Compensating the losers of free trade

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Compensating the losers of free trade

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Contribution to the Project

This policy paper provides an overview of labor market policies that are suitable to compensate the losers of the globalization process. It draws on both our own and external research on the topic.

Compensating the losers of free trade

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Abstract. Fears of rising wage inequality and job loss loom large in current debates on free trade. Surprisingly, however, there exists little academic research on how to compensate those who lose from free trade. This policy paper reviews the existing theoretical literature on trade and compensation, and derives guidelines on how to design compensation schemes in practice. The existing theoretical literature suggests that active labour market policies, targeted to workers who lose from free trade, are a promising way of compensation. In line with this theoretical recommendation, we find that countries open to free trade also spend more on active labour market policies.

1. Introduction

International trade has soared in the last 50 years: as a percentage of global GDP, total world trade more than doubled from 24.9 per cent in 1960 to 61.6 per cent in 2011 (see Figure 1). The figure is even higher in the European Union (EU) where the trade-to-GDP ratio stands at startling 85.9 per cent. In recent years, trade with China has intensified dramatically. While economically isolated until the late 1970s, China is now the EU's second biggest trading partner (behind the US) and by far the EU's biggest source of imports. But not only has the volume of international trade increased, the nature of international trade has changed as well. Today, countries not only exchange raw material or final products but also intermediate inputs. Falling transportation costs and rapid advances in information and communication technologies have led many firms to unbundle production stages and offshore production processes to foreign suppliers. Countries' growing integration in international value chains is reflected in a decrease in the domestic value-added share of exports (and thus in an increase in the share of foreign content). For the EU as whole, the domestic value added content decreased from 90.5% in 1995 to 86.4% in 2009. Of particular concern in the public discussion in developed countries is the increasing competition from low-wage economies, and especially from China.

Most economists and large parts of the business community highlight the benefits of free trade: a competitive spur for firms, lower prices and greater product variety for consumers. In fact, many Europeans acknowledge that globalisation entails aggregate benefits. For instance, 56 per cent of Europeans agree that "globalisation is an opportunity for economic growth", while only 27 per cent disagree with this statement (Eurobarometer, 2010). At the same time, however, Europeans also believe that the benefits of globalisation are not shared equally in society: 62 per cent believe that "globalisation is only profitable for large companies, not for citizens", and 60 per cent think that globalisation increases "social inequalities". Fears of rising inequality are also widespread in other parts of the world: an opinion poll by the BBC has found that majorities in 27 out of 34 countries, and 64 per cent of all respondents, believe that the benefits and burdens of "the economic developments of the last few years" have not been shared fairly.

Figure 1: Trade (imports and exports) in per cent of GDP, 1960-2012
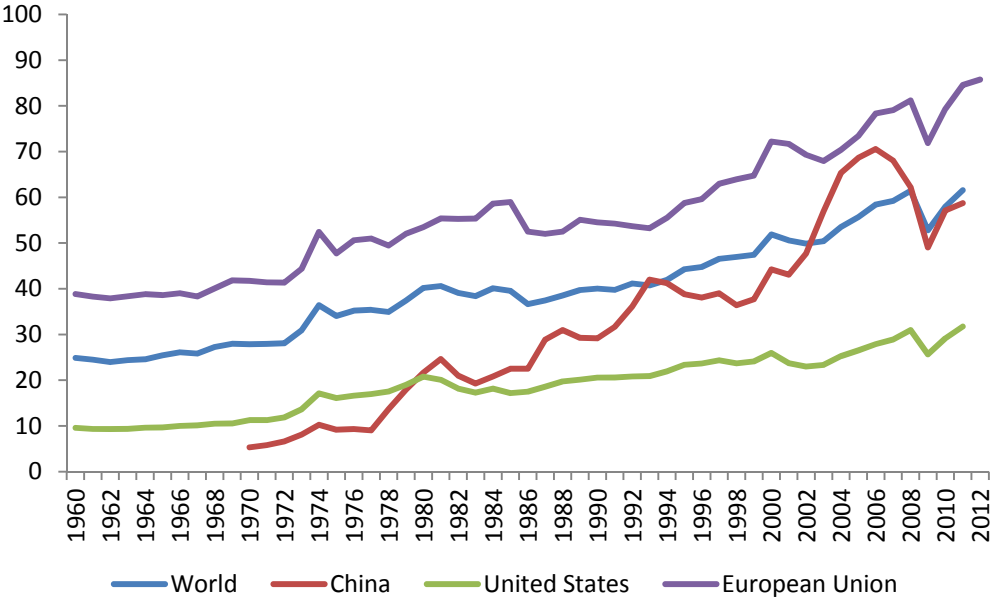
Source: World Development Indicators (2013)

