Income Inequality in the EU

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Inequality and Market Integration: Direct Effects and Policy Implications in EMU

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Cohesion is one the European Union's objectives, along with growth and stability. In the Economic and Monetary Union (EMU), however, these objectives are only targeted by ineffective coordination frameworks and small spending programmes. Economic integration was meant to be a source of economic growth and efficiency, particularly through market-size and product diversity effects. It was also supposed to promote cultural and institutional convergence across countries, as well as imitation and competition among policy systems. Relatively little attention was paid to the effects of international market integration on income inequality within countries, despite its obvious political relevance. In all industrialised countries, and especially in continental European ones, welfare state policies are far more extensive than the European Union's structural, cohesion, and social funds. At a share of a European Union's budget that hovers around 1 percent of aggregate income, the latter are hardly significant compared to national social protection expenditure which, even excluding pensions, amount to some 10-20 percent of income in member countries.

This article focuses on the implications of international economic integration for inequality among each nation's citizens; and for national policies that influence inequality in politico-economic equilibrium. Empirically, the closer economic integration implied by EMU was associated, on average, with higher intra-country inequality. Around that trend, member countries' inequality indicators display wide swings that are correlated with country-specific average income changes, and are largely symmetric before and after the crisis. Simple theoretical mechanisms can explain these phenomena as a straightforward implication of EMU's institutional configuration. While unsurprising in hindsight, higher inequality is problematic, and not what European citizens expected from EMU. Market integration and policy competition may well improve efficiency and help to achieve economic growth objectives, but their inequality implications make it more difficult to achieve political stability and social cohesion at the member country level.

This article reviews the message conveyed by the data, refers to broader evidence, while outlining theoretical explanations of the facts, and concludes by discussing their institutional and political relevance.

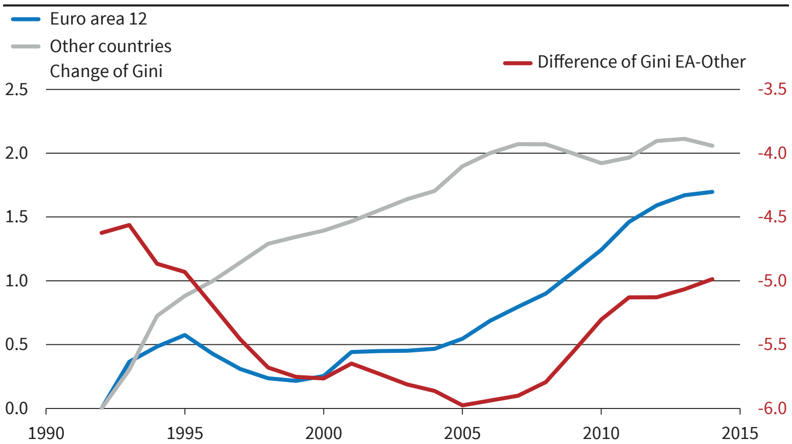
A FEW FACTS

Figure 1 plots population-weighted averages of a standard country-specific inequality indicator against time, separately for the group of countries that joined the Eurozone early[1] and for the other mostly developed

[1] This group includes Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain.

Figure 1

Population-weighted Averages of Gini Coefficients of Disposable Income Inequality



Source: Solt (2016).

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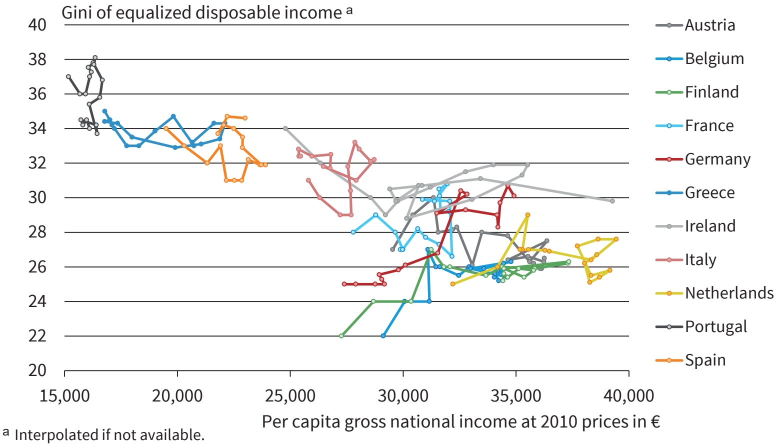
Figure 2
Country-specific Average Income and Income Inequality, 1998–2015



[a] Interpolated if not available.
Source: Eurostat; AMECO.

