The Political Geography of the Euro Crisis (*)

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I. Efficiency Gains and Redistribution in Fiscal Unions: the European Puzzles

The idea that “all successful monetary unions have eventually been associated with a political and fiscal union”¹ has a long pedigree in political economy (Popitz 1927; Dixit 1996; Perotti 1996; Drazen 2000; Casella 2005). Once markets integrate, centralized institutions are necessary to overcome transaction costs: fiscal integration ensures a more efficient allocation of services and revenue burden, facilitates the realization of economies of scale, and manages the increasing flow of labor and capital across boundaries. As factor mobility increases, regulatory restrictions and policy differentials become a source of inefficiencies and capture that jeopardize at once workers’ productivity and capital’s returns. In addition, an integrated fiscal system plays a second role, that of insurance provider, eliminating investors’ uncertainties and smoothing consumption levels in hard times. By contrast, the preservation of a fragmented fiscal authority amidst a common currency areas generates macro-economic imbalances and policy consequences that ultimately worsen economic and social outcomes (Krugman 1991; Eichengreen and Frieden 1995; De Grauwe 2014).

At the same time, historically, large scale crises create political opportunities to pursue common pool solutions.² Insofar as all members are hit by a common shock, there are economies of scale to be gained from coordinating the institutional response to the crisis, easing the political path towards integration (Riker 1964). That was indeed the core lesson from the experiences in the late 1930s and early 1940s: the Great Depression triggered an unprecedented increase in the fiscal role of the federal government in both Canada and the United States. Canada went all the way to undertake a constitutional reform to facilitate the adoption of a centralized unemployment insurance system in 1941.

¹ Nouriel Roubini, Financial Times, 13 June 2011, “The Eurozone heads for breakup”
² Ex ante, the risk of external economic shocks creates political demand for a common pool of resources such as more integrated fiscal structures (Alesina and Perotti 1998; Cremer and Palfrey 1999). In anticipation, the prospect of an external shock works to reduce the distance among regions in terms of their risk profiles. Neither the poor nor the wealthy region know ex ante whether they will be affected by the shock. What they both know, however, is that if a negative shock hits them, they would be worse off without a common insurance scheme. In contrast, insofar as there is a cross-regional fiscal structure at work, the region negatively affected by the shock can transfer some of the cost to the common pool. Otherwise, it must fend for itself. The possibility of a shock with common effects across units/regions should foster support of a more integrated fiscal system.
While the USA did not centralize this particular program, the relative economic weight of the federal budget and the regulatory capacity of Washington expanded massively between the late 1930s and the early 1960s. As early as 1935, the New Deal pushed for the centralization of as several major fiscal and investment policies, as well as for major involvement of the federal government in the fiscal bailout of American states. To be sure, there were resistances, objections, and concerns on both ends of the US-Canada border, but they were overcome despite enormous economic diversity within both federations and constitutional limitations to the expansion of the federal government. 

Seemingly working against theory and history, the European Union has failed to realize the efficiency and insurance gains associated with fiscal integration before the crisis. More importantly, the Great Recession has failed to generate political momentum in support of shift towards fiscal integration (Hall 2012; Krugman 2012). Why? I refer to this as the puzzle of unfeasible fiscal integration. At the same time, however, the lack of fiscal integration has not prevented significant transfers between governments as a response to the crisis. Euro-zone members have bailed-out, at great cost, several economies within the union and devised a series of mechanisms, such as the European Stabilization Mechanism, the Securities Market Program, or the Outright Monetary Transaction from the European Central Bank to manage similar situations. These sizeable transfers are redistributive between countries in that wealthier Euro members contribute a

3 For a full account of these processes, see Beramendi 2012.
4 To be sure, several proposals for advancing fiscal federalism have been advanced (Pisani-Ferry et al. 2013; De Graauwe 2014). These proposals vary in ambition, design, and redistributive impact, but they tend to share similar political fate. A common European budget would imply a standard system of automatic stabilizers and massive redistributive transfers across the territories of the union. A second, slightly more realistic, approach would involve the mutualization of default risks through the so-called Eurobonds. Again, an actual default would imply, under such a system, a significant transfer of resources between members of the union. Finally, from a nuanced understanding of the specific constraints at work in the EU crisis, the Tommaso Padoa-Schioppa group proposed an automatic cyclical adjustment insurance fund to make palatable internal devaluations through inter-temporal, countercyclical management (Enderlein et al. 2012): the idea is to accumulate buffers in good times and use them automatically (i.e. off political controversies) in bad times. In addition, a European Debt Agency will manage according to clear criteria and strict procedures the trade-off between accessing to bailouts and the preservation of budgetary sovereignty. Again, the adoption of such a system would imply a major step up in the level of fiscal federalism and redistribution between the EU members.
larger share to the coffers from which they are drawn. Yet to the extent that they are earmarked to bail out financial institutions in the recipient country and partly annotated as debt to be paid by national tax payers, they also constitute a form of perverse redistribution within countries. Net contributors to the Eurozone budget seem unwilling to pursue fiscal integration but ready to develop large scale horizontal transfers to the recipient countries. Why? I refer to this as the puzzle of international redistribution.

What explains the co-existence of the persistent reluctance by domestic leaders in core EU countries to pursue fiscal integration and large scale transfers between nations within the union? To address this question, I approach Europe’s current dilemmas as an question of endogenous fiscal capacity. The argument builds on two tenets. First, the unfeasibility of fiscal integration reflects the constraints that, under electoral democracy, a very uneven politico-economic geography poses on rational leaders intent on staying in office. Europe’s perpetual stasis is but a political conflict over the determination of fiscal capacity within a confederation in which constituent members have veto power on any institutional development threatening their material and political status quo. Second, the combination of the crisis and the pre-existing pattern of economic externalities across EU members create incentives for voters and leaders in core EU countries to support various forms of international redistribution. By focusing on how potentially negative externalities shapes the preferences of wealthier regions, the paper illuminates the paradoxical combination of resistance towards fiscal integration on the one hand and support of bailout transfers on the other. Contrary to a widely held belief, the crisis does

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5 For instance, Greece is to receive 197.5 billion Euro during the period 2010-2016 from the ESM. And Spain received a credit of up to 100 billion Euro of which it has used up to 41. By contrast, Germany contributes 27% of the reserves of the ESM whereas Spain makes up for 11% and Greece 2.8%. Sources: http://esm.europa.eu/about/publications/index.htm http://ec.europa.eu/economy_finance/assistance_ms/index_en.htm.
6 For example, in the case of Spain, the cost for tax payers of the financial restructuring program is estimated (conservatively) to be between 61 billion Euro (estimates of the Bank of Spain) and 107 billion Euro (estimates by the Tribunal de Cuentas (chief auditing institution in Spain); source: report submitted to the lower chamber, Congreso de los Diputados). In either case the figures are several orders of magnitude above budgetary cuts in public spending in health and education (13.8 billions up to 2013).
7 An increasingly popular view sees European power holders’ (notably, but not exclusively, Germany) imposition of austerity as an “insane” deference to the diktat of the greedy hand of capitalists. Put simply, the duration of the crisis reflects either poor leadership by governments who endorse recipes that do not work (Blyth 2013; Stiglitz 2011) or, more candidly, the fact that politics itself is “over-determined” by the interests of multinationals and portfolio investors. Ultimately, the crisis would bring back, in stark terms,
not reflect the political inability to manage markets, but the tension, within the union, among countries with very heterogeneous resources and political coalitions underpinning the balance between state and markets.