Figure 2: Change in Income Inequality (Gini Coefficient) in OECD Countries, Mid-1980s to End-2000s
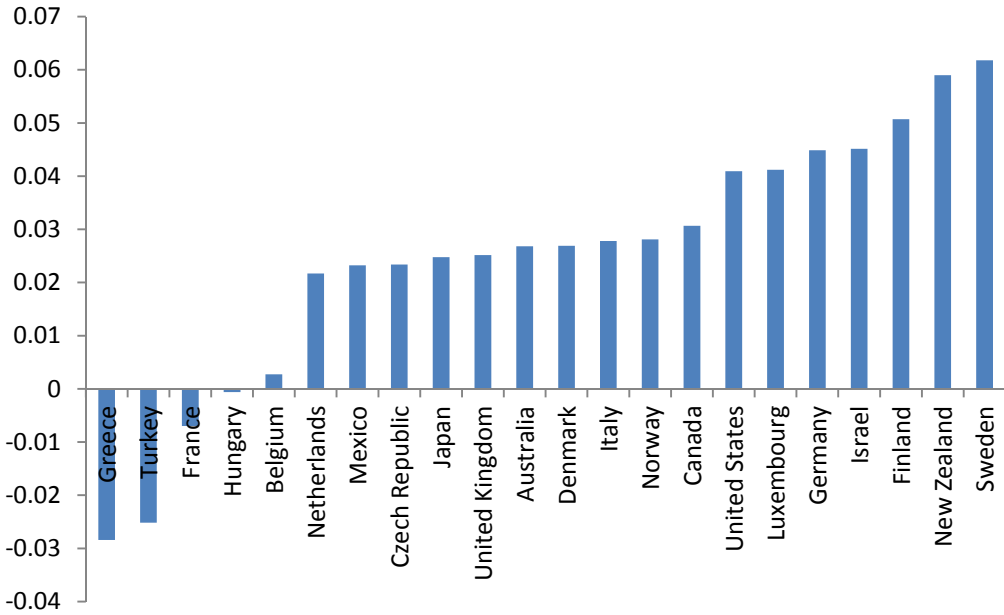
Source: OECD Database on Household Income Distribution and Poverty.
Notes: The Gini coefficient is one of the best known measures of inequality. Its values range between 0, in the case of "perfect equality", and 1, in the case of "perfect inequality". The income concept used is disposable household income in cash after transfers and taxes, adjusted for household size.

Recent evidence indeed shows that in most developed countries, income inequality has increased since at least the mid-1980s – and thus during a time of rapid globalization. Figure 2 depicts the changes in overall inequality, as measured by the Gini[1] coefficient, in disposable household income (after transfers and taxes) for 22 OECD countries. Inequality has increased in 18 out of 22 countries, although the exact magnitude of the increase differs a lot across countries. The main factor driving the observed increase in household income inequality is the widening of the wage distribution (OECD 2008, 2011). In almost all OECD countries, gross wages grew much faster at the top than at the bottom of the wage distribution. In general, wage differentials did not only increase between but also within occupational, demographic and skill groups (see Mileva et al., 2013, for a more detailed overview of recent trends in inequality).

In addition to the alleged distributional effects of international trade, the public debate on globalization is dominated by fears of large-scale adjustment costs on the labour market. Trade liberalization is meant to increase aggregate output by leading to a more efficient (international) allocation of resources. However, this requires the re-allocation of production factors between and within sectors and, in particular, the re-allocation of labour. This re-allocation, in turn, entails adjustment costs. Some workers might, for instance, lose their job in a declining sector, and might have to engage in a lengthy and costly job search to find a job in an expanding sector. Or they might have to re-train in order to find a new job. And even if affected workers eventually find a new job, they often experience large wage losses.[2] In fact, The size of such (temporary) adjustment costs is difficult to quantify, but existing estimates suggest that it might be substantial. Model-based estimates by Davidson and Matusz (2004), for instance, suggest that adjustment cost might add up to as much as 30% to 80% of the long run gains from freer trade. And Artuç et al. (2010) estimate that workers' cost of moving between sectors are many times higher than an average workers' annual earnings. Consequently, the authors find that sectoral reallocation after trade liberalization requires several years.

