spain and Greece and under eight percent in Germany.

Eurozone institutions were not only created on northern European terms, they have functioned, and continue to function, on northern European terms. We first need to understand, therefore, what the northern European model of capitalism is.

2.1. The Northern European Export Model

As we have argued elsewhere, the northern European model of capitalism is built on institutions designed to promote international competitiveness and exports.¹ The export sector is treated as the engine of growth, leading the way for the rest of the economy. Wages are set through collective bargaining, with the internationally-oriented, high-productivity sector playing the role as wage leader; a feature long ago recognized by Aukrust (1977) and Edgren, Faxen, and Odhner (1973). Because wage-setters in this sector are large and pace-setting, they make choices in the anticipation that their actions will affect aggregate wages and prices. But how this impacts the welfare of members of unions and employer associations depends on the response of the central bank. If the central bank is concerned about employment and growth, higher wages and prices will be accommodated through lower interest rates and devaluations. That in turns undermines the incentive of unions to act restrained. Each union knows that *its* wages will not have an appreciable effect on aggregate demand, and hence employment, while its members still benefit from higher wages. The result is a classic collective action problem: all unions push for higher wages, and the consequence is higher unemployment and lower competitiveness.

The solution to this problem has been a non-accommodating, inflation-averse central bank that responds to excessive wage increases by raising interest rates. This is only possible by increasing unemployment, but the prospect of rising unemployment is precisely the key to wage restraint. Because each union has an appreciable effect on prices, the effect of wage hikes in a non-accommodating setting is a reduction of aggregate demand (or in the “real money supply”), and hence also an increase in unemployment. In consequence, unions face a steeper tradeoff between wages and employment than when the bank is accommodating, and they will therefore choose lower wages. This argument also applies to fiscal policy, and just as governments have an incentive to delegate monetary policy autonomy to an independent central bank they have an incentive to institute tough fiscal rules and transparent budgetary procedures that clearly signals to wage-setters that inflationary bargains will not lead to off-setting expansions in aggregate

¹ We build on Soskice (1990), Iversen (1998; 1999), Soskice and Iversen (2000), and Iversen and Soskice (2010).

demand. In practice this is done by vesting strong powers in a finance ministry charged with enforcing a collectively agreed budget constraint (Hallerberg 2004, von Hagen and Hallerberg 1999).

Non-accommodating macroeconomic policies depresses domestic demand, which is a Keynesian effect, and in order for this effect to be outweighed by lower real exchange rates and rising demand for exports, the export share of the economy has to be large. In Germany, the largest country in the EU, exports as a share of GDP exceeded 50 percent in 2013, and in most other northern European countries the share is higher still. In none of the southern European countries is the share more than a third. France looks more like southern Europe in this respect (28 percent), and although state-mediated coordination of wage bargaining is greater in France than in southern Europe, with collective wage agreements extended to a great majority of workers, in some respects (discussed below) France looks more like a southern European than a northern European economy.

In addition to the effect on wage restraint, restrictive monetary and fiscal policies induce investment in skills. This happens via three mechanisms. The first is that training slots as well as high value added skilled employment depend on net exports, and letting moderation in real wage bargaining operate in loose labor markets produces the desired results, while expansionary fiscal policies with rising wage demands do not. While this strategy could mean that it takes longer to return to full employment after a shock, with a sufficiently large export sector the economy will return to equilibrium, and no debt will be accumulated in the process. This ‘normal’ case is where an improvement in competitiveness unambiguously increases aggregate demand – any potential negative effect of real wage moderation on consumption is outweighed by the positive effects on net exports.

The second mechanism is via firm-level cooperation. Hancké (2002) argues that an institutional complement to macroeconomically-induced wage moderation is the strong incentive given to works councils to cooperate with management in producing labor productivity/quality/innovation improvements. These enable skilled employees to gain local-level wage and benefit improvements while still producing overall increases in competitiveness; in so far as these are product quality or innovation improvements they increase rather than reduce firm demand for skilled labor and hence in principle boost training slots.

Finally, intersectoral wage compression increase demand for skilled labor. There is strong empirical evidence that coordinated bargaining increases wages in relatively low-productivity, domestically-oriented sectors and reduces them in high-productivity, skill-intensive internationally-oriented sectors (Wren 2013; Iversen and Soskice 2010). This magnifies the competitiveness effects of wage restraint.

Together these mechanisms call attention to another critical feature of the northern European model: effective and well-funded training systems. Because relatively low wages on skilled labor

push up demand, while the opposite is true for semi-skilled labor, the “excess” demand has to be met through training systems that can effectively shift labor from low to high productivity occupations.

All three mechanisms also have salutary medium- and long-term effects on growth. But they are not easily replicated in different institutional settings. Effective training systems require well-organized employers to prevent poaching and free-riding, it requires coordinated action by unions to ensure that newly trained workers are priced into jobs, it requires an institutionalized “from school to work” transition to match supply to demand, and it requires governments (and/or employers) willing to subsidize the costs of training.

Politically the model is supported by well-organized businesses in the leading sector of the economy, large industry unions, and a compromise between skilled and semi-skilled labor involving heavy investment in secondary education and vocational training. There are clearly differences between skilled and semi-skilled workers in their preferences over wages and training subsidies, but the conflict is tempered by a common interest in promoting exports and growth. This common interest extends to political parties that represent distinct but interdependent groups, and compete on programmatic policy differences rather than by building clientilistic networks with narrowly defined groups of voters. Since heavy investment in co-specific skills, and coordinated wage bargaining, tie the interests of different groups together, parties and governments understand that it is difficult for *anyone* to move forward without *everyone* moving forward. It is the institutional equivalent of chain-ganging.

Employers who rely on semi-skilled workers and low wages are clearly disadvantaged in the northern European model, and they are politically marginalized, even as their attempts to “opt out” of the industrial relations system can create problems of dualism (Thelen 2012).² In all the northern European countries, however, there is a broad political compromise to support training, collective bargaining, and export competitiveness. Institutionally, this compromise is underwritten by proportional electoral systems, representative parties, and a corporatist-style policy-making process with strong legislative committees where all major parties are represented, and close ties between committee and regulatory agencies in which the main employer and union interests are represented (Powell 2000).

2.2. The southern European dual-sector model

The southern European countries exhibit institutions that are sometimes portrayed as institutional disequilibria, or at least as inchoate systems (Hall and Gingerich 2009). Yet these institutions do in fact exhibit linkages that are tightly integrated and highly resilient to change, even as they are not conducive to good economic performance. They are part of what can be understood as an

² How much these dualist tendencies are counteracted through government policies depends on how well represented low-end workers are in the political system. Generally speaking, where Christian democratic parties have been politically strong, Germany being a prime example, dualism has been allowed to develop further than in systems where it is difficult to form alliances without participation of social democrats, notably in Scandinavia.

institutional equilibrium, and resemble the situation in many Latin American countries (Wibbels, forthcoming).

All southern European cases exhibit pronounced features of dualism between a formal and an informal sector. The formal sector has strong but uncoordinated unions and professions, pays good wages and benefits, and has high levels of employment protection, underwritten by restrictive hiring and firing legislation and elaborate regulations of entry into the professions (references?). Until recently all southern European countries also had state ownership of several industries and sometimes detailed product market regulations (though these have come down). The informal sector, on the other hand, has weak unions, low wages and benefits, and is essentially unregulated. This division does not coincide with the distinction between traded and non-traded sectors. While jobs in export-oriented firms are mostly in the formal sector, many non-traded professions, including public employees, are also in the formal sector. Also, while the informal sector is generally low-skilled and produces little for export, it incorporates a vibrant and competitive service sector that has traditionally been linked to comparative advantages in tourism. Formally untraded, these services bring in significant spending from the rest of Europe.