The paper makes several contributions. First, it brings the literature on federalism and endogenous fiscal institutions into the discussion about Europe’s crisis, adding to the voices trying to bridge political and economic reasoning on the process (Scharpf 2011; Iversen and Soskice 2012; De Grauwe 2011 2012). Second, the paper approaches Europe’s protracted institutional dilemmas as one more instance of the difficulty of endogenously building centralized fiscal capacity in the presence of divergent economic interests and risk profiles. By doing so the paper situates economic and political geography at center stage in the political economy of the EU crisis. Third, by analyzing the interaction between the politico-economic geography of the EU and the crisis and its political implications the paper contributes to an informed discussion of the possible options out of the sovereign debt crisis.

The rest of the paper is organized as follows. Section 2 presents the theoretical framework Section 3 an analysis of the European crises from the perspective of a common currency area with a very diverse economic geography, and how those pre-crisis features shape the nature of the post-2008 contentions within the Union. Thereafter, Section 4 focuses directly on the unfeasibility of fiscal centralization directly by linking patterns of cross-national differences in economic geography to the variation in support for delegation of fiscal authority to Brussels during the period 1995 - 2011. Section 5 discusses the relationship between economic externalities and the observable transfers (perverse redistribution) between member states after the crisis. Finally, I conclude with a discussion the central implications of the analysis for ongoing debates on the ways out of the European debt crisis.

the notion that incumbents are little else than the “committee to manage the whole affairs of the bourgeoisie” (Marx 1848). However appealing this romantic return to old truths may result, this diagnostics does not take us very far.
II. An Argument in Three Steps: Income, Production, and Externalities.

This section develops a theoretical framework to examine two issues: (1) the relationship between economic geography and institutional preferences, a linkage that speaks directly to the *puzzle of unfeasible fiscal integration*; and (2) the role of economic externalities in mediating these preferences, a factor that speaks directly to the *puzzle of international redistribution*. In what follows, I argue that preferences for fiscal integration and preferences for international redistribution reflect the balance between three dimensions of economic geography: income, the degree of specialization of production within regions, and the presence of economic externalities across regions.

The analysis builds on the following premises. I begin by considering a union with just two regions (A and B), where individuals care about their final consumption capacity and vary in their pretax income. A is poorer than B, that is, it has a lower aggregate income per capita ($W^A < W < W^B$). As a result income varies along two dimensions: individuals ($w_i$) and regions. At any given time, individuals may be employed ($\alpha$) or unemployed (1-$\alpha$). The former have a final income defined by their post-tax work earnings. The latter enjoy an income equal to the benefits (b) received while being unemployed. In addition, citizens are affected by an interregional transfer that, when in place, is a function of the regional average income vis-à-vis the union. Hence, citizens face a decision about two policy instruments, namely, the level of interpersonal redistribution ($t$), and the level of interregional transfers of resources among members of the union, that is to say the level of interregional redistribution ($T$). Finally, to study how the geography of economic production affects institutional choices, the model of individual preferences includes an additional insurance motive that is assumed to relate directly to the degree of specialization of economic activity across areas (on. The literature in political economy repeatedly identifies risks, that is the possibility of a future income loss, as a key factor in driving people’s redistributive preferences (Varian 1980; Atkinson 1995; Moene and Wallerstein 2001; Iversen and Soskice 2001). This being the case, risk and risk aversion, as well as the territorial distribution of risk, becomes a

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8 This section builds on the model of adoption of centralized fiscal structures (tax-transfer systems) within a political and economic union developed in Beramendi 2012.

9 Risks are assumed to affect utility according to Arrow-Pratt constant relative risk aversion function.
primary mechanism for the geography of economic production to condition the choice of fiscal institutions. To analyze the conditions under which political integration or international redistribution become feasible I develop the implications of the model in three steps.\textsuperscript{10}

\textsuperscript{10} The Appendix presents in detail the formal analysis that substantiates the theoretical discussion.
Figure 1: An Argument in Three Steps

Step 1: Geography of Income

- \( T > 0 \): Increase in \( T \)
- \( T = 0 \): No change in \( T \)
- \( T < 0 \): Decrease in \( T \)

Step 2: Geography of Economic Strategies

- \( w' < w \) for all \( t > 0 \)
- \( w' > w \) for all \( t = 0 \)

Step 3: The Role of Intergenerational Externalities

- \( w' < w \) for all \( t > 0 \)
- \( w' > w \) for all \( t = 0 \)
Consider first preferences as driven exclusively by income (*Step 1: Geography of Income*). Four distinctive groups emerge. At the bottom left, the poor citizens in the poor region support both types of redistribution. They want both transfers from the rich in their region and a larger tax base to draw from. At the top right, the other end of the diagonal, the rich citizens in the rich region, in the absence of mobility and insurance motives, would oppose all forms of redistribution. In turn, the off diagonal features voters whose preferences are not consistent across policy tools: in the top left, the rich among the poor oppose redistribution within the region, but support receiving a share of the resources of other members of the union (perhaps to grease their own political machines; by contrast, in the bottom right, the poor citizens in rich countries support their welfare states while refusing to share their tax base with their class-comrades in other regions.

Interestingly, this map of preferences changes slightly when the geography of production and its impact on labor market risks is taken into consideration. There is no gainsaying that most countries have three or four areas of economic development that attract large masses of workers, thereby altering their social and economic geography. Economic production tends to be concentrated in specific areas or regions due to increasing returns and the reduction of transportation costs (Krugman 1991; Venables 2001; Cai and Treisman 2005). Economic concentration makes capitalist economies geographically unbalanced, and they will be more so the larger the scale of the political unit of reference. By virtue of concentration different areas pursue different strategies: some regions, for instance, may opt for a growth strategy based on R&D investments and high labor productivity whereas others rely on activities based on current consumption as the main driver of aggregate demand (e.g. areas specialized in tourism).