The exact size of the adjustment costs is disputed among economists and so is the exact contribution of trade to the observed increase in inequality. However, the view that the

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[1] The Gini coefficient is one of the best known measures of inequality. Its values range between 0, in the case of "perfect equality", and 1, in the case of "perfect inequality".
[2] In fact, Autor et al. (2013) have recently shown that rising imports from China significantly increase unemployment and reduce wages in those local US labour markets, in which import-competing manufacturing industries are located. Similarly, Dauth et al. (2014) find that intensified trade with China and Eastern Europe led to significant job losses in German regions specialized in import-competing industries.

globalisation process is benefiting some groups in society while harming others is widely accepted in the profession. This raises important questions. Should the losers of free trade be compensated? And if so, what should compensation policies look like?[3]

There are three main arguments in favour of compensation (OECD, 2005). First, it may be judged unfair that some workers bear high adjustment cost and lose from free trade while the economy as a whole benefits (*equity consideration*). Second, citizens' negative perceptions about the distributional effects of globalisation may result in support for protectionist measures that, if escalating, may wipe out the aggregate gains from globalization. To make globalization sustainable, and reap its aggregate benefits, policy makers might have to ensure that a majority of voters benefit from globalisation (*political economy consideration*).[4] Third, compensation policies might also help to overcome market failures and improve the efficiency of matching trade-displaced workers to new jobs (*efficiency consideration*).

This discussion suggests that, in general, there might be good reasons, both political and economic, to design specific policies aimed at sharing some of the benefits of liberalized trade with those workers paying a heavy price for trade liberalization. However, compensation programs in most industrialized countries are designed to assist all unemployed workers, regardless of the cause of the unemployment. The absence of labour programs specifically targeting trade-induced unemployment may be a reflection of the practical difficulties in isolating the trade cause of worker displacement from other causes.

One informative exception has, however, emerged. The United States is unique within the OECD countries for having operated a targeted program for trade-displaced workers, the Trade Adjustment Assistance program (TAA), for over 40 years (OECD 2005). The program is national in scope, and is designed to target workers (and to a lesser extent firms) affected by imports. The number of workers accessing TAA-funded benefits and services was more than 227,000 in 2010, with almost USD 1 billion of spending from federal funds (US Department of Labor 2014). TAA has traditionally offered a set of active labour market programs (such as training) and unemployment benefits to workers certified as trade-displaced, which are more generous than those available to workers displaced for other reasons. In its current form the

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[3] In the following, we consider all those policies as compensation policies that improve the welfare or labor market outcomes of workers who would lose from free trade in a no-policy scenario.

[4] The theoretical literature on the political economy of international trade has analysed situations where compensation of the potential losers of trade help foster the sustainability of trade openness because compensation creates a political consensus for trade policy (see Davidson et al., 2007, Adserà and Boix, 2002). Survey-based empirical evidence also suggests that the political support for free trade might be higher when trade liberalization is accompanied by a compensatory mechanism (see Hays et al., 2005 for OECD countries and Ehrlich and Hearn, 2013, for the U.S.).