It is clear from this description that the southern European countries lack two of the key elements of the Northern European model: capacity for wage restraint and intersectoral wage leveling. The former is absent because of strong formal sector unions and professions, which are too fragmented and uncoordinated to seriously incorporate macro-level effects of inflationary wage bargains, and because unionized workers are too protected to feel seriously constrained by the risk of unemployment. Intersectoral wage dispersion is a function of lacking cross-union and cross-sector coordination, cemented by the interest of formal sector unions in holding down wages in the informal sector. Unlike the northern European model where the welfare of a large portion of workers across sectors depend on the success of exports, “insiders” in the formal sector worry little about coordinating wages with “outsiders” in the informal sector. Instead, insiders benefit from low domestic prices on a wide range of personal and social services.

This strong dualistic feature of the southern European economies in turn has consequences for training policies. Because skilled wages are not limited by union restraint and intersectoral wage compression, demand for skilled workers is depressed, and since insiders are protected against layoffs it is very difficult to put downward pressure on skilled wages by increasing supply. This works to the detriment of competitiveness in the internationally oriented sector, and it means that growth cannot rely on external demand. While young people enter into the educational system in large numbers because a formal degree is a prerequisite for competing for highly coveted jobs in the formal sector, only those jobs that open up as a result of natural attrition usually become available. Competition for jobs is intense, but it is impossible for young workers to price themselves into formal sector jobs, and many instead end up unemployed, underemployed, or working for low pay in the informal sector. In 2013 the youth unemployment rate in southern Europe ranged from 38 percent in Portugal and 40 percent in Italy to 56 percent in Spain and 58

percent in Greece, while in the northern Eurozone members these numbers vary from eight percent in Germany to 25 percent in France (again, France comes closest to the southern tier).

Macroeconomic policies in this context work very differently than in the northern European model. Since unions in the formal sector are individually small and uncoordinated, and wages in the informal sector are set competitively, monetary and fiscal policy cannot be used to deter inflationary wage bargains. Instead, non-accommodating policies simply create unemployment, at least in the short run. On the other hand, accommodating policies undermine competitiveness by raising the real exchange rate, drive up the current account deficit, and cannot prevent unemployment from reaching its equilibrium level beyond the short and medium run. In the pre-EMU era this build-up of current account pressure prompted governments to occasionally “let out steam” through currency-devaluations. Because wages were highly downward sticky in the formal sector, devaluations was the only effective method to address trade imbalances. This cycle of real exchange rate appreciation, macroeconomic accommodation, and devaluation is also a well-known from Latin America (see Blomberg, Stein, and Frieden. 2005; Fernandez-Albertos, 2007).³

How is a system that ignores the interests of outsiders and produces such poor macroeconomic performance sustainable politically? The short answer is that insiders are pivotal in the political system. But why this is the case is not so obvious because (mostly male) workers with secure well-paying jobs are a fairly small minority of the electorate, even using broad definitions of “insiders”. To understand this we have to consider the role of the family in southern Europe, as well as the role of clientilism. Family structure in these countries tends to be very traditional with a male breadwinner and a dependent household. Divorce rates are low⁴, and while women and young people are excluded from effectively competing for good jobs, they are critically dependent on the male breadwinner. Undermining job protection and deregulating the professions would undoubtedly create better employment opportunities for outsiders in the medium to long run, but the short run effect is to produce very significant economic insecurity. The finances of a traditional household with the husband in a good, well-paying job that includes health and pension coverage would be devastated if he lost his job. Simply put, insiders are married to outsiders and this fact brings the insider coalition well beyond the 50 percent electoral threshold.

This political equilibrium is reinforced by clientilistic networks, with weak parties and politicians catering to narrow constituencies (Kitschelt 2012). Open list electoral systems in Greece and during long periods in Italy (the latter has been in flux lately) give ample

³ This inflation-devaluation cycle also haunted Denmark and Sweden during the 1970s (Denmark) and 1980s (Sweden). Unlike the southern European cases, however, once macroeconomic policies turned non-accommodating the need for devaluations disappeared because industry-level wage bargaining along the lines of the northern European model enabled restraint (see Iversen 1999 for details on the switch).

⁴ Divorce rates in Greece, Italy and Spain were about one percent per inhabitant in 2010; less than half the European mean (Eurustat, Population Database 2012). Portugal is an exception in this respect, experiencing a convergence to northern European rates in the past two decades.

opportunities for small well-organized groups, including industry lobbies, unions and the professions, to influence politics with little regard for the common good. Elections to the Spanish Congress of Deputies approximate a majoritarian two party system, but elections to the Senate involve a large number of personal votes on open lists. Portugal has a semi-presidential system with two major parties, and while the electoral system is closed list, the strong powers of the popularly elected president breed weak parties. According to a new large-scale cross-country expert survey, clientilism is widespread in all four countries and it has helped entrench highly regulated labor and product markets, and until recently also widespread state ownership of industry (Kitschelt 2012).

The structural-institutional differences between the two varieties of capitalism in the euro-zone are summarized in Table 1, using both descriptive vignettes and quantitative indicators. The latter largely confirms the qualitative differences we have described above: the north exports more, exhibits more coordinated wage bargaining, trains more, is less clientilistic, and had (prior to the EMU) more independent central banks.

Yet there are some qualifications to this general picture, most notably in the case of France. While France is counted here as a northern European country, it had slightly lower exports as a share of GDP than Portugal. This partly reflects a larger internal market, and it would not hold if we controlled for country size, but it is still true that France is much less export-oriented than the rest of northern Europe. It also has less wage coordination than any of the countries in our analysis, although, as noted above, it does have very high collective bargaining coverage (91 percent). The only other “overlap” between the north and the south is in vocational training where Austria shows lower numbers than in Spain. Yet, the “from school to work” transition in Austria is much more institutionalized, and newly trained workers are more effectively priced into work than in Spain (references?). This difference shows up in the fact that Austria has one of the lowest and Spain one of the highest youth unemployment rates (9 versus 56 percent in 2013).

Table 1. Summary of relevant institutional differences between Southern Europe and Northern Europe.