The second panel in figure 1 (*Step 2: Geography of Production*) captures the importance of the geography of production for the political economy of integration. As shown formally in the appendix, given the higher degree of specialization in B, workers and employers are more risk averse (*they fear more the potential realization of unemployment risks*) and therefore agree on a insurance system that benefits the functional needs of the regional labor market. Their preferences over $t$, in the model,

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11 Examples of concentrations of economic activity include fishing, farming, mining, manufacturing of particular goods (e.g. cars), or IT specialized industries such as hardware and software development.
become relatively closer (within B) than those in region A, as highlighted by the squared area. This result follows from the contrast between specialized and non specialized areas. In the latter, the rich have incentives, due to risk aversion, to support insurance (t), whereas the optimal level of insurance for the rich in a region with no economic specialization is necessarily lower (at the extreme t=0). By forging an alliance with the poor within their own unit, the rich in the rich and specialized region forge cross-class coalitions to develop mutually advantageous insurance systems. In political terms, this implies that risk differentials associated with the geography of production facilitate the formation of in intra-regional cross-class coalitions and, conversely, undermine the likelihood of interregional class coalitions. Insofar as members of the union differ in the type of dominant economic activity in their areas, they will also differ in the characteristic of their domestic insurance systems, and will be wary of any process endogenously delegating fiscal capacity upwards. Empowering the center looms as too large a risk on the efficient working of their local economy. By implication, a fully centralized fiscal system seems out of the question.

Critically, the connection between the geography of production/labor markets and political coalitions feeds back directly into a distributive conflict over fiscal resources (T) between A and B. To the extent that differences in productive systems and risk profiles constrain the feasibility of endogenously creating a centralized tax and insurance policy (t), political conflict will center around the size of on interregional transfers (T). As derived from the model and captured in figure 1 (step 2), no voter in B, whether rich or poor, has any incentive to share their tax base with the rest of the union. The former because they are bound to become tax payers for a much larger pool of dependents; the latter because they have no incentive to share in their (larger) tax base with their fellow class travelers from other nations. Importantly, differences emerging from an uneven geography of production and risk reinforce the polarizing effects of an uneven geography of income.

12 In doing so they become particularly sensitive to what Alesina and Perotti 1998 defined as “political risks”, namely the possibility that delegating authority to the center would increased the likelihood of a common, dysfunctional policy, distorting the workings of the local labor market.
That the case, the third and final step in the analysis involves exploring how a common external shock, such as financial crises, interact with the underlying economic geography of the union. The importance of economic geography, in terms of both income and production becomes particularly apparent in the context of economic shocks. The key distinction here is whether the crisis brings members of the union closer in terms of resources and risk profiles or, by contrast, generates asymmetric effects that exacerbate pre-existing differences within the union. The issue is whether the negative socioeconomic effects associated with the common shock of the financial crisis spanned across regions or remained geographically concentrated. If the latter, the crisis will polarize regions in terms of redistributive preferences and institutional tensions. In contrast, if the social consequences of the crisis are common cut across regional boundaries, the crisis may act as an engine for political and fiscal integration. Which of these two scenarios actually realizes depends in large part on the scope of socioeconomic externalities across regions.

Economic externalities depend primarily on the extent to which factors, labor and capital, travel across borders and their implications for country’s risk profiles. Labor flows work as transmission mechanism of labor markets and social insurance risks between territories. Capital cross-border linkages within a common economic and monetary area facilitate the exposure, as a result the pattern of internal lending and borrowing (Hale and Obstfeld 2014), to financial risks. The geography of debt flows works as a transmission mechanism of financial risks between territories.

The analysis so far has assumed no externalities of either type. To the extent that such remains the case, in the presence of an uneven geography of production, economic shocks have differential effects on regional economies and polarize institutional preferences across the members. By contrast, to the extent that cross-regional externalities, such as large labor flows or cross-country exposure to financial risks, take place, preferences will change to favor some level of interregional redistribution.

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13 By labor flows I refer to mobility of workers and potential dependents across borders. For other analyses where increasing labor mobility facilitates the adoption of common social policies, see Bolton and Roland 1996; and Perotti 2001.
Consider first the case of large levels of mobility among the unemployed. In such case, the region expelling unemployed poor people increases its employment rate and average output, whereas the recipient region sees both magnitudes drop. As a result, both regions also come closer in terms of the nature of the distributive conflict among their citizens. More importantly, as the poor travel across regional boundaries, net welfare recipients in wealthier regions lose their ability to protect their tax base by keeping a decentralized insurance system and reducing interregional redistribution.\(^{14}\) Regarding capital and debt flows, a similar process unfolds. If the geography of debt is such that wealthier areas are exposed to negative shock via the risk of poorer areas actually defaulting in their payments, then the risks associated with economic collapse are no longer concentrated territorially.

By acting as a multiplier of social shocks across territories, labor and capital/debt flows thus become a new source of risks for which wealthier members of the union have incentives to create some form of insurance. This is the scenario captured by the bottom panel in Figure 1 \((\text{Step 3: The Role of Cross-national Externalities})\). Recall that by assumption the wealthier area (B) is more economically specialized than the rest.\(^{15}\) Under these circumstances, as potentially large labor and debt flows become an additional source of risks, citizens in a wealthy, economically specialized region face a complex set of motives that work in opposite directions.

They need some form of common pool of resources against the prospect of an external negative shock. Yet, as discussed above, they also want to preserve policy autonomy to design interpersonal redistribution in ways that disrupt their regional economy the least. Therefore, the elites of the wealthier, specialized region, in anticipation of undesired population inflows and/or external risks of default, have strong incentives to act strategically and support an increase in interregional transfers \((T)\).

Hence, in anticipation of negative economic externalities, rich and poor citizens of the wealthier region will coalesce with the rich citizens of the poor region on an exchange in

\(^{14}\) Interregional mobility of dependents from economically depressed to economically prosperous areas implies by definition an interregional transfer of resources between the regions of the union.

\(^{15}\) In contrast, in the absence of economic concentration across regions, large levels of mobility would facilitate a fully centralized system around a common budget (a common fiscal system, \(t\), and no explicit interregional transfers \(T\)).
which interregional transfers (T) are used to ensure the status quo in terms of fiscal integration and inter-personal redistribution (t), even if at the expense of the poorest members of society.\textsuperscript{16} This is precisely the situation I refer to as “perverse redistribution.” The goal is to contain the scope of negative economic consequences associated with migration and capital/debt flows. Such flows would undermine the viability of regionalized labor markets and welfare states.

Support for a combination of decentralized interpersonal redistribution and significant interregional transfers is likely to grow stronger only when (the expectation of) negative economic externalities and regional economic specialization co-exist. The resulting fiscal structure would be a combination of decentralized fiscal institutions with partial interregional transfers (T).\textsuperscript{17} The actual form of T will reflect the nature of the externality to be dealt with. If the concern is primarily about labor flows, it will take the form of funding for infra-structural programs meant to enhance aggregate demand and the functioning of local labor markets in recipient areas (e.g. various forms of Structural Funds). If the concern is primarily about financial risks and capital losses, it will take the form of targeted bailouts meant to facilitate the rebalancing of financial institutions (both private and public).\textsuperscript{18}

In conclusion, the analysis of the three scenarios laid out in Figure 1 helps establish the conditions under which the paradoxical combination of unfeasible fiscal integration (puzzle 1) and significant levels of international redistribution (puzzle 2) is likely to emerge: when a heterogeneous geography of income and production overlaps with significant cross-regional economic externalities. In what follows, I use the EU member states’ reactions to the Great Recession as a basis to evaluate the empirical validity of this analysis.