program also includes additional elements such as wage insurance and health creditsTAA was launched in 1962 to complement the Kennedy round of multilateral negotiations that cut the tariffs on imports from the European Community by 50%. In the same principle, the later stages of expansions of the program went hand-in-hand with policies of trade liberalization, such as a major reform in 1993 to support the North American Free Trade Agreements (NAFTA), or another significant expansion of the program in 2002 granting President George W. Bush trade promotion authority to pursue WTO negotiations (for a summary of TAA see, for example, Baicker and Rehavi, 2004).A similar initiative but with a somewhat smaller scale is operating in Europe since 2006. The European Globalization Adjustment Fund (EGAF) is defined to "provide support to people losing their jobs as a result of major structural changes in world trade patterns" (European Commission 2014). The program has an annual budget capped at EUR 150 million, and, unlike the TAA, is designed to provide training or similar services but does not include any unemployment benefits. In general, such programs may create costly distortions. However, these can be overweighed if the smoothing of transitions for trade-displaced workers helps to make international trade closer to a Pareto improvement. In any case, both of these programs remain fairly small in size (Baicker and Rehavi, 2004), suggesting that their role might be more of political use than of crucial importance to structural adjustments.Despite ranking high on the international policy agenda, there has been little academic work on how to compensate the losers of globalisation. This policy brief gives an overview of the existing theoretical literature on trade and redistribution, focusing specifically on new insights which have emerged recently from the *WWWforEurope* project (Section 2). We then ask whether some of the policies recommendations stemming from the theory have been followed in practice—and provide empirical evidence on the link between trade openness and expenditures on labour market policies (Section 3). The final section (Section 4) concludes.

2. Compensating the losers of globalisation: Insights from economic theory

Economists have invested a great deal of effort in analysing the effect of international trade on the relative distribution of income. Most studies on the distributional effects of international trade are based on either the Heckscher-Ohlin or the Ricardo-Viner model. The Heckscher-Ohlin model predicts that the owners of abundant production factors gain from trade while the owners of scarce factors lose, whereas the Ricardo-Viner model predicts that opening up to trade harms factors specific to the import-competing sector. More recent contributions have

also analysed the effects of international trade on the distribution of income in trade models with heterogeneous firms and in models of offshoring.[5]

In general, there is broad agreement among economists that the globalisation process will generate net aggregate benefits but will also harm some groups in society. Yet, surprisingly little research has been devoted to the question of how welfare policies can optimally compensate the losers of globalisation. As Feenstra (1998, p.48) has put it: "We know surprisingly little about redistribution schemes, other than that they often fail". In this section, we will first review the existing literature on trade and redistribution, and point to potential shortcomings of the literature. We will then describe new insights generated by two recent papers written within the *WWWforEurope* project.

The existing literature on trade and redistribution

Following the lead by Dixit and Norman (1980, 1986), most of the earlier papers on redistribution schemes concentrate on the possibility of compensating the losers from trade without exhausting the net gains from trade. The policy analysed by Dixit and Norman specifies a scheme of commodity taxes and subsidies such that consumers face autarky prices for goods and factors. Free trade then leaves individuals as well off as under autarky. Dixit and Norman (1980, 1986) show that such policy raises non-negative revenue for the government and thus results in a Pareto improvement.

There are several limitations of the earlier literature in the tradition of Dixit and Norman (1980, 1986). First, the issue of redistribution and trade is usually discussed in the context of the neoclassical approach to international trade, and in particular in the context of the Heckscher-Ohlin model. However, the conventional Heckscher-Ohlin framework cannot explain much of the change in inequality observed since the early 1980s. In particular, the Heckscher-Ohlin theory predicts that the integration of less developed, low-skilled abundant economies, such as China or India, into the world economy will increase the relative prices of skill intensive goods in developed economies, thereby inducing a between-industry shift to skilled workers and a within-industry substitution away from skilled workers.[6] However, much of the increase in the relative demand for skilled workers took place within and not between industries (Bernard and Jensen, 1997; Desjonqueres et al., 1999). The traditional Heckscher-Ohlin framework can also not account for other key developments on the labour

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[5] See Grossmann and Rossi-Hansberg (2008) and Egger and Kreickemeier (2009a) for important recent contributions.
[6] See, e.g., Desjonqueres et al. (1999) for a detailed exposition of the argument.