	Northern Europe	Southern Europe	Indicators (average and range)
Economic structure	Export-led two-sector model	Formal versus informal sector division	Export as a share of GDP: North: 52 percent [27, 78] South: 26 [23, 29]
Wage-Setting system	Large industry unions and employer associations with cross-sector wage coordination	Uncoordinated unions in formal sector and competitive wage-setting in informal sector	Coordination of wage bargaining: North: 42 [11, 51] South: 22 [18, 25]
Macro-economic policies	Non-accommodating policies with independent central bank and strong finance ministry	Accommodating policies with dependent central bank and flexible exchange rates and fiscal policies	Central bank independence: North: 9.2 [7, 13] South: 4.3 [3, 5]
Training system	Highly developed and publicly supported training system with institutionalized from-school-to-work transition	Weakly developed training system with poorly institutionalized from-school-to-work transition	(i) Vocational training ratio: North: 35 [20, 53] South: 20 [4, 36] (ii) Spending on active labor market programs North: 1.01 [0.62, 1.37] South: 0.65 [0.61; 0.73]
Political system	PR list systems with strong programmatic parties and capacity for collective action	Clientilistic networks with weak parties and low collective action capacity	Clientilism index: North: 8.2 [6.5, 9.4] South: 12.1 [11.3, 12.6]

Notes: **Export as a share of GDP:** Exports of all goods and services as a percent of GDP, 2000-2010. *Source:* OECD.Stat. **Coordination of wage bargaining:** average of two measures of bargaining coordination by OECD (2004, Table 3.5) and Ochel (2000). The index was multiplied by collective bargaining coverage in percent of employment (Ochel 2001). It refers to the period from 1980 until the end of the 1990s. **Central bank independence:** Index that varies from 0 to 15, with higher values implying greater economic and political independence. It refers to the 1980s. There are no data for Finland. *Source:* Grilli, Masciandro and Tabellini (1991). **Training system:** **(i) Vocational training activity** is the share of an age cohort in either secondary or postsecondary (ISCED5) vocational training. The data refer to the 1980 and early 1990s (not available for later dates). *Source:* UNESCO; **(ii) spending on active labor market programs:** Average spending as a percent of GDP, 2000-2010. *Source:* OECD SOCX database, OECD.Stat. **Clientilism index:** Index that varies between based on an expert survey of clientilist practices by political parties. When a party uses highly targeted benefits as opposed to broad programmatic policy statements to get electoral support it is accorded a high value; otherwise a low value. The index is a weighted average across parties in each country. *Source:* Kitschelt (2012).

2.3. Two varieties of capitalism in a single market and currency

We can get a good sense of the economic consequences of the differences between northern and southern Europe by comparing countries on two outcome dimensions: i) international competitiveness, and ii) domestic price levels. In the northern European model relative wages in the high-productivity export sector are kept low and competitive, complemented by an effective training system, while wages and benefits in the non-traded low-productivity sector are kept relatively high. This implies high international competitiveness, but also high domestic price levels. The opposite pattern holds for southern Europe because wages are relatively high in the traded sector, undermining competitiveness, whereas domestic prices are held down by low wages and benefits in the non-traded, informal sector.

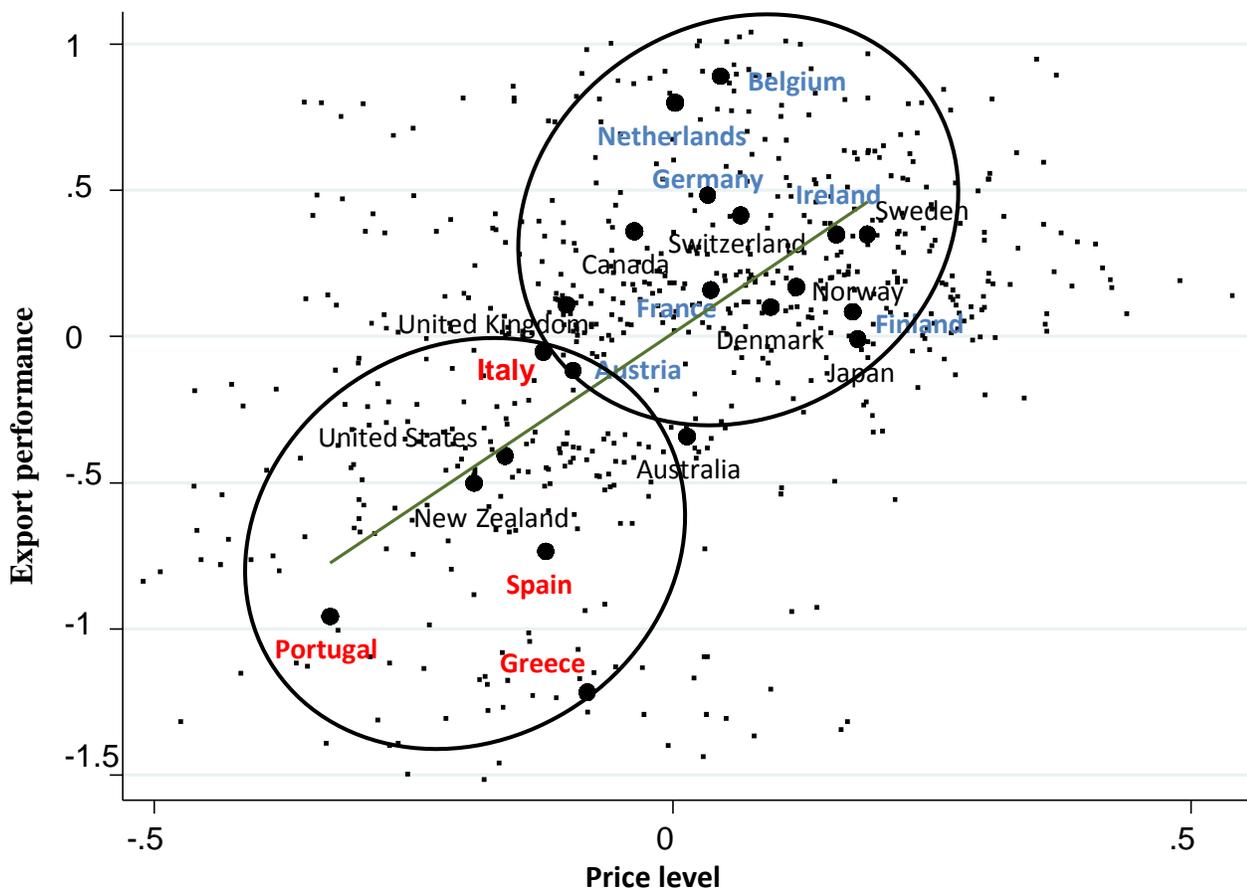
These differences are clearly revealed in Figure 1, which plots OECD countries on the two dimensions, covering the period from the end of Bretton Woods and up until the adoption of the common currency in 1999. Competitiveness is measured as a country's share of OECD exports divided by its share of OECD output (GDP).⁵ Domestic prices are measured by dividing the nominal dollar exchange rate in each country by the purchasing power parity (PPP) exchange rate. The PPP exchange rate is the rate that would equalize the buying power of a dollar between the US and a particular country based on an average basket of goods and services. So if the actual dollar exchange rate is higher than the PPP exchange rate it means that a dollar buys less than it would in the US, implying a higher price level.⁶

With the partial exception of Austria, note that the northern and southern European Eurozone members are at opposite ends on the two dimensions, with the former exhibiting high domestic price levels but also high export performance, while the latter combine low domestic prices with poor export performance. This pattern reflects the institutional-economic differences we outlined in the previous section, but it also shows that the members of the Eurozone could hardly have been chosen to have more distinct institutions and economic fundamentals. Institutionally speaking, the two economic systems are unambiguously *not* part of an optimal currency area.

⁵ The numbers have been adjusted for the effect of country size (measured as GDP) on exports because small countries tend to trade more without necessarily being more competitive.

⁶ The numbers have been adjusted for GDP per capita because poorer countries tend to have lower prices for reasons that are unrelated to the wage structure (known as the Balassa-Samuelson effect).

Figure 1. Two clusters of euro-zone countries (bolded) using price levels and export performance, 1972-2000.