\textsuperscript{16}This will be the optimal strategy insofar as additional marginal increase in interregional redistribution (T) equates to the net loss due to changes in interpersonal redistribution (t) motivated by larger levels of cross-regional mobility of dependents.

\textsuperscript{17}This logic of prospective self-insurance is also at work in the international arena: the privileged prefer to pay to keep the poor away rather than risk allowing undesired dependents into their economies.

\textsuperscript{18}Optimally, and to ensure political feasibility, these packages will feature large levels of conditionality, targeting, and inter-temporal burden sharing with recipient countries. For evidence on citizens’ support for different forms of bailouts see Bechtel et al. 2013.
III. From the theory to the case: Monetary Union, Economic Geography, and the European Debt Crisis.

In this section, I present relevant background information on the EU and derive the empirical expectations from the model as applied to the European debt crisis. To analyze the role of economic geography in the crisis it is necessary to take a step back. The common currency area was purposefully created through the monetary integration of countries very diverse in terms of both economic strategies (production) and resources (income). These differences were only exacerbated by the several rounds of enlargement over time, themselves entailing distributive compromises between the beneficiaries of larger markets and those facing steeper competition while giving up significant policy autonomy (Schneider 2009). The nature of these differences in terms of income and production is important to understand the nature of the Eurozone crisis and its political implications. Growth strategies shape labor markets and distributive conflicts within countries. Income levels and with them state resources matter for distributive conflicts both within and between countries. 19

Concerning growth strategies and the geography of production, the key distinction is one between investment and consumption strategies. An innovation based strategy builds on skills upgrading in the medium run, aspires to increase productivity levels, and to sustain growth through “leading edge innovations” in Aghion and Hewitt’s (2006) terms. In contrast, for countries behind the technology frontier growth occurs primarily via capital investments, the import of technologies developed elsewhere, and consumption oriented policies aimed at sustaining high levels of aggregate demand (Acemoglu et al. 2006). In line with this logic, I define “investment” widely as public expenditures that increase the overall productivity of the economy, and that of labor and capital in

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19 In terms of the formal model developed in the appendix, growth strategies speak directly to cross-national differences in the type of economic specialization (δ); in turn, fiscal capacity speaks to cross-national differences in terms of the pool of resources necessary to undertake different types of redistribution (w, t, T in the model).
particular. The term investment refers to the future-orientation of these expenditures in the fields of education, research and development, childcare, and labor market activation. On the other hand, I consider “consumptive expenditures” social transfers to beneficiaries that use them in order to cover current needs and demands. Governments choices reflect how much they privilege consumptive expenditure at the expense of future returns via investments in education, research and development, and child-care. The balance between these two sets of policy instruments is critical to understand the political economy of growth and inequality in the postindustrial world (Beramendi et al. forthcoming): investment oriented economies by and large perform better and generate more egalitarian outcomes than consumption oriented ones. In addition, a critical difference for the argument in this paper, lies in their trade orientation within a common currency: investment oriented economies tend to privilege export-driven growth strategies, whereas consumption oriented ones rely more heavily on import oriented economic policies.

Concerning wealth differences across EU members, the EMU brought together under a common currency countries with very different levels of fiscal resources, as measured by the amount of revenue they are capable of collecting relative to the size of their economy. Besley and Persson (2012) have shown convincingly how legal, political, and fiscal institutions feedback on each other over the long run, shaping economic development (with figure 1) in the long run. A central implication of their analysis is that it is very difficult to bridge gaps in fiscal and state capacity with short-term interventions. Fiscal capacity and revenue collection reflect the shadow of long-term processes, including the type of industrialization pursued, the age of democracy, and the pattern of state-society relations regarding strategies of political mobilization. Countries with early development of rule of law and democracy industrialized first and consolidated a set of political and economic institutions more conducive to investment, more capable of forging political coalitions to expand public goods and raise the necessary revenues (Pinkus and Robinson 2012), and less tolerant of capture of special organized interest (North et al. 2006;)

A slightly narrower distinction between consumption- and investment oriented expenditures has also developed in the welfare state literature (e.g. Esping-Andersen 1999).
Grossman and Helpman 1994). By contrast, late industrializers only achieved modernization via different forms of import substitution industrialization, which facilitated the formation of a core of well organized interests (Altamirano et al. 2015) that captured the political control of state institutions and used them to secure political hegemony via patronage and clientelism rather than programmatic politics (Kitschelt and Wilkinson 2005). As a result, states are weaker, the shadow economy grows larger (Schneider et al. 2010), and both voters and parties privilege consumption over investment.

To illustrate the importance of these two dimensions, Figure 2 explores cross-national differences in terms of both the geography of growth strategies and the states’ fiscal resources (i.e. the pool of revenues out of which \( t \) and \( T \) are drawn) before the crisis actually took place. I focus on the period 2003-2007 as the period immediately preceding the Great Recession.\(^{21}\) The left panel presents countries’ choices in terms of both total civil public expenditures (consumption plus investment, x axis) and the relative focus on investment relative to consumption (ratio, y axis). In turn, the right panel plots a second indicator of the balance between consumption and investment, namely the share of employment in construction (x axis), and the size of revenues relative to the size of the economy (y axis). I take large shares of employment of construction as a symptom of a lesser interest in pursuing an investment oriented strategy, as construction is the prime low skill, low productivity sector in the economy.

\(^{21}\) Figures reflect period averages. Consumption refers to the sum of per GDP expenditures on old age pensions, survivors’ pensions, unemployment benefits and incapacity pensions, 2003-2007, OECD data; Investment refers to the per GDP expenditures on public and private research and development, tertiary education, childcare services and active labor market policies, 2003-2007, OECD data. The data for Total Tax Revenue as a percentage of GDP was obtained from the OECD National Accounts, 2003-2007. Finally, the data on the share of employment in the construction sector was calculated on the basis of the OECD labor force statistics.
Figure 2: Pre-crisis Geography of Production and Fiscal Strategies
By the time Lehman Brothers marked the beginning of the end of the new gilded age, European political economies had been pursuing very different paths. Four distinctive groups emerge from the analysis in the left panel of Figure 2. Nations like Denmark, Sweden, and Norway both make large budgetary efforts in investment and consumption, and privilege the former. A second group of nations, like Austria or Italy, and to a lesser extent France and Germany, traditionally engage in large scale spending but privilege consumption over investment. Symmetrically, at the other end of the spending capacity spectrum, we also find nations, like Ireland, that have privileged investment over consumption, whereas other, like Spain, Portugal, and Greece, spend relatively little and devote most of their budget to short-term, consumption oriented transfers.