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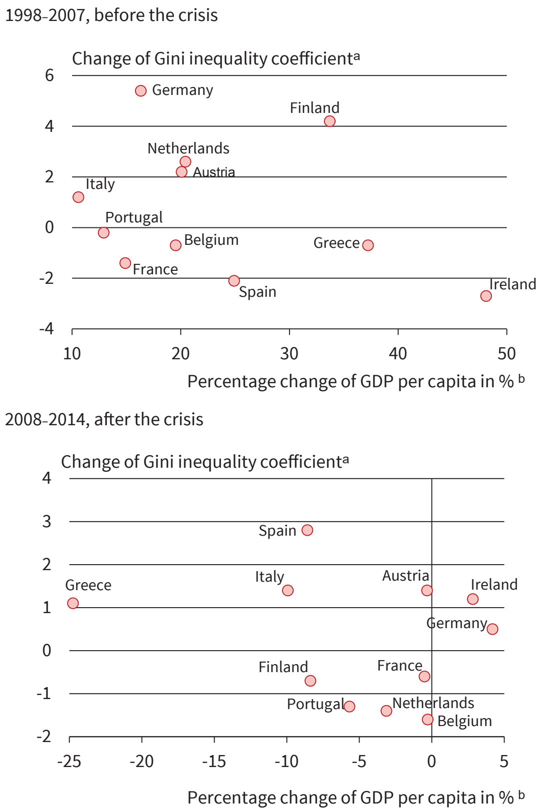
countries[2] included in the Solt (2016) database. In the first group inequality was on average stable or decreasing in the 1990s, and subsequently began to increase quickly. The figure also plots the difference in average inequality in the two groups. Inequality is, on average, always lower in the continental European countries that form the bulk of the Eurozone than in the comparison group of countries that did not integrate as tightly. However, the difference becomes narrower as of 2005 and, especially, after the 2008 crisis.

Figure 2 plots the 1998–2015 paths of country-specific average income and income inequality for the countries that adopted the euro around 2000 (Luxembourg is omitted). It conveys an impression of large and heterogeneous changes that, like the sharply increasing path of average inequality in Figure 1, is not good news for anybody who hoped EMU would foster cohesion.

Figure 3 isolates some changes in the same data over two periods. The top panel starts when the euro was first adopted and stops just before the crisis; the bottom panel covers the crisis. There are, of course, many explanations for aggregate income and income inequality dynamics at the country level. Finland is similar to other Northern European countries in many respects, but was recovering from a deep crisis when it joined the Eurozone; the pre-crisis boom was cut short much sooner in Portugal than in other peripheral countries; the crisis was asymmetric and so was recovery across countries; and the data only imperfectly measure the phenomena of interest (average income is particularly difficult to measure and interpret in Ireland, where multinational operations would imply a very sharp GDP increase if the post-crisis period were to include 2015). But the broad-brush picture painted in Figure 3 suggests that changes in income averages and inequalities are often related. In the top panel some countries, notably Germany, experience both relatively slow growth and a relatively large increase in inequality; while the opposite is true of other countries like Spain and Greece. The bottom panel shows a broad reversal in fortunes: during the crisis Germany's income levels and inequality were relatively stable, while Greece and Spain suffered not only large output declines, but also increasing inequality.

A relevant source of variation for the data displayed in the figures must be the impact of international economic integration on average incomes and their inequality. Some of these effects are complicated and ambiguous. When markets operate across national borders, new types of shock and new channels of adjustment become relevant. Growth and inequality developments are the result of common and country-specific technological

Figure 3
Variation of Country-specific Average Production and Income Inequality in EMU



[a] Gini coefficient of equivalised disposable income, interpolated if not available.
[b] Gross domestic product at 2010 levels/total population.
Source: Eurostat; AMECO.

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[2] Australia, Britain, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Hungary, Iceland, Japan, Korea, Latvia, Lithuania, Malta, Mexico, New Zealand, Norway, Poland, Romania, Slovakia, Slovenia, Sweden, Switzerland, Turkey and United States.

developments, and of globalization, which had different implications for countries that within Europe specialized in sectors that compete with or are complementary to those where emerging countries have a comparative advantage.

In the Eurozone's experience, however, the initially tighter international integration of financial and other markets implied and the disintegration triggered by the crisis did, in interesting respects, conform to the less ambiguous theoretical implications, discussed next, of international economic integration for personal income distribution when production factors are distributed unevenly across and within countries.