Notes: Export performance is the share of OECD exports divided by the share of OECD GDP minus the effect of country GDP in a regression with real exchange rates and country GDP as predictors. Small dots indicate country-year observations; large dots country averages. The price level is the log of the PPP real exchange rate divided by the actual exchange rate (using the US dollar as the reference currency) after subtracting the effect of GDP/capita on the real exchange rate.

Yet, in the short run there were gains to be had for both the north and the south. One of the most serious problems afflicting all of the southern economies was their weak currencies and the build-in expectation that nominal exchange rates, despite being in principle fixed, would depreciate over time. Such expectations commanded a high risk premium, and real interest rates were consequently well above the rest of Europe. In turn, this caused undercapitalized banks, lack of risk-willing foreign capital, and curbs on credit-based consumer spending. The prospect of a significant increase in access to foreign capital was therefore politically very attractive: an

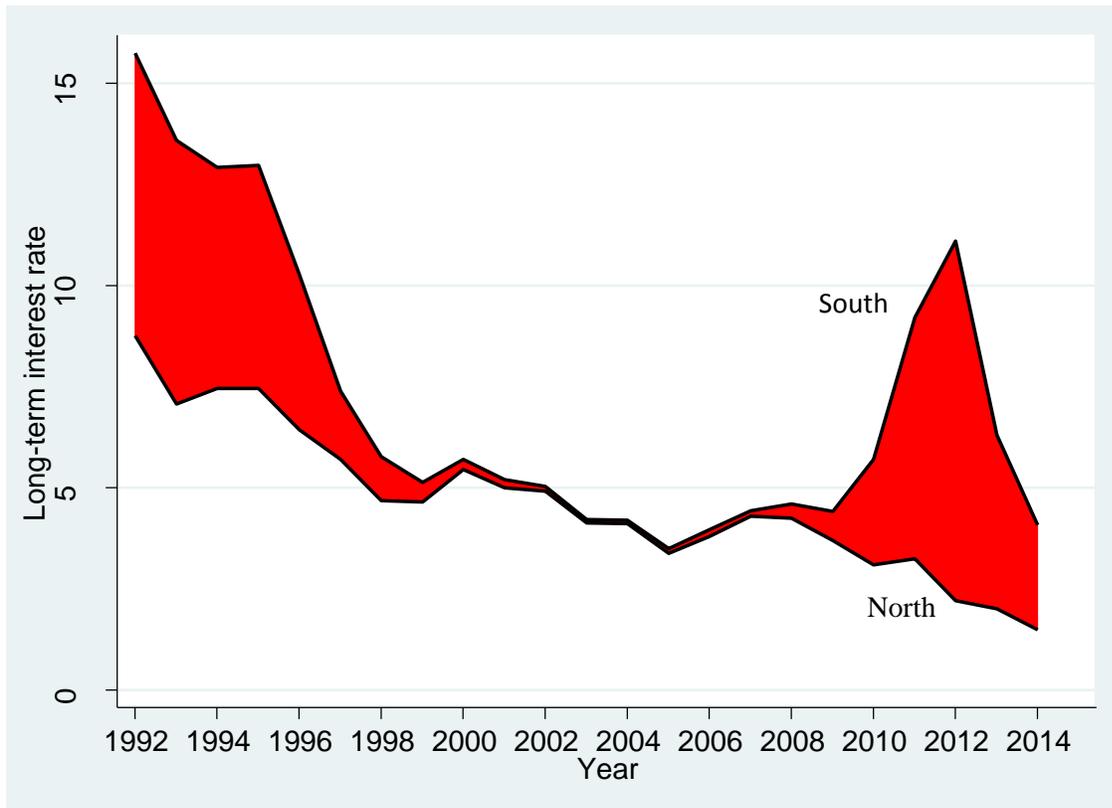
expansion in private consumption, rising real estate prices, and lower financing costs of public debt.

All these expectations were realized. Long-term interest rates went from nearly 16 percent on average at the signing of the Maastricht Treaty (in 1992) to less than four percent in 2005, and the interest risk premium dropped from more than seven percent to practically nil in the same period (see Figure 2). With access to cheap credit consumption also expanded, especially in Greece and Spain (Tilford 2010), and this in turn had salutary effects on growth and employment. Unemployment declined in every country except Portugal, falling from 3 percent above the northern rate in 1999 to 1 percent in 2005, the year when southern interest rates bottomed out.

Once the crisis hit, however, fortunes reversed. Housing prices collapsed, consumption dropped, and unemployment rates rose much faster in the south than in the north, reaching 15 percent in 2011 versus 6 percent in the north. This collapse in employment reflected the build-up of massive structural imbalances. We will consider the reemergence of the interest rate premium below. Suffice it to say that it is not simply a function of the build-up of debt but also of the reappearance of the exchange rate depreciation (in the form of an exit from the Euro).

Nowhere are the structural imbalances as evident as in the area of trade. If monetary union had been expected to permit southern Europe to close the competitiveness gap with northern Europe the euro was a massive disappointment. This is starkly revealed in Figure 3. Using exports as a percent of GDP for northern and southern Europe, the thick solid line is the gap between the two euro-zone regions. Note that in the two decades preceding the Maastricht Treaty this gap fluctuated between 20 and 25 percent, but starting in 1992, when exchange rates were effectively locked in, there was a strong, secular rise in the gap, reaching over 40 percent in 2008. Correspondingly, the north trade surplus grew while in the south the deficit rose. The slight improvement from 2008 is the result of a collapse of demand in southern Europe and the resulting drop in imports from the north.

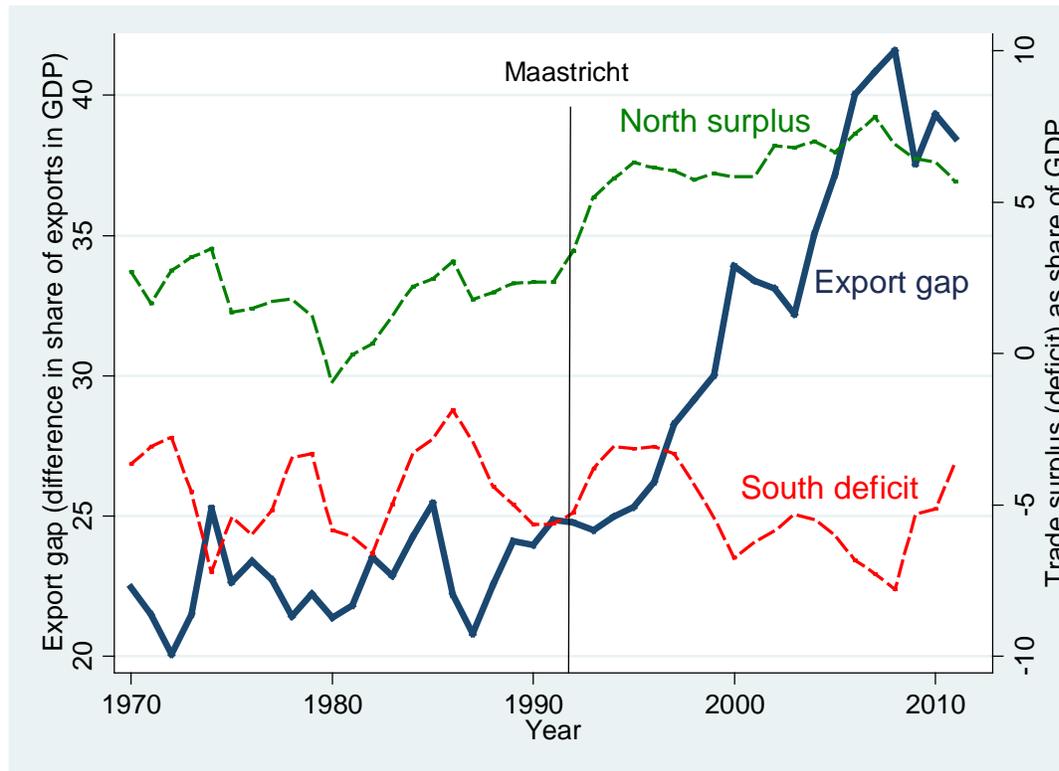
Figure 2. The southern European risk premium on long term interest rates from the Maastricht Treaty to 2011 (red area is the spread between north and south)



Note: Long-term interest rates refer to Maastricht criterion 10-year bond yields. This is the definition used for the convergence criterion for EMU for long-term interest rates (central government bond yields on the secondary market, gross of tax, with around 10 years' residual maturity). *Source:* Eurostat.