market, such as the rise in residual wage inequality (i.e., the increase in wage dispersion within demographic and skill groups). Second, the earlier literature in the tradition of Dixit and Norman (1980, 1986) assumes factor markets to be perfectly competitive and therefore abstract from unemployment. Consequently, the literature cannot answer the important question of how to compensate unemployed workers for their job loss (Kletzer, 2004). Third, the compensation scheme considered by Dixit and Norman (1986) has little repercussions in the real world. As Davidson and Matusz (2006: p. 724) have put it: "We know of no government that has ever considered such a scheme to compensate workers harmed by changes in trade policies". In contrast, labour market policies, such as wage or training subsidies or minimum wages, are at the heart of the policy debate on how to assist the losers of the globalisation process.[7] Fourth, much of the earlier literature uses static models of international trade and, thus, considers only the long-run effect of trade liberalization. Hence, the literature abstracts from the potentially large short- and medium-run costs of adjusting to trade liberalization. Fifth, labour is usually supplied inelastically and the skill level of workers is exogenous. Therefore, welfare policies have, by assumption, no effect on the incentives to work or the education decision of workers. Yet, these effects are at the heart of the policy debate on the future of the welfare state, as many observers have criticised that existing policies often encourage welfare dependency rather than labour market participation. Finally, trading partners are usually assumed to be identical and the policy analysis does therefore not consider country-specific characteristics. This is worrisome, as both the effect of but also the policy response to the globalisation process will arguably depend on national idiosyncrasies, and, in particular, on the characteristics of national labour market institutions.

In view of the earlier literature, current and future research on the compensation of the losers from freer trade faces at least five challenges. First, researchers should come up with model frameworks that can capture important aspects of the new stage of globalisation and that can, at the same time, replicate recent developments in the labour market (such as the observed increase in within-group inequality or the increase in the skill premium). Second, these models should account for (empirically relevant) labour market imperfections that generate involuntary unemployment. Third, the models should also be able to replicate recent empirical findings on the individual costs of (trade-related) job loss and the characteristics of displaced workers. For instance, the re-employment probability of displaced workers is particularly low for older workers (Kletzer, 2004). Fourth, newly developed models should also consider the

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[7] See, for instance, the recommendations of the OECD (2007) for dealing effectively with the increased vulnerability of workers in a globalising world.

short-run adjustment costs of trade liberalization. Fifth, the models should then be used to study optimal policy schemes to compensate workers harmed by globalisation, with a particular focus on the labour market policies that are at the heart of the actual policy debate on displaced workers. To make the analysis especially relevant to policy makers, national idiosyncrasies in the economic environment that can profoundly influence labour market outcomes of freer trade, and thus, also shape policy responses, should also be taken into account. A number of recent papers have made progress on these issues (of course, no theoretical model will account for all of them), and in the next paragraphs we discuss five of them.

Recent Advances in the Literature

First, Davidson and Matusz (2006) compare a variety of labour market policies designed to compensate workers that are harmed by trade liberalization. Their model considers a two-sector economy with perfectly competitive product markets and heterogeneous workers that differ in terms of their ability. Low-ability workers work in the low-tech sector that requires few skills and pays low wages. High-ability workers, in contrast, acquire high-tech skills and work in the high-tech, high-wage sector. Labour supply in the model is fixed but workers choose a sector, and acquire the necessary training, based on expected income. In the initial equilibrium, the low-tech sector is protected by a tariff. The removal of the tariff increases the real wage in the high-tech sector but reduces the real wage in the low-tech sector. Davidson and Matusz (2006) identify two groups of losers from liberalisation: "Stayers" that are stuck in the low-tech sector and "movers" that go through costly training to switch from the low- to the high-tech sector.

The authors then use the model to analyse whether unemployment benefits, wage subsidies, employment subsidies or training subsidies compensate the losers of globalization at the lowest cost. They find that the movers are optimally compensated by a (targeted) wage subsidy, paid to those workers who switch sectors after liberalization. The stayers, in contrast, are optimally compensated by a (targeted) employment subsidy. The employment subsidy should be independent of a worker's wage and should only be paid to those workers who were employed in the low-tech sector at the time of liberalization. A general finding of Davidson and Matusz (2006) is that compensation policies should always be targeted to those workers harmed by liberalization. In a follow-up paper, Davidson et al. (2007) show that compensation policies can increase the likelihood that trade liberalization is chosen in a

political process. This is an important result, as it suggests that compensation policies might be necessary to reap the aggregate benefits of free trade.