THE DIRECT INEQUALITY IMPACT OF INTERNATIONAL INTEGRATION

In the absence of other distortions, the removal of international market barriers would certainly benefit 'representative' individuals who own factors in each country's average proportion: in undistorted markets exchanges are voluntary, hence they must be beneficial. Within each country, however, international factor mobility or factor reallocation between import and export sectors lowers the market income of factors that were scarcer in autarky. Redistributing the gains from trade would, in principle, make it possible to allow all individuals to benefit from economic integration. In practice, doing so would require unrealistically detailed information and policy instruments. Hence, international economic integration changes the distribution of income distribution across individuals who own different factors in different proportions within each country, and may very well damage individuals who mostly own factors that are less scarce in the integrated economy than in autarky. International markets increase the incomes of hypothetical country-specific representative individuals, but also raise or lower the incomes of many real-life individuals.

Gainers and losers are not the same in different countries and different historical contexts, and international economic integration may increase or decrease inequality in specific countries. In the 19th century, intercontinental trade made land less scarce and reduced rich landlords' income and benefitted labourers in European economies (O'Rourke 2001). In the more recent wave of globalisation, integration with poorer countries plausibly increased inequality in rich countries, as their poor citizens' incomes were bid down by competition from workers in poor countries. Inequality in most advanced countries did begin to increase towards the end of the 20th century, reversing a previous declining trend. This pattern broadly parallels that of global economic integration indicators, but it is difficult to identify the effects of economic integration separately from those of technological change. On the one hand, this is because the extent of economic integration is shaped by progress in transportation and communication technologies, as well as by trade liberalization and other policy trends. On the other hand, it is due to the fact that the two phenomena have similar effects on the distribution of incomes in advanced countries.

The sharp and precisely-timed economic integration implied by EMU offers an opportunity to observe its implications more clearly. Factor prices can influence personal income inequality through a variety of economic integration channels: not only trade and migration, but also capital flows, which stand out clearly in early EMU data. Differences in capital abundance, rooted in historical experience and in demographic and other determinants of savings rates, triggered not only new opportunities for trade in goods with different factor contents, but also highly visible financial flows, as capital went 'downhill' towards economies where its relative scarcity offered higher returns. Labour is less mobile than capital and ownership of the latter is more concentrated. If wealth is more unequally distributed than other income sources within each country, theory predicts that inequality should increase in capital-rich countries, where wealthier individuals can enjoy the higher rate of return offered by investment in capital-poor countries, and that it should decline in countries where capital inflows bid down returns on wealth and raise wages and employment. In the early 2000s increasing income inequality was indeed positively and significantly associated with current account surpluses not only in Germany, but more generally across EMU member countries (Bertola 2013 and 2016).

FROM INTEGRATION TO INEQUALITY THROUGH POLICY

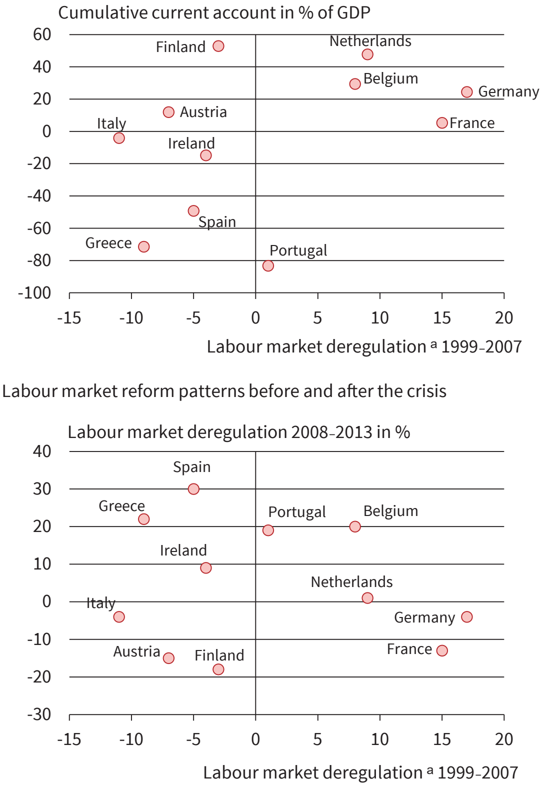
To interpret the evidence, it is important to consider the implications of economic integration not only for market income inequality directly, but also for the policies that aim to reduce income inequality in each country, and in EMU continue to do so independently, even as markets integrate.