The reason for the rising competitiveness gap is not hard to fathom in light of the institutional-structural differences described above. Unable to control labor costs and without access to exchange rate devaluations, real labor costs on southern exports soared. In northern Europe, on the other hand, real exchange rates dropped as skilled wage restraint was no longer (partially) offset by nominal exchange rate appreciations. Since nominal exchange rates cannot adjust in a currency union, any differences in the capacity of countries to promote the competitiveness of exports will be fully passed through as real exchange rate depreciations. Skilled wage restraint combined with heavy investment in training therefore propelled northern Europe -- Germany in particular -- to a hegemonic trade position within Europe. This competitiveness shift was complemented, for a while, by capital flowing from the north to the south as perceived exchange rate risks disappeared.

Figure 3. The North-South trade gap



Notes: Thick solid blue line: Exports as a percent of GDP in northern European euro members minus exports as a percent of GDP in southern Europe as a percent of GDP (measured on left axis). Thin dashed lines: Trade surplus as a percent of GDP; northern (green) versus southern European member countries (measured on right axis). Source: OECD: National Accounts at a Glance.

Once the financial crisis hit, not only did it reveal the riskiness of many southern European investments, but, more importantly, raised questions about the sustainability of the EMU project itself.

The crisis is sometimes called a sovereign debt crisis, but while it is true that Greek governments accumulated large, unsustainable public debt prior to 2008, and hid much of it from the world using fraudulent accounting, this is not true of Portugal and Spain, which ran primary government surpluses. The level of public debt is also not a variable that clearly distinguishes the north from the south. Before the crisis hit, the average debt-to-GDP level for the north was 66 percent between 1992 and 2007 while for the south it was 81 percent (74 without Greece). In Spain, for a while considered second in line for a euro exit, debt was 54 percent. It is true that southern debt has since risen much faster in the south – in 2011 it was 131 percent compared to 80 percent in the north – but the reason is higher post-crisis interest rates, not exceptionally high initial debt levels.

To explain this pattern we need to recognize that there are two sources of interest rate premia. The first is the risk of default due to unsustainable debt levels; the second is the risk of devaluation, which is due to a combination of debt and unsustainable current account deficits. While defaults on sovereign debt can in principle occur inside the Euro, most see it as highly unlikely. When Draghi introduced his Outright Monetary Transactions (OMT) bond buying program in 2012 it was justified not to help Greece and other southern European countries avoid default, but to save the Euro. The effect is very notable in Figure 2 above. But this does not mean that the regional trade imbalances play no role. Indeed, while long-term rates ranged from 1.2 to 1.6 in the north in 2014, in the south the figures were between 2.7 and 6.9.

To assess the independent role of imbalances we regressed long-term interest rates (Maastricht definition) on the trade balance and government debt for each year starting in 1990 and ending in 2013. We exclude Greece from this analysis because it is such a big outlier for the reasons explained above. Using standardized regression coefficients, Figure 4 shows how the relative importance of the two variables in “explaining” interest rates evolved over time.

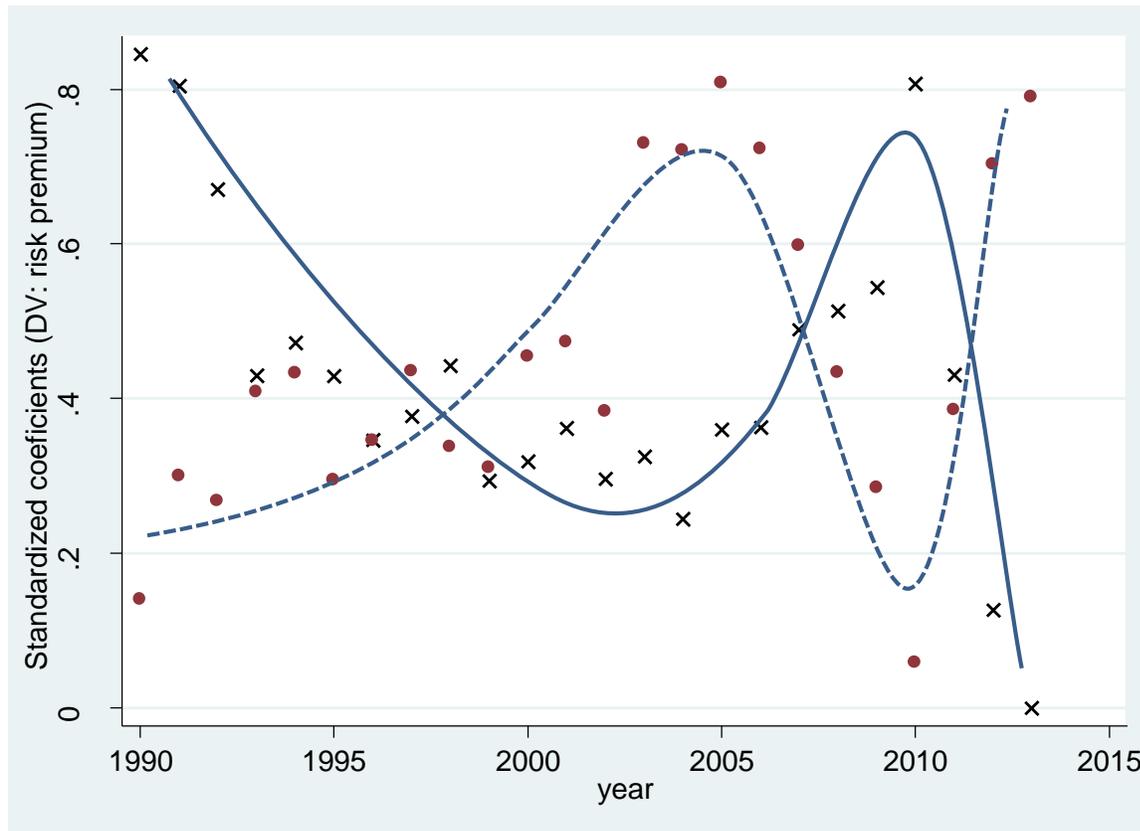
The coefficients move in an out-of-phase pattern over time, and they tell a rough economic history of the Euro. Prior to Maastricht, by far the strongest predictor of the interest rate premium on government long-term debt was the trade deficit. Expecting a high probability of southern European devaluations, investors demanded a premium on holding debt in the local currency. As the EMU was implemented, the importance of trade deficits in determining interest rates diminished as the common currency came to be seen as irreversible, eliminating any devaluation risk. Instead, the risk of government default became the overriding concern of investors. This risk was seen as small in the period up until the crisis, and interest rates varied little across countries (refer back to figure 2). The variance that did exist was due to a normal market assessment of sovereign debt default risk, and since debt and deficits varied little (with the exception of Greece) risk premia were small. We might call this the normal operation of a common currency area.