Second, Itskhoki (2008) considers optimal redistribution through the tax system in a model with heterogeneous worker-entrepreneurs. Entrepreneurs differ in terms of their productivity and face fixed costs of exporting. As a consequence, trade integration disproportionately benefits the most productive entrepreneurs, which are able to engage in export activities, and thus increases income inequality. In the model setting, the government chooses income taxes so as to maximise a social welfare function that features positive inequality aversion. Itskhoki (2008) shows that trade liberalisation increases the incentives for redistribution, but also aggravates the equity-efficiency trade-off associated with re-distribution. He therefore concludes that "countries might need to accept increasing inequality in order to reap the most welfare gains from trade" (p.1). Itskhoki (2008) uses a stylized model of the economy, in which workers are entrepreneurs and thus earn firm revenues as income. The paper does not consider labour market institutions and restricts its analysis to tax policies.

Third, Egger and Kreickemeier (2009) analyse the effects of redistribution in a model of international trade with heterogeneous firms that also features firm-specific wages and involuntary unemployment (but exogenous labour supply). In their model, workers have fairness preferences. The wage considered to be fair by workers is an increasing function of firm profits and more productive firms thus pay higher wages in equilibrium. Since ex-ante identical workers earn different wages depending on the firm they are employed in, the model features within-group inequality. The authors show that free trade increases within-group wage inequality in their model, which can therefore replicate an important empirical regularity observed in the data. Egger and Kreickemeier (2009) then analyse the effects of a redistribution scheme consisting of lump-sum transfers to all workers financed by a linear profit tax. They show that such a redistribution scheme can, under certain conditions, lead to a more equal income distribution than in autarky without exhausting the gains from trade.

Fourth, Coşar (2013) compares the appropriateness of unemployment insurance schemes and employment subsidies in mitigating the adjustment burden of trade liberalization. His analysis starts from the empirical observation that trade liberalization often leads to earning losses and long-lasting unemployment spells, and that the burden of adjustment is particularly high for older workers. To capture the heterogeneous experience of workers, the author builds an overlapping generation model with young and old workers. Workers accumulate human capital on the job. Human capital is sector specific, so that workers can only transfer their

accumulated human capital to subsequent new jobs in the same sector. Once unemployed, workers have to search for a new job, and might thus experience long-lasting unemployment spells. Finally, workers can either be employed in the export-oriented or in the import-competing sector of the economy. The economy has a comparative advantage in the export-oriented sector and initially shields the importing-competing sector from foreign competition.

Coşar (2013) uses the model to simulate the dynamic effects of the trade liberalization episode that Brazil underwent between 1988 and 1991. He distinguishes between three policy scenarios. In the first scenario, workers receive no income support after trade liberalization. In the second scenario, workers who become unemployed receive unemployment benefits for a limited period of time. In fact, Brazil introduced an extensive unemployment insurance system just before trade liberalization. In the third scenario, old workers who were employed in the previously protected import-competing sector and move to the export-oriented sector after trade liberalization receive a subsidy. Coşar (2013) finds that relative to the scenario without income support, unemployment insurance slows down the reallocation of workers from the import-competing to the export-oriented sector and therefore leads to an output loss. In contrast, targeted employment subsidies can not only compensate the losers of liberalization but can also increase aggregate output. Therefore, Coşar (2013) concludes that compensation policies should foster the mobility of workers adversely affected by trade liberalization.

Fifth, and without a formal model, Kletzer (2004) sheds light on the effectiveness of a wage insurance program in compensating the losers of trade liberalization, and compares the program to unemployment insurance benefits. Wage insurance is paid to workers who were employed in the import-competing sector, conditional on finding a new job. Workers are eligible for wage insurance payments for a limited period after the initial job loss. The payment compensates the workers for a fraction of the wage loss associated with the job change (i.e., no compensation is paid to workers who find a better paying job). The level of payment might vary with individual worker characteristics, such as age and tenure. In contrast to unemployment benefits, wage insurance increases the returns to job search, since it is paid only to workers who find a new job. The incentives to search are particularly high for workers who can expect high re-employment losses.

New insights from the *wwwforEurope* project

Two recent research papers, which were written within the *wwwforEurope* project, offer new insights into how compensation schemes work in a globalized world. The first paper

(Kopasker et al., 2013) asks why countries differ so much with respect to their employment responses to large international demand shocks—and how these cross-country differences shape policy responses that aim to offset negative employment effects. Therefore, the paper accounts for the fact that national idiosyncrasies can profoundly influence labour market outcomes and policy responses in an integrated world economy. The second paper (Lechthaler and Mileva, 2014) analyses and compares the effectiveness of a wide variety of policy tools in compensating the losers of trade liberalization. The paper does so in a dynamic trade model and thus explicitly accounts for the adjustment costs of trade liberalization. It also allows the stock of skilled workers to evolve endogenously. In what follows, we describe the two papers in some detail.