Ireland notwithstanding, these spending choices map well onto employment strategies and fiscal capacity (right panel). High spending, high investment countries pursue such a model in large part because they have enough fiscal capacity and their governments can, accordingly, pursue employment strategies less dependent on large masses of unproductive labor. Politically, they rest on stable electoral coalitions dominated with high skilled workers as pivotal players. The scenario changes as the ratio of investment to consumption declines, and so does the size of the state relative to the economy (again, exception made of Ireland). In turn, with declining tax revenues, investment oriented strategies become less viable and the economy concentrates in low productivity, low technology sectors, as reflected by the increasing shares of employment in construction. These differences are important because they shape both the way different national economies react to the Great Recession and the potential patterns of economic externalities across territories.

Consider first the issue of how national labor markets are affected by the financial crisis. In the case of investment-oriented political economies, I expect a relatively lower elasticity of labor markets to economic downturns. The presence of well developed systems of active labor market policies in the context of less rigid labor markets facilitates a better adjustment, and mutes the response of the unemployment rate to economic slowdowns. More specifically, those countries with an innovation based
strategy and high levels of fiscal capacity (such as Sweden, Denmark, and to a lesser extent Germany) are capable of better absorbing the negative consequences of the shock not only because the demands for budgetary intervention will be smaller, but also because their automatic stabilizers are more effective. Accordingly, aggregate demand holds its ground, citizens’ levels of welfare decreases marginally to a lesser degree, and the fiscal sustainability of the state is ensured. As a consequence, these countries are perceived as less risky by international investors, which renders them less subject of bond market speculators (Scharpf 2011).

As the level of fiscal capacity and the investment/consumption balance shifts, the situation progressively reverses. At the other end of the spectrum, I expect consumption oriented countries to show a much higher elasticity of unemployment relative to GDP. This is the case for two reasons, one economic, one political. Economically, by virtue of the low investment rates themselves, consumption oriented economies feature a larger share of low skill, low productivity labor. Politically, labor forces also reflect the capture of regulatory policy by organized interests during the process of industrialization and are, as a result, highly dualized. In those circumstances, left parties and unions cater to the interests of insiders (Saint Paul 1996; Rueda 2007), while less protected outsider workers provide a buffer during economic downturns. The presence of the latter group enhances the elasticity of the unemployment rate with respect to GDP. The situation becomes particularly untenable in consumption countries with low fiscal capacity, as they confront large and rapid increases in their budgetary demands with very limited margin to cope with them. As exemplified by the Spanish experience, former economic miracles quickly turn into nightmares for policy makers and citizens alike. With the fiscal and financial feasibility of public institutions in question, investors perceive higher risks, and these countries become attractive targets for bond market speculators, tying even more tightly the incumbents’ hands. In conclusion, past economic strategies mediate the impact of the crisis and set EU countries in rather divergent politico-economic trajectories in terms of risks, fiscal weaknesses, and fiscal needs.
In addition to their domestic implications, the contrast between investment and consumption oriented economies is also important for the potential of externalities across territories. The fact that the Euro integrated very diverse economies in terms of fiscal capacity and the investment/consumption balance prevents the emergence of large labor flows. As labor markets differ, mobility is endogenously constrained (Krugman 1991). As a result, mobility rates are expected to be and remain low before and after the crisis. However, the co-existence of very different growth strategies under the same currency generates a very different type of externality. The monetary policy in the decade prior to the crisis provided a direct mechanism, the supply of credit and the attendant geographic patterns of debt, between investment and consumption oriented economies. This mechanism further exacerbated the contrast between economic models within the union. Due to the lingering costs of Re-unification and the need to avoid a protracted recession, the early years of the Euro saw strong pressures by core economies in favor of low interest rates. This, in turn, facilitated an excess supply of credit that more peripheral, consumption oriented economies, in particular those with low fiscal capacity such as Ireland or Spain, embraced to boost short-term strategies towards fast growth (mostly around the construction sector). Interestingly, the fortunes of both types of economies became, closely intertwined along the way. Hale and Obstfield (2014) document significant growth in financial flows (in terms of both debt and bank borrowing) between the European core and the periphery, and accordingly a sharp increase in net foreign liabilities of peripheral countries vis-à-vis the core in the Euro zone. The story is well known (Fernandez-Villaverde et al. 2013): Banks in core countries get money at low rates from the ECB and invest in high yielding sovereign bond markets in the periphery, feeding their consumption oriented strategies further along the way. This pattern is crucial to understand the nature of economic externalities in the post 2008 EU: by virtue of the geography of debt flows, key financial institutions in core countries are exposed to high risks should the periphery default. To the extent that core investors are tied in bond markets in the periphery, their economic fortunes are no longer isolated: default in the periphery has entails major financial risks for key financial institutions at the core, thereby feedback into the political process.
To summarize, given the status quo prior to the crisis, the analytical model presented above suggests two important implications of the Great Recession for the economic geography of the union:

1. An increasing diversification of risk profiles and capacity among investment and consumption oriented economies.

2. An important set of economic externalities across EU members associated more with the geography of debt flows and less with labor or dependent mobility

The next section evaluates the empirical leverage of these two claims.

IV. The Crisis and the Economic Geography of the Union

Have EU members grown apart as a result of the way the Great Recession has interacted with the pre-existing economic strategies? To approach this question Figure 3 below traces the link between differences in terms of economic strategies and fiscal resources prior to the crisis and changes in three indicators after the collapse of Lehman-Brothers: the national unemployment rate, the level of public debt, and the interest yield in public bonds, which I take to capture how risky investors perceive a specific economy to be. The evidence conveyed in Figure 3 clearly supports the notion of divergent responses to the crisis by investment and consumption oriented economies. Consistent with the theoretical expectations above, European economies have indeed grown apart in terms of both the incidence of risks and the financial capacity to cope with them.
Figure 3: The Crisis and the Economic Geography of the Union
Figure 3 traces the link between pre-crisis economic strategies and post-crisis responses in four steps. First, consistent with our argument, a higher reliance on consumption oriented strategies before the crisis leads to more dramatic increases in the unemployment rate. Figure 2 above showed how the share of employment in construction proxies quite accurately the dependency on short term boosts in aggregate demands (and by implication, the refusal to invest in long-term increases in productivity). The top left panel in Figure 3 confirms that those countries that pursued consumption oriented economic growth are the ones suffering the highest increase in the incidence of unemployment during 2008-2011. In other words, the realization of labor market risks becomes more polarized as a result of the Great Recession.

Second, this increases in unemployment correlates negatively with the ability to cope with their fiscal implications. The top right panel in Figure 3 suggests that countries with lower levels of fiscal capacity tend to suffer larger increases in unemployment during the post-crisis period. Risks and resources map in opposite directions in the European Union after 2008. This is hardly surprising since there is a clear feedback loop linking capacity and production/employment, namely the organization of tax structures and its interplay with the dualization of labor markets. Low fiscal capacity states tend to be highly regressive as well. That is, they have both regressive tax structures (high reliance on labor and consumption taxes) and not very progressive tax designs. These, in turn hinder the performance of labor markets, particularly in countries with dualized, highly rigid, labor markets (for a more detailed discussion of this link see Daveri and Tabellini 2000; Rueda 2007).