But after the crisis hit, interest rates rose sharply in southern Europe. Because debt levels were similar, this increasing spread is very hard to explain by differences in default risks, and debt is also a very poor predictor of interest rates. Instead, these again become closely associated with trade deficits. The only way to understand this is that investors perceived a risk that some countries would not be able to remain in the euro because of trade deficits whose underlying causes would be very difficult to tackle without a large “devaluation”. The risk of exit is clearly seen as much smaller than the risk of devaluation prior to Maastricht, but if a breakup does happen the devaluation would be much larger.

From this perspective the decline in the effect of the trade deficit and rise in the effect of debt may be seen a return to normal. Of course, the sovereign debt default risk never disappeared, but the huge rise in the risk premium after 2008 was due to real fear of exit from the Euro, and we see this fear rooted in deep structural-institutional conditions. Mr. Draghi’s determination to “do

everything necessary to save the Euro” and the willingness of northern governments to play along by accepting debt restructuring saved the Euro. But these policies did not alter the underlying structural problems, and we are very likely to go through another phase in the lingering crisis. Greece just avoided default by the skin of the teeth, and it will require painful reforms to avoid another crisis. The decision to carry out such reforms to make the Euro sustainable, or to break it up, is a political decision. The future of the Euro is in fact a function of a series of decisions by governments who are in strategic interaction with each other, and who face distinct domestic constraints. Having analyzed the structural-institutional conditions for the crisis, we can consider these

Figure 4. The estimated effects of the trade deficit and government debt on long-term interest rate premia, by year (excluding Greece)



Notes: Observations are the estimated effects of the trade deficit and government debt on long-term interest rates (using Maastricht criterion 10-year bond yields; see notes to Figure 2 for details). The x's are the estimated coefficients for the trade deficit; the dots are the estimated coefficients for government debt. The curves are smoothed lines connecting the observations over time. The estimating equation is: Interest rate = constant + β_1 · trade deficit + β_2 · government debt + error.

4. Why did they do it?

There is no indication in the debates surrounding the Maastricht treaty, nor in the implementation of the Euro, that either economists or policy-makers believed the Eurozone *was* an optimal currency area. Some economists seem to have pinned their hopes on what is essentially a political logic, namely that governments in the southern euro countries would come under great pressure to reform their labor markets and liberalize protected industries when they could no longer resort to devaluations (references?). In these accounts, increased labor market flexibility, both in terms of employment and wages, would ultimately enable southern European economies to catch up to the north in terms of competitiveness and exports.

Whether southern European policy-makers also believed that such institutional adaptation would happen is doubtful. There was certainly an ambition to modernize their economies and perhaps even an expectation of gradual institutional convergence, making companies more competitive and providing a lasting improvement to the trade balance. But such hopes were not what swayed policy-makers. In the short and medium term there were much more tangible and realistic goals, the most immediate of which was to increase foreign capital inflows and reduce interest rates. This, it was expected, with some justification as we saw above, to fuel investment and growth in the short and medium run.

The competitiveness effect of monetary union was in turn a main motivator for northern European governments, and while this is not a paper about the origins of the EMU, evidence suggests that it played an important role in convincing a country like Germany to give up its cherished Deutschemark. Indeed, according to Moravcsik, a leading expert on EU institution building, the prospect of continued German trade expansion was a key element in persuading German and other northern European leaders to go along, just as the prospect of large capital inflows was important in persuading governments in the south to do the same (Moravcsik 2011). As Moravcsik aptly puts it, both sides got exactly what they wanted.

In addition there were geopolitical considerations that cannot be ignored. With German unification there were widespread fears of a resurgent Germany abandoning Europe and going it alone. This was a particularly weighty consideration in France, which did not need the euro to address the credibility problems that plagued the southern European countries, and did not have a “northern European” institutional infrastructure that would have made monetary union a boon for export. Instead France was anxious to reintegrate Germany into Europe....

[Presumably more detail plus references to intergovernmentalism]

5. The politics of negotiating the north-south divide

As the previous analysis hopefully makes clear, the Eurozone crisis has structural-institutional foundations that shape the political options available to national decision-makers. But the structural imbalances also continuously put distributive issues on the table that cannot easily be ignored, precisely because they have deep structural-institutional roots. And each time a new crisis emerges, such as the recent Greek attempt to renegotiate the bailout terms, the institutions themselves are objects of negotiation. This pattern is not unlike the unintended consequences envisioned in neo-functional theory, the spill-over effects into genuine reforms are lacking.

In the simplest form, we can think about the politics of the Eurozone crisis as a bargaining game between the north and the south, mediated by European and domestic institutions (see Figure 5). In panel a) the bargaining line represents possible compromises between north and south where points further to the right indicates more attractive terms for the south, and points further to the

left indicates more attractive terms for the north. To make the presentation as simple as possible we exemplify the logic using Greece and Germany as the “representatives” of the two regions. Since Greece is currently the most vulnerable euro-member it is also sensible to think that “Grexit” would be the opening shot in a broader breakdown, and much of the attention of policy-makers has been, and still is, focused on Greece.

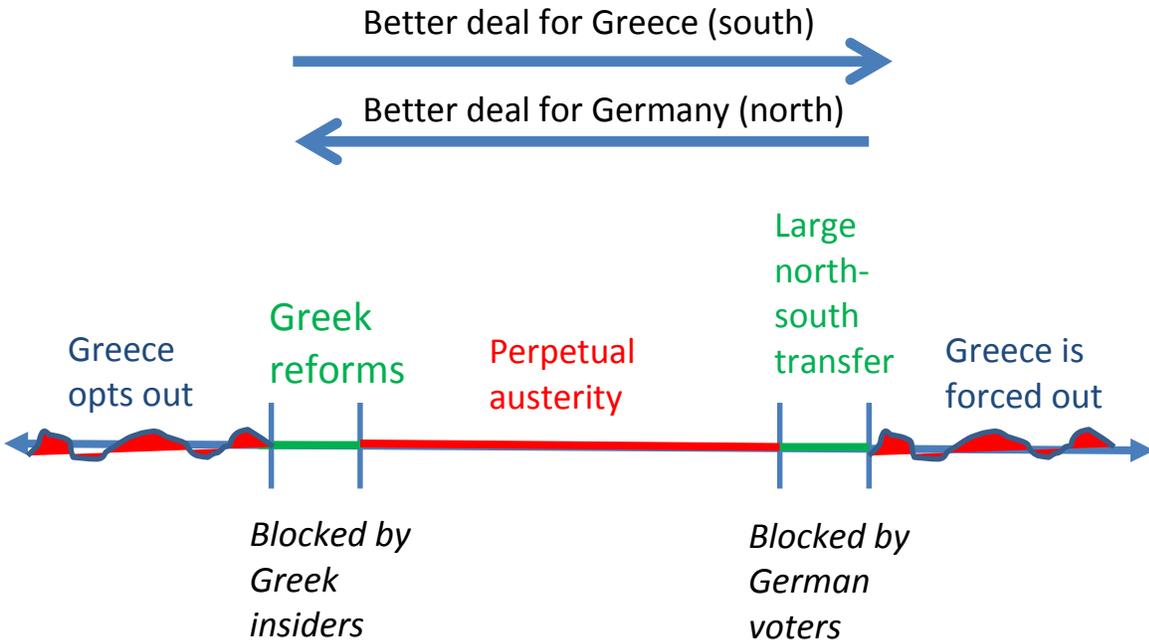
At both ends of the bargaining space is the possibility of a Greek exit – either because Greece opts out or because it is forced out. This could happen if Greece pushes for such a radical renegotiation of the terms of the bailout, including blatant noncompliance with current terms, that it is forced out of the euro. At the other end it could happen if Germany pushes so hard for additional austerity measures in Greece that even insiders would consider exit preferable to staying in the union and enduring the pain. Within these bounds, however, there is a significant bargaining space which arises because of the huge costs that a breakup is perceived to have in both the south and the north.