Negative Shocks, Job Creation, and Selection (MS1)

Kopasker et al. (2013) start their analysis with the empirical observation that there exist large cross-country differences in the responsiveness of output to (exogenous) shocks and of employment to output contractions. These cross-country differences, recently observed during the Great Recession, reflect country-specific productivity responses to shocks which, in turn, have been explained with differences in labour market institutions. A great variety in institutional arrangements exists between countries in their labour markets, for instance in the adoption of work-sharing agreements and in the severity of employment protection laws, that affects the lags in and extent of laying-off workers in a recession. In addition, differences in aggregate economic structures can also contribute to country specific responses to shocks, with countries that specialise in relatively labour intensive sectors exhibiting a tendency to experience higher employment adjustments. The authors argue that cross-country differences in the degree of intra-industry heterogeneity can be an important channel through which a shock affects aggregate outcomes. In recent years, an extensive body of literature has documented the existence of a significant degree of intra-industry heterogeneity between firms in characteristics, behaviour and performance in international markets. A key stylised fact emerging from this evidence is that there is a positive correlation between firms' size and their productivity and performance. Building on this evidence, Kopasker et al (2013) conjecture that variations across countries in the size and productivity distribution of firms can contribute to explaining the observed differences in aggregate employment. This channel can then be important for predicting the level and effectiveness of policy interventions that aim at increasing employment and/or offsetting the effects of negative shocks.

The paper develops a theoretical framework that can provide a rationale for the observed cross-country differences in output and employment fluctuations over time, and in the size distribution of firms. The framework considers a small open economy producing two goods with labour endogenously supplied by households. In one of the sectors, firms exhibit heterogeneous productivities. The paper's focus on a small open economy is motivated by the observations that: (i) many European countries can fall into this category if seen in the context of the global economy, and (ii) that relatively small economies, whose size limits the extent of intra-regional redistribution and risk-sharing, are particularly vulnerable to external shocks. Within this theoretical framework, the authors then examine how intra-industry reallocations influence the effectiveness of Active Labour Market Policies (ALMP), in the form of employment subsidies, in countering the effects of a shock on employment and welfare. These policies, which are widespread across the OECD and have become more important during the recent recession, are central to the "European Employment Strategy" to address structural unemployment and to increase labour participation and are a cornerstone of the Social Investment model of the welfare state.

The results of the paper confirm the initial conjectures. Intra-industry heterogeneity and selection among firms is a channel through which shocks, by affecting average industry productivity, impact on employment and welfare. Specifically, a negative demand shock reallocates market shares towards less efficient firms.[8] In essence, the shock then results in an 'anti-competitive' effect that lowers average industry productivity, aggregate employment and welfare. Countries with a "more efficient distribution of firms" are shown to weather out the shock better than less efficient ones, experiencing a weaker anticompetitive selection effect, and smaller aggregate employment and welfare losses.

The model also shows that competitive selection and intra-industry structure affect the usefulness of ALMP in countering the employment and welfare effects of a negative shock. Specifically, in most cases the use of ALMP entails taxing firms and subsidising workers. Underlying this result is the fact that this policy mix toughens export selection (thus reducing the extensive and increasing the intensive margin of export), increases average industry efficiency, and expands aggregate demand directly by increasing workers' income. In the context of an export-oriented small open economy (the case examined by Kopasker et al., 2013) this result is reversed only when the relatively less efficient firms (i.e., domestic

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[8] A negative shock is modelled here either as a contraction in foreign demand or as an increase in trade costs. Both have qualitatively similar effects in that they penalise exporters relative to domestic-only firms, thus resulting in market reallocation effects that are opposite to the standard ones resulting from trade liberalisation in the Melitz type models.