Third, the fiscal burden associated with associated with abrupt increases in budgetary demands in low fiscal capacity, consumption oriented states translates into rapidly increasing levels of public debt (bottom left panel in Figure 3). By contrast, investment oriented economies face the crisis from a stronger fiscal base, suffer lower spikes in unemployment, and less increases in debt.
Fourth, this diversification of economic fortunes within the union has direct implications for the behavior of international investors (bottom right panel). Increasing unemployment, low fiscal resources, and growing debt map directly onto higher risks for investors, who flee towards safer, fiscally sounder economies. As a result, the polarization of economic geography triggered by the Great Recession is further reinforced by the differential ability of European economies to borrow in international credit markets.

The interaction between the pre-existing economic strategies and the crisis also shapes the type of economic externalities to emerge across different EU economies. Because of the split between consumption and investment oriented economies, European job markets were fairly isolated before the crisis, except for a very small share of the high skilled labor force. In line with the model above, and given the polarization of macro-economic outcomes conveyed in Figure 3, there is little reason to expect major population flows across European countries. To the extent that labor markets continue to be specialized due to the divergence in economic strategies among EU members, unskilled workers from the periphery have little future in Northern specialized economies. As a result, labor flows remain limited to the upper ranks of the skill distribution and are unlikely to constitute a major source of economic externalities. The left panel in Figure 4 plots the correlation between the mobility rates in Europe in 2007 and 2011. Figures represent for each country-year the share of population coming from other EU countries relative to the national population. Clearly, not much has changed as a consequence of the Great Recession. The scope of mobility patterns suggests no process capable of homogenizing either risks or fiscal bases across EU nations.

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22 Author’s calculation on the basis of EUROSTAT data.
In contrast to labor mobility, which clearly does not constitute a major linkage between European economies traditionally engaged in different growth strategies, the geography of debt flows ties the ties the fortunes of the investment oriented economies of the core and the consumption oriented economies in the periphery quite tightly (Hale and Obstfeld 2014). Prior to the crisis, investment oriented economies borrowed at low rates from ECB and invested in high yielding sovereign bond markets in the periphery, feeding short-term growth strategies and facilitating a sharp increase in net foreign liabilities by the periphery with respect to the core. As a result, those countries whose financial institutions have invested more aggressively in buying bonds and injecting liquidity in the peripheral economies are more exposed to the risk of a potential default by the latter. The right panel in Figure 4 presents the evolution between the last quarter of 2007 until the third quarter of 2011 data from the Bank of International Settlements capturing the size of foreign claims of core European countries in domestic banks in Spain, Portugal, Ireland, Italy and Greece. Figures capture exposure in billions of constant US $ relative to population expressed in millions. Clearly, Germany, France, and to a lesser extent Belgium are the three core economies with a largest degree of financial exposure to the potential collapse of South European economies. Accordingly, a potential default by one or, especially, several of these economies constitutes a major financial risks for the economies at the core. As the externalities are a source of shared risk, the transfers (T, in this case large scale bailouts financed unevenly) work essentially as a form of insurance against the future realization of severe risks. Through the scope of potential externalities, financial linkages tie together the fortunes of the periphery and some members of the core in ways that creates political support for transfers between countries (T) oriented to protect the financial system of core economies.
Figure 4: Post-crisis Economic Externalities across EU nations
To summarize, this section has shown how, consistent with argument in this paper, the Great Recession has triggered a polarization of economic fortunes within the union (in terms of both labor market outcomes and fiscal resources) and nurtured potential economic externalities between the core and the periphery associated with the geography of debt flows.

According to the argument above, these two patterns in the economic geography of the union should translate directly into the political arena:

3. *The growing divergence in economic and fiscal outcomes is expected to constraint the political feasibility of reforms towards fiscal centralization* (Puzzle 1: Unfeasible Integration).

4. *In turn, the specific nature of economic externalities described above is expected to alter core members’ preferences and pave the way to sizeable efforts to protect the core and the periphery’s economic elites* (Puzzle 2: International Redistribution).

The final section of the paper evaluates the empirical validity of these expectations.

V. **Political Geography in the Aftermath of the Great Recession: Unfeasible Integration and International Redistribution.**

The EU works as a confederation in which domestic (national) pivotal voters have de facto veto power on the behavior of their respective incumbents at the EU level. The latter are primarily responsive to their national electorates (Hix 2005; Thompson et al. 2006). Accordingly, should they have the capacity, they will not adopt courses of action at the EU level that run contrary to the interests of their supporters. This institutional context facilities the analysis of the link between economic geography and political strategies by placing citizens preferences across units at center stage. In what follows I present a series of empirical analyses in which I model the determinants of EU citizens to:
a question asking them whether they “support a joint tax system within EU.” I use this question as proxy for political support for fiscal integration across different European countries, that is support for the centralization of t.\textsuperscript{23} The key empirical prediction in the relation to (I) is that the polarization in economic geography as a result of the crisis translates into a polarization of views about the benefits of fiscal integration, which in the current institutional context renders it politically unfeasible.

(I) a question asking whether they agree with the following statement: “In times of crisis, it is desirable for (OUR COUNTRY) to give financial help to another EU member state facing severe economic and financial difficulties.” I use this question as a proxy for political support for international transfers, that is support for an increase in the levels of T.\textsuperscript{24} The key empirical prediction in relation to (II) is that support for international transfers will be larger in those countries with a higher degree of exposure to potential negative territorial spillovers.

For simplicity I have collapsed both scales into a 0-1 variable where 0 captures opposition to and 1 support for either tax integration or international transfers. Both (I) and (II) require recovering information about the average levels of support for either fiscal integration or international transfers and evaluate how they correlate with a number of macro-level variables capturing the evolution of the union’s economic geography and their degree of exposure to financial risks in the GIIPS. Given the nature of the data requirements to test (I) and (II), I follow a similar approach in both sets of analyses. I first recover country specific intercepts controlling for age, gender, education, income status, and labor market status. Intercepts are drawn up from a pooled version of the data. These intercepts capture average levels of support by country controlling for individual level determinants.

\textsuperscript{23} Data computed on the basis of Eurobarometer 74.2, November-December 2010.
\textsuperscript{24} Data computed on the basis of Eurobarometer 76.1, September 2011.
Thereafter, the macro level variables of interest are used to predict the country-specific intercepts, thereby testing the impact of the geography of production and fiscal resources on the support for the integration of fiscal systems. These analyses can be performed in a variety of ways: a two-stage approach described in Lewis and Linzer (2005), a frequentist multilevel approach (Gelman and Hill 2007), or a Bayesian approach, mindful of the fact that there are indeed very few observations in the second level of analysis (Stegmueller (2012)). The frequentist version is a hierarchical mixed effect model with random country intercepts. Similarly, the bayesian version is a hierarchical mixed model with random country intercepts and standard non-informative priors. Results are by and large robust to the different estimation techniques and specifications. For simplicity, I only report below the multi-level estimates for both (I) and (II).