In Figure 2 above, inequality tends to be lower in EMU member countries with higher per capita income. In this group, and more generally, policy reduces inequality more strongly in richer countries: for example, social protection expenditure as a percent of GDP is positively correlated with per capita GDP, and negatively related to inequality (see Bertola 2010b). While some redistributive policies may increase productivity at the same time as they reduce risk and inequality (a welfare safety net may encourage entrepreneurial innovation, and job security may similarly give appropriate risk-taking incentives to employees), a more plausible explanation for the more generous welfare policies of richer countries is that higher income makes it easier to afford the luxury of more extensive redistribution at the cost of lower production efficiency.

Focusing on factor incomes as a determinant of personal income distribution offers sharp insights not

Figure 4
Labour Market Deregulation Patterns in EMU

Labour market deregulation and international imbalances before the crisis



ª Cumulative count of the reforms that increase labourmarket felxibility (see Turrini *et al.* 2015).

Source: Eurostat; LABREF, database DG, EMPL; European Commission.

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only into the direct impact of economic integration on inequality but also into its implications for redistribution policies. Given that labour income is less concentrated than other factor incomes, it is a more important income source for relatively poor households. Thus, policies that shift income towards labour and away from other factors reduce inequality. For example, a wage floor increases worker welfare as long as higher wages are not offset by lower employment along the labour demand curve, and reduces inequality at a price in terms not only of employment, but also of total production and capital returns. Other 'passive' policies (like unemployment insurance, worktime regulation and employment protection) have similar effects. They are more prevalent than symmetric 'active' policies (like in-work employment subsidies), and this can be explained by democratic decision processes that give a greater weight to the many citizens who predominantly earn labour income than to the relatively small number of wealthy voters.

While competition in well-regulated markets fosters efficiency, competition among policymakers can make policies ineffective (Sinn 2003). To see how international economic integration interacts with national policies that shift income towards workers and reduce capital returns, note that higher wages exact higher employment prices if capital can move across country borders seeking higher returns. The resulting race-to-bottom pressure on competing policies makes them gravitate towards the competitive deregulated equilibrium.

Empirical evidence on policy reactions to economic integration can be gathered by comparing countries that did and did not adopt the euro before and after the event, which was indeed associated with the significantly faster deregulation of product markets, some deregulation of their labour markets, and lower social policy expenditure. In the data, the faster growth of disposable income inequality illustrated in Figure 1 above, and different employment and unemployment developments, are statistically accounted for not by economic integration *per se*, but by its association with changes in labour and social policy indicators (Bertola 2010a and 2010b).

These developments, however, were uneven across countries. After the adoption of the euro, Germany's *Hartz* reforms quickly brought its labour market towards the deregulated 'bottom'. Other Eurozone members implemented less drastic reforms, and some reduced their labour market flexibility. A useful summary indicator of these developments is the LABREF database developed at the European Commission's Directorate General for Economic and Financial Affairs at the initiative of the Labour Market Working Group attached to the Economic Policy Committee of the ECOFIN Council in 2005, and currently maintained by the staff of the Directorate General for Employment, Social Affairs and Inclusion. It contains a classification of measures in a variety of areas and an indicator of how each influences labour market flexibility. A cumulative count of these indicators provides a time-varying measure of each country's reform stance.

The top panel of Figure 4 shows that before the crisis labour markets were deregulated more in countries that accumulated positive external imbalances, and also tended to display relatively slower average income growth in the top panel of Figure 3, than in countries where capital inflows financed some private or public consumption growth and large investment booms. The bottom panel of Figure 4 shows that reform patterns are largely symmetric before and after 2008. As with the output and inequality patterns in the bottom panel of Figure 3, reform patterns also reversed when the financial and euro crises reversed the previous integration trends.

Bertola (2017) analyses these patterns in greater detail and documents them for other policy indicators too; while Bertola (2016) offers a simple politico-economic explanation for these observations. In EMU wealth differs across countries as well as within them individually, and labour market regulation is chosen to benefit individuals who draw relatively more income from labour within each country. In capital-rich countries, such individuals are poor relative to their compatriots' average, but become less poor when the market that employs their labour and capital is extended to include capital-poor countries. So, the politico-economic equilibrium in Germany, for instance, should and did swing towards deregulation more strongly than in Spain, for example, where politically-decisive individuals become even more capital-poor. As EMU allowed capital to move more easily across the boundaries of countries with independent labour policies, reforms were related to the countries' different capital intensities, and associated with international financial imbalances as capital flowed towards higher returns.

Both divergent reforms and downhill capital movements were completely natural consequences of financial integration and policy subsidiarity; both increased inequality in countries that experienced capital outflows and decreased it in countries that accumulate negative international imbalances; and both were reversed when the financial crisis made it more difficult and less appealing for rich countries' savings to fund poorer countries' investment and consumption.