At the boundaries of the bargaining space are Greek institutional reforms – labor market deregulation, opening of the professions, tight and transparent fiscal rules and budgetary procedures, continued public sector layoffs, and tax reforms – and large northern subsidies to the south in the form of government-backed major debt restructuring and forgiveness. What blocks either solution is the possibility of retaining the union without such reforms, even if this option produces hugely costly European-wide austerity. It is precisely the possibility of keeping the euro without major reforms that is the main problem; what we might call the curse of the large bargaining space. The situation produces a string of mini-crises, but politicians are able to muddle through each time without solving the underlying structural problems. In game theory this is called a war of attrition, and it can go on for a very long time.

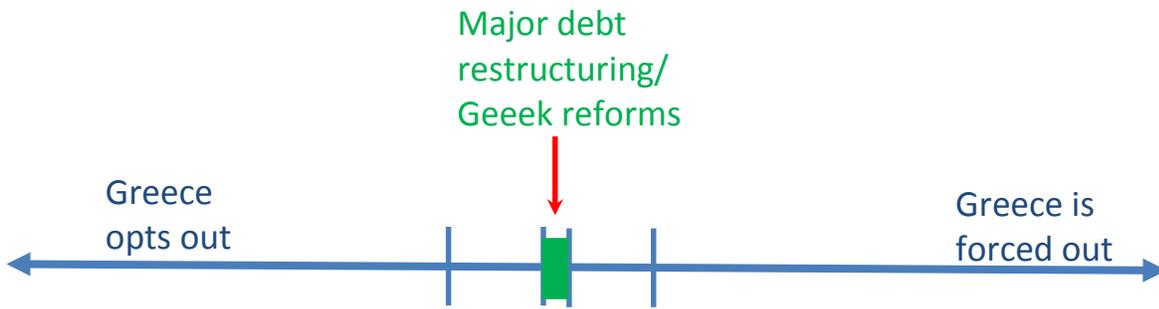
Could this situation change? Certainly. Although austerity of the sort we have witnessed over the past seven years could continue for a long time – witness Japan – the costs may become so prohibitively large that a continuation is seen as less attractive by both sides than reform. In effect, the bargaining space would shrink to the point where a compromise is feasible in which credible commitment to institutional reforms in southern Europe is coupled with major debt restructuring and transfers from the north. The possibility is illustrated in panel b) of Figure 6. If that is to happen, it would probably require a notable deterioration of economic conditions in Germany. This is not an attractive prospect for Europe, or for the world, but it may nevertheless suggest the most optimistic scenario for the future of the euro. Should a compromise along these lines emerge as an equilibrium, southern Europe would again be able to buy northern European products and northern Europe would again be willing to invest in the southern economies. While the trade imbalances would likely reappear, with more flexible internal labor markets and access to cheaper credit would enable internal devaluations and modernizing investments. There is no reason in this scenario that southern European could not do as well within the euro as outside of it, and the expectation of exit would correspondingly go away.

Figure 5. The North-South bargaining game (using Germany and Greece as examples)

a) Large bargaining space



b) Small bargaining space



Given the possibility for mutual gains – a move towards the Pareto-frontier – why are does the bargaining space contain such a large area where such gains cannot be realized? The answer is domestic politics. We consider the constraints from both a northern and southern perspective.

5.1. Insider blockage of southern institutional reforms.

As argued, the euro-zone institutions were created around a northern European model of capitalism, and in principle the crisis could be solved by adopting these institutions in southern Europe. But institutional “choice” at this magnitude is not practical. The northern European model developed over centuries as a result of an intricate coevolution of institutions, collective identities, and coordinated action, and there is no “big bang” shortcut to achieving the same result in southern Europe. More realistically, southern governments may finally fulfill the economists’ promise of major domestic deregulation of labor markets, a breakup of the protected professions, and increased transparency of budgets and budgetary procedures. Since these objectives can be achieved through legislation and decree this solution is available in principle.

While such reforms would not turn the southern European economies into export-driven world beaters, it would put pressure on formal sector wages and enable a more flexible adjustment to a restrictive macroeconomic environment (“internal devaluation”). With time, reforms would allow more well-trained young workers to find employment and help companies modernize and become more efficient. In turn, such prospects would increase the confidence that southern European countries can stay in the euro and hence ease pressures on interest rates; in effect turning a self-fulfilling prophecy of exit into a self-fulfilling prophecy of indefinite membership.

But the political barriers to such reforms are formidable because of the institutional constraints discussed above. If reforms are difficult during good times, they are even harder during times of serious economic disruption. Deregulation would almost certainly be met by firms laying off middle-aged and older workers; precisely the cohort that so many families depend on for their only secure source of income and benefits. Even as youth unemployment hits unprecedented levels, many of these unemployed youth depend entirely on support from their families. The prospects of a euro exit may be even worse than reform for a pivotal number of insiders, but as long as the status quo does not force southern European countries out of the euro, they have no reason to accept painful structural reforms.

The Greek case is exceptional because of the difficulties of [Greek discussion]. But even in this exceptional case there is reason to be skeptical of deep reforms. Syriza has a popular mandate to fight every demand for reform by the Troika, and it has even committed itself to rehiring public employees and renew pension and unemployment commitments.

5.2. Massive debt restructuring: A Marshall plan for the south.

Most analysts agree that the current levels of southern European debt are not sustainable, even in Greece where significant debt restructuring has already occurred twice. Encouraged by their unlimited borrowing facility in the ECB, banks temporarily eased the refinancing burden of southern European governments, but the effect has not lasted. Markets -- including, of course,

banks -- continue to view southern European government bonds as fundamentally risky. Because the risk of default and euro exit has not significantly abated, and because the stability of banks is no less precarious by adding more government debt to their books, a large risk premium on long-term bonds persists.

Major debt restructuring would therefore suggest a path out of the crisis. Although it would not address the underlying structural imbalances in the euro-zone, it would greatly enhance the medium-term prospects of keeping the union together. That in turn would ease the pressure on southern European bond markets. But to have a major effect, it would require significant northern European sacrifices. Much of the southern European debt continues to be held by northern banks, and these cannot be forced to accept additional “haircuts” without, as it were, losing their heads. To prevent another major banking crisis, northern European governments would therefore have to step in with large bank subsidies coupled with pressure on the ECB to acquire significant portions of the remaining debt. At the end of the day this solution would add up to a massive transfer of resources from the north to the south; in effect an intra-European Marshall Plan for the south.