Before discussing the key findings, a word on the specification is in order. To analyze the impact of economic geography on the support for fiscal integration (I), I resort to the several indicators capturing the evolution of labor markets and their level of fiscal resources in the aftermath of the Great Recession. The former include the members’ standardized unemployment rate and shadow economy shares (Schneider et al. 2010). The latter include the levels of both total tax revenues and debt as a share of GDP. In some specifications, I use a combined index of the unemployment rate and the share of the shadow economy as they encapsulate different dimensions of the reaction of labor markets and tax payers to economic downturns. In addition, I include a measure of the yield of 10 year bonds as a measure of market’s perception of the countries economic viability after the crisis. Finally, I also include the following additional controls: the export share, to capture different orientations of the domestic production structure in the international economy (refer back to VoC); the level of GDP per capita before the crisis (and therefore whether the country is a net contributor or a net recipient of European structural funds) and two one for the Eurozone (1=non euro) and a second one to

Results based on alternative estimation techniques are available from the authors.

The EU net budgetary balance correlates with GDP pc at .8. Using either variable makes no difference for the findings reported.
capture the legacy of a socialist economic organization (Eastern Europe=1). The left side of Table 1 below reports the results.

In turn, the analysis of the determinants of support for international transfers (II) builds on the following specification. The key predictor in this case is the level of exposure of the banking systems in the European core (measured as the log of the magnitudes reported in Figure 4) as a determinant of the average level of support to international transfers towards countries in crisis. Our analysis includes the following core EU countries, for which I have data on exposure: Austria, Belgium, Germany, Finland, France, United Kingdom, Netherlands, and Sweden. The number of macro-level observations is much smaller, which limits the feasibility of introducing additional controls. In addition to the log of exposure in the countries at the EU core, the analysis includes first simply a control for national income levels (logged), and, subsequently, the following macro-level covariates: membership of the Euro-zone, tax revenue, debt, and the combined index of the unemployment rate and the share of the informal economy. The right side of Table 1 below reports the results.
Table 1: The Political Geography of the Euro-Crisis: Multi-level analyses

<table>
<thead>
<tr>
<th>Total Tax Revenue</th>
<th>Support for an Integrated Tax System (Eurobarometer 74.2, Nov-Dec 2010)</th>
<th>Support for International Redistribution (Eurobarometer 76.1, September 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.048*** (.013)</td>
<td>-0.049*** (.013)</td>
</tr>
<tr>
<td>Debt</td>
<td>.011*** (.003)</td>
<td>.008*** (.002)</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Informal Economy</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Standardized Unemployment and Informal Economy Share</td>
<td>.028** (.014)</td>
<td>.028** (.01)</td>
</tr>
<tr>
<td>Log of GDP pc</td>
<td>-.71 (.66)</td>
<td>-.83 (.99)</td>
</tr>
<tr>
<td>Log Exposure to GIIPS default</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Additional Macro Level Controls</td>
<td>All</td>
<td>Euro</td>
</tr>
<tr>
<td>Individual Level Controls</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>N (level 2)</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>N (level 1)</td>
<td>22579</td>
<td>23313</td>
</tr>
</tbody>
</table>

All models include a constant.
Findings (I): Unfeasible Fiscal Integration

The types of models under consideration do not allow a direct interpretation of the effects of interests. Accordingly, Figure 5 plots 1000 simulations and capture the point estimates and the 95% confidence interval holding all other variables at their mean or their mode. The x axis covers the full range of variance in the independent variable of interest. The left panel focuses on the index capturing differences in the working of labor markets across EU members. The right panel, in turn, captures differences in revenue generation capacity.

Controlling for individual factors, with a small macro-level sample size, and a high level of co-linearity amongst macro variables, the analysis still identifies significant and sizeable effects of macro level factors associated with differences in the functioning of labor markets and fiscal capacity on average levels of support for fiscal integration in the EU. The patterns emerging are straightforward: citizens in countries with less resources, less efficiency, and worse labor market performance are more favorable, other things being equal, to integrate taxation. The left panel in figure 5 suggests that as the labor market outcomes associated with the Great Recession worsen, the support for tax integration strengthens. In turn, citizens exposed to better endowed and better working politico-economic institutions are more resilient to the possibility of delegating fiscal authority to EU institutions. As the level of tax revenues raised by the national state increases, so does the opposition towards further fiscal integration. In conclusion, the crisis has reinforced,

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27 This result is consistent with earlier findings about the relationship between national levels of corruption and support for the process of European integration (Sanchez-Cuenca 2000).

28 In a recent paper using survey experimental evidence in a sample of German citizens Bechtel et al. 2013 explore the conditions under which voters are more or less supportive of Eurozone bailouts. Consistent with the results in this paper, they find that when conditionality is high and the cost of the bailout is shared by other European economies, the support by German voters increases. In other words, tolerance increases as the redistributive incidence decreases. Equally consistent with the model in this paper, they also find no differences in the views of German voters along income lines. This set of findings supports the notion that a wider gap in term of the geography of labor markets generates homogeneity of preferences within nations and heterogeneity of preferences between nations. See also Bechtel et al. 2014 where the analysis focuses on the tension between economic nationalism and other-regarding preferences.
asymmetrically, performance and distributive differences across units, thereby making the possibility of “more (fiscal) Europe” even less feasible than before.
Figure 5: Labor Markets, Resources, and Support for Integration
Findings (II): International Transfers

To assess the impact of exposure on the support for international transfers, Figure 6 performs a similar set of simulations. Recall that the expectation in this case is that more exposed countries show higher levels of average support for international transfers. The findings in Figure 6 suggest that a higher exposure to risks associated with cross-regional externalities increases the support for international redistribution. The effect is quite sizable: a one standard deviation increase in the degree of exposure (about 1 point in the log scale) implies a 5% increase in the average support for international transfers in that particular country.

Arguably, the politics behind this process reflects more a top-down process where elites, aware of the potential risks, undertake the task of convincing voters of the need and desirability of support the union as a collective good. Qualitative evidence on the German case suggests that it was incumbent upon employers organizations, trade unions, banking associations, and party elites to build the case for costly bailouts towards those economies where German financial institutions where especially exposed (according to the data from the BIS reported in Figure 10 those economies would be in particular Spain, Ireland, and Italy). Quoted in March 2011, the head of the German employers association (Dieter Hundt) criticized opposition to bailout efforts in the following way: "It's easy to demand that the rescue fund should not become bigger. But this avoids the crunch question: whether the volume is enough to clear a realistic path into the future for illiquid states." A similar discourse was adopted by the main parties, which supported in September of that year the creation of the European Financial Stability Facility, a major fund to bailout European economies in need, with a majority of 523 out of 620 members of the Bundestag. By early October, the heads of the major trade unions (among others Michael Sommer, Berthold Huber (IG Metall) and Frank Bsirske (Verdi)) had endorsed the approach. Elites’ discourses would trickle down to voters, who would in turn show a stronger support for international transfers towards those countries that could potentially constitute a larger risk. Interestingly, in a recent paper Bechel et. al. (2013) find, on the

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29 Handlesblatt, 8 March 2011.
basis of an innovative co-joint experimental design, that German voters do actually discriminate their support for bailouts depending upon who the recipient country is. Holding the degree of conditionality and cost-sharing across EU members constant, “bailouts face the strongest opposition when the recipient country is Greece and are most popular when the recipient country is Ireland, with Italy and Spain falling in the middle.” These findings are clearly consistent with the patterns reported in Figure 6.