ON THE INTERACTION OF MARKETS AND POLICIES

Remarkably, economic integration in Europe moved inequality through policy in the same direction as markets did: in countries where market-income inequality was increasing, labour market deregulation and the decreasing generosity of welfare policies did nothing to keep it in check. As explained above, economic integration has obvious implications for inequality and for the politico-economic determination of country-specific policies that reduce inequality. But these developments are politically uncomfortable in relatively rich countries, where integration may well benefit the country on average, but damage politically crucial, lower-middle-class voters.

As Figure 3 above shows, increasing inequality has often been associated with countries that have relatively slow per capita income growth. Growing inequalities within and across countries challenge the political sustainability of EMU, if they result from, or are perceived to result from economic integration, and if politico-economic equilibrium policies fail to remedy them. Income inequality across countries increases when national government budgets cannot buffer asymmetric shocks (Bertola 2013), and relatively poor workers within each country may suffer the consequences not only of capital outflows, but also of country-specific reforms that reduce the generosity of social policy and make labour markets more flexible.

Before EMU, a single market with multiple currencies was disturbed by devaluations because uncoordinated macroeconomic policies, fixed exchange rates, and free capital mobility were mutually inconsistent. EMU is similarly disturbed by reforms of its multiple social and labour policies because market integration, subsidiary policies, and politically acceptable inequality also form an inconsistent trinity. In principle, supranational policy stabilisers (like a European unemployment insurance scheme) or effective policy coordination (that would control the excesses of both deregulation and re-regulation) could keep the centrifugal forces and tensions arising from exposure to systems competition between politically crucial policies in check. In practice, harmonising social and labour policies would be much more difficult than even adopting a single currency was. The member countries of EMU pursue similar distributional objectives using a large variety of different instruments, and it would be both politically and technically difficult to design a supranational scheme that could replace, or be added to, the respective historically-determined welfare states of member countries with very different administrative capacities and heterogeneous political majorities.

European integration was exceptionally supported by a mutual interest in preserving peace through the convergence of institutions, cultures, and policies. Other economic gains (like economies of scale and diversity) and non-economic motives (like a desire to achieve consensus on German reunification) had to play a significant role in making integration with capital-poor countries politically acceptable in relatively rich countries, where a democratic majority of relatively poor workers could expect to be damaged by capital outflows and labour market reforms. In countries that suffered from financial disintegration during the crisis, hopes of a quick return to better times were similarly necessary for EMU to survive resentment on the part of relatively poor workers.

Economic integration is not robust, however, if it perturbs national income distribution issues that cannot be addressed by supranational policy action and political processes. It is hard to formulate compromises among contrasting interests across the boundaries of member countries when policies designed to cope with country-specific industrialization are challenged by international market integration, but political interactions still take place mostly at the national level. A solution to this thorny set of problems is not easy to find, but none will ever be found unless the issues arising from the interaction of international market integration and inequality concerns are recognised and analysed clearly.

REFERENCES

Bertola, G. (2010a), "Inequality, Integration, and Policy: Issues and Evidence from EMU", *Journal of Income Inequality* 8, 345–365.

Bertola, G. (2010b), "Labour Markets in EMU: What Has Changed and What Needs to Change", in: Buti, M., S. Deroose, V. Gaspar and J. Nogueira Martins (eds.), *The Euro: The First Decade,* Cambridge: Cambridge University Press, 715-758.

Bertola, G. (2013), *Policy Coordination, Convergence, and the Rise and Crisis of EMU Imbalances,* European Economy - Economic Papers 490, Brussels: European Commission DG Economic and Financial Affairs.

Bertola, G. (2016), "Labor Policies and Capital Mobility in Theory and in EMU", *European Economic Review* 87, 62-77.

Bertola, G. (2017), *EMU and Labor Market Policy: Tensions and Solutions,* European Commission DG Economic and Financial Affairs, European Economy Discussion Paper 054.

O'Rourke, K.H. (2001), *Globalization and Inequality: Historical Trends,* NBER Working Paper 8339.

Sinn, H.W. (2003), *The New Systems Competition,* Oxford: Blackwell Publishing.

Solt, F. (2016), "The Standardized World Income Inequality Database", *Social Science Quarterly* 97, 1267-1281.

Turrini, A., G. Koltay, F. Pierini, C. Goffard and Á. Kiss (2015), "A Decade of Labor Market Reforms in the EU: Insights from the LABREF Database", *IZA Journal of Labor Policy* 4, 12.