There is currently no support for such a solution in the north. Government leaders have publicly ruled out additional debt restructuring, and voters express strong opposition. Nowhere is this more evident than in Germany, which would have to shoulder the lion’s share of the transfer. While it is easy to castigate German voters for failing to recognize the large role German and other European banks played in building up southern European debt, and while it is certainly true that Germany has benefitted greatly from the currency union, as long as no fundamental reforms are implemented in southern Europe, and as long as a breakup of the euro is not imminent, German voters see no reason to sacrifice their own welfare to help their southern peers. This obstinacy is accompanied by less than flattering stereotypes about southern Europeans, which seems an inevitable complement to the anti-German demonstrations in especially Greece. But the fundamental problem is not cultural animosities; the problem is that the behavior at both ends of the euro-zone is fully consistent with the short-term economic interests of the majority in each.

5.3. Breakup.

The most obvious solution to the euro-crisis is a breakup, either by creating separate currencies for the north and south or by going back to national currencies. Since the euro is not an optimal currency area, this is a solution that is not only sustainable but arguably warranted by economic and institutional fundamentals. The problem is that a breakup will have huge short and medium term costs – real and perceived. Insiders in southern Europe have their savings in euros and have become accustomed to buying German and other northern European consumer goods with a significantly overvalued “currency.” The prospect of having wages, savings, and pensions denominated in Drachma, Lire, or Peseta after hard-to-predict but surely large devaluations is a

huge short-term disincentive to exit. Insiders with significant savings would probably accept meaningful domestic reforms before supporting an exit, and political parties of all stripes support continued euro membership. Even in Greece a solid majority of voters, more than 70 percent during a peak in the crisis, say they want to remain in the euro (the *Economist*, January 28, 2012).

Northern European governments also perceive huge costs of a breakup, although for very different reasons. If the currently weakest major euro country, Greece, is forced out, it is difficult to see how markets could be convinced to spare the rest of southern Europe, possibly not even France. The resulting market turmoil would be unprecedented since the 1930s, and, perhaps more importantly, northern European governments understand that they have benefitted greatly from the real depreciation of exports to southern Europe. Before giving it up, we would expect northern Europeans to accept additional significant debt restructuring and forgiveness.

5.4. The Keynesian scenario

We now return to where we started and the proposal to use Keynesian reflation to restore growth and employment in the Eurozone. The most likely scenario that would put this option on the table in a serious way would be one in which Germany preferred the status quo to major restructuring of debt -- a situation where the bargaining space does not shrink in the manner described above -- but where France experience a serious deterioration of economic conditions. If so, France may team up with southern European countries, especially Italy, to put pressure on Germany to accept major changes to Eurozone institutions. Italy has already suffered greatly as a result of the crisis, and France is experiencing rising interest rates and unemployment. France is increasingly treated as a southern European country by investors, and Hollande is now consulting with Italy and Spain in a manner that would have been unthinkable under Sarkozy. With a deepening of the crisis in France, it is conceivable Germany would be presented with an ultimatum: either accept Eurobonds, higher deficit ceilings, quantitative easing by the ECB, and real appreciation of German exports, or face a breakup of the euro.

The problem with this scenario is that Germany would probably choose the latter. To understand this we are back to the analysis of the northern European model. An absolutely critical pillar in this model is non-accommodating macroeconomic policies. If it became accepted wisdom that the governments and the central bank can intervene in the economy with the aim of creating employment and growth, the foundation of orderly, coordinated wage bargaining breaks down. And with it goes the effectiveness of the training system. Surely, if macroeconomic policies can be used to bail out France and southern Europe, they can also be used to bail out Germany when rising wages threaten employment and growth. Knowing this, large unions are no longer bound by their commitment to coordinated wage restraint, which is also the foundation for intersectoral wage compression and skill-formation. Just as it is difficult to impose German macroeconomic

institutions on southern Europe and expect good economic outcomes, it is impossible for Germany to abandon these institutions and expect their own export-driven model to thrive. Returning to the D-Mark or a separate northern European currency is not the first-best solution for Germany, but it would be preferred to Keynesian reflation.

For empirical support for this conclusion, one does not have to rely exclusively on current German policies and policy statements, which are adamantly opposed to Eurobonds and relaxing fiscal rules. Germany has in fact contemplated Keynesian solutions to economic problems twice in the past: one time under Helmut Schmidt and one time during Oscar LaFontaine's tenure as minister of finance. In both cases the Keynesian option was soundly defeated by a coalition led by export interest and skilled unions (Scharpf 1991, ch ??).

6. Conclusion: Global imbalances in the light of the Eurozone crisis

[To be developed further]

The structural imbalances that gave rise to the difficulties in the Eurozone are not restricted to the European regional economy; it is a global phenomenon. The focus of this paper has been the Eurozone crisis, but here we briefly sketch how the analysis may be generalized to the global economy. In the current international trade and monetary regime different models of capitalism coexist and adhere to broadly-agreed norms of macroeconomic management (price stability), national financial regulation (within common accounting standards), and free trade and capital mobility. Yet because these norms do not include requirements for governments to balance their current account, and since there are no institutionalized means to address global imbalances of the sort that have marred the EMU project, the different models of capitalism are perpetuated in ways that produce recurrent economic problems, including the global financial crisis.

From this perspective the financial crisis in the US, just as the real estate boom in southern Europe, cannot be separated from the imbalances we have discussed on the European continent. Differences between export-demand driven capitalism in northern Europe and East Asia, on the one hand, and domestic-demand driven capitalism in North America, on the other, for a long time fueled the financial bubble in the US by producing a huge influx of foreign capital (Iversen and Soskice 2012). The complement to these inflows is large trade surpluses in northern Europe and East Asia. The imbalances at the European level are thus reproduced at a larger scale at the global level.

It is not hard to quantify the problem. Using WTO data, in 2010 Germany's share of world trade was virtually the same as the US (8.5 vs 8.6 percent). A small country like the Netherlands exported nearly half the total of the US in the same year. The EU share of world trade, excluding intra-EU trade, was 15.1 percent vs 10.8 percent for the US. In terms of world shares of merchandise exports for the entire postwar period, Europe slightly declined from 39.4 percent in

1953 to 37.9 percent in 2010, mostly because of the rise of Japan and the NICs. But in the same period the US share of exports dropped from 18.8 to 8.6 percent. If we look at total exports from just the US and northern Europe, in 2011 70 percent was from northern Europe, up from 50 percent in 1960. Northern Europe has also run increasing trade surpluses while the US went from surplus to deficit in the early 1970s.

But while trade increasingly favor northern Europe income shares have been fairly stable. The reason is that the US makes up for slugging external demand by rising internal demand. That demand has in turn been fuelled by inflow of foreign capital. [Maybe we can add some numbers]

The problem of global imbalances is in principle eased by floating exchange rates between the main currencies (the dollar, the yen, and the euro). But they are not enough to eliminate the imbalances and these will be a source of global economic instability for the foreseeable future. The intractability of the Eurozone crisis shows just how difficult it is to find a sustainable solution because the problems are structural. There are no political incentives in the export-driven countries to increase domestic consumption any more than there are incentives in the demand-driven countries for cutting domestic consumption. Global imbalances will therefore persist, and so will the crises that they occasionally fuel.

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