30 Bechtel 2013, 17. Similarly, Rickard 2012 argues that parties, interest groups and citizens in the UK were much more tolerant towards the Irish bailout than to those favoring other European economies.
31 Ultimately, though, modeling the specific mechanisms of the political process leading to a higher support for interregional transfers in more exposed countries is outside the scope of this paper.
Figure 6: Impact of Exposure on Endorsement of International Redistribution
6. Conclusions

This paper has addressed the puzzling co-existence of two political processes in the EU: the persistent resilience to adopt a common fiscal system despite having a common monetary system, and the fact that significant levels of international redistribution from the core to the periphery have taken place. The analysis suggests that the key to unlock this puzzle lies in the combination of a heterogeneous economic geography, exacerbated by the financial crisis, and the nature of cross-regional economic externalities. It is the exposure to financial risks by the core that underpins support for international transfers that are ultimately regressive from the perspective of the recipient population.

The analysis offers one important political implication for the future. Given the economic geography of the union, the status quo hardly constitutes a stable equilibrium. Wealthy, investment oriented economies have little incentive to pursue the agenda of fiscal integration. Moreover, to the extent that bailouts work in protecting financial institutions in core countries, political opposition to further transfers will rise. At the other end, the constraints on the political autonomy of net recipients appear hardly sustainable in the medium run. While South European incumbents face huge uncertainties and costs outside of the Euro, the possibility of a break-up is subject to the enduring patience of core voters in low capacity, high inefficiency economies, and to the strategic responses by their leaders. The recent rise of several populist political forces may suggest that voters’ patience is running thin and a different political response is required. However, were the periphery of Europe to pursue a coordinated effort (possibly with France) to renegotiate the terms of the union, and given the political and economic fundamentals of the union analyzed in this paper, net contributing, investment oriented members would have incentives to opt out altogether. Ultimately, political integration is only feasible and sustainable under sufficiently low levels of heterogeneity in the political and economic geography of the union.
Appendix.- The Micro-logic: Formal Derivation of Individual Preferences.

In this appendix I develop formally the analysis of the determinants of preferences of inter-personal and international redistribution that underpins the theoretical analysis in the paper. Risks are assumed to affect utility according to Arrow-Pratt constant relative risk aversion function, by which \( \left( \frac{c_i}{1-\delta} \right)^{1-\delta} \), where \( c_i \) represents individual consumption.

As a result, citizens’ utility function becomes:

\[
V_{ir} = \alpha \frac{(w_{ir}(1-t)-T(w_r-w^u))^{1-\delta}}{1-\delta} + (1-\alpha) \frac{\alpha t w^u - T(w_r-w^u))^{1-\delta}}{1-\delta}
\]

where \( w \) refers to income, subscript \( i \) refers to individuals, subscript \( r \) refers to regions, and subscript \( u \) refers to the overall union. Solving for the optimal tax rate of individuals across different regional income distributions yields:

\[
\frac{\partial V_{ir}}{\partial t} = -\alpha w_{ir} \left( \frac{w_{ir}(1-t)-T(w_r-w^u))^{1-\delta}}{1-\delta} + (1-\alpha) \frac{\alpha t w^u - T(w_r-w^u))^{1-\delta}}{1-\delta} \right)
\]

\[
\rightarrow \left( w_{ir}(1-t^*)-T(w_r-w^u) \right) \left( \frac{w_{ir}}{w^u} \right)^{1-\delta} = \left( \frac{\alpha t^* w^u - T(w_r-w^u))}{1-\delta} \right)
\]

where the last line is the FOC for a unique interior solution of the optimal tax rate, \( t^* \).

A number of interest implications follow from this FOC expression:

(1) In the absence of risk aversion (\( \delta = 0 \)), the model simplifies to one in which distributive concerns are dominant. This scenario is the one best capturing the distributive dimension of the problem:

a. any citizen in any region with income above \( w^u \) will want zero union-wide income tax rate;

b. any citizen anywhere with income at or below \( w_{ir} \leq w_{ir} = w^u = \frac{\beta}{\alpha} \) will want \( t^* = 1 \);
c. \( \frac{\partial t}{\partial w_{ir}} < 0 \) for \( w'' \geq w_{ir} \geq w''_{ir} \)

d. the more citizens below \( w'' \), the greater the demand for redistribution;

e. Last but not least, it is also clear that all citizens in regions with \( w_{ir} < w'' \)
will support the highest value of \( T \) feasible, and those where \( w_{ir} > w'' \) will want \( T = 0 \).

(2) The demand for redistribution, \( t^* \), increases with the scope of realized risks, \( 1 - \alpha \). If the FOC is totally differentiated with respect to \( t^* \) and \( \alpha / (1 - \alpha) \), the result is:

\[
\frac{d t^*}{\alpha (1 - \alpha)} = - \frac{t^* w''}{\left( \frac{\alpha}{1 - \alpha} w'' + \left( \frac{w_{ir}}{w''} \right)^{\frac{1}{\delta}} w_{ir} \right)} < 0 \quad \rightarrow \quad \frac{d t^*}{d(1 - \alpha)} > \quad (1)
\]

(3) The demand for redistribution increases with risk aversion. To see this, note that in the solution to the optimization problem, \( \frac{\partial t^*}{\partial \delta} > 0 \).

(4) As a result of risk aversion, it is also the case that \( t^* > 0 \) when \( w_{ir} > w'' \) (so long as it is not too much greater), whereas with \( \delta = 0 \) any income above \( w'' \) will prefer \( t^* = 0 \). To see this note that if \( w_{ir} = w'' \) then in the FOC \( \left( \frac{w_{ir}}{w''} \right)^{\frac{1}{\delta}} = 1 \), if \( \delta > 0 \), and the FOC then implies with \( w_{ir} = w'' \) that \( t^* = 1 - \alpha \), which is strictly positive for \( \alpha < 1 \). Hence a small increase in \( w_{ir} \) above \( w'' \) implies a small decrease in \( t^* \), and a small enough increase in \( w_{ir} \) implies that \( t^* \) must remain positive. The key analytical result is that the demand for redistribution increases with risk aversion, which suggest that for sufficiently high levels of economic specialization wealthier citizens may be willing to invest in insurance despite the short-term costs in tax terms.
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