production alone) are targeted. Furthermore, a uniform policy (that does not discriminate between production for domestic markets and for exports) is dominated, from a welfare point of view, by a policy that targets exports only (hence concerns the more efficient firms). Thus, the 'best' policy (in terms of employment and welfare) entails picking winners (i.e., the exporters) by taxing their production for export in order to sustain aggregate demand and employment via worker subsidies. These policy results go against the widespread perception that, in the face of the negative employment effects of the recession, hiring credits (i.e. subsidies to firms that encourage hiring of workers) are unambiguously more effective than worker subsidies (that encourage active labour force participation) in generating employment. In subsequent research, Molana and Montagna (2014) show that in more general settings – in which the small open economy is also an importer and/or the country is large – the specific nature of the optimal policy mix may vary. The underlying forces, however, are qualitatively unaltered and hinge on the effects of the policy on the toughening/softening of selection among firms.

The analysis has important policy implications. Aggregate budgetary considerations are central (and have become more prominent in light of the recent austerity drive in macroeconomic policy in many European countries) to the debate concerning the future of the Welfare State. By focussing on the macroeconomic implications of policy, the paper casts doubts on the conventional view that globalisation and negative international shocks challenge countries' ability to maintain welfare state programmes. The results suggest instead that the Welfare State can play a role in sustaining employment and recovery from shocks – and that fiscal 'prudence' and balanced budgets are compatible with and not alternative to pro-employment expansionary redistribution policies. Specifically, the findings suggest that wage and employment subsidies may expand the level of economic activity and employment directly by increasing workers' income and aggregate demand, and indirectly by generating pro-competitive effects that enhance industries' competitive position in international markets. In this sense, consistent with a social investment model of the welfare state, ALMP complement the more traditional social insurance role of the welfare state by enhancing aggregate productive efficiency.

Thus, ALMP can be seen as an effective means to sustain the rates of active labour market participation and employment levels. A plausible conjecture, calling for further research, is then that their effectiveness in encouraging participation may be particularly relevant in activating those segments of the labour force with a higher elasticity of labour supply, such as

women. An important implication of Kopasker et al. (2013)'s work, however, is that the effectiveness and the need for welfare state policy in general and ALMP in particular are affected by the structure of industries. In particular, the analysis suggests that the effectiveness of welfare state policies may be higher if accompanied by policies aimed at enhancing firm level productivity.

Smoothing the adjustment to trade liberalization

In a second *wwwforEurope* working paper, Lechthaler and Mileva (2014) develop a dynamic model of international trade to analyse the effectiveness of different policy instruments in compensating the losers of trade liberalization. The model combines a number of features that are crucial for an analysis of the effects of trade liberalization on wages and wage inequality. It features two countries, a developed and a developing country, two production factors, high-skilled and low-skilled labour, and two sectors which differ with respect to their factor-intensities in production. The model thus lends itself to the analysis of trade between the EU and emerging economies such as China and India. This is important because the increasing competition from low-wage economies, and especially from China, is of particular concern in the public discussion. The model also features firm heterogeneity, endogenous firm entry and selection into export markets as in Melitz (2003), ingredients which have been found to be empirically important. Finally, it is not restricted to steady state comparisons but explicitly models the transitional dynamics after trade liberalization. This is crucial because it is mainly the adjustment costs of trade liberalization that cause policy debates. The model is rich enough to capture inequality along two dimensions: the wage differential between skilled and unskilled workers (the skill premium) and the (skill-specific) wage differential between the two sectors (inter-sectoral wage inequality).

The authors distinguish between two different assumptions regarding the training decision of workers. In the first case, they assume that the number of skilled workers is exogenously given. This is the standard case in many models of international trade (e.g., Bernard et al., 2007). In the second case, they endogenize the number of skilled workers by allowing unskilled workers to train in order to become skilled workers. The two assumptions lead to very different long-run equilibria. A country that is skill abundant specializes more in the production of the skill intensive good when trade is liberalized. This leads to a higher demand for skilled workers. If the number of skilled workers is exogenously given, this has to result in a higher skill premium. It can even happen that the wage of unskilled workers decreases not only in relative terms (i.e., relative to the wage of skilled workers) but also in absolute terms.

In contrast, when workers can train, the number of skilled workers will increase until the skill premium is driven down to its pre-liberalization level.

Although the two versions of the model imply very different long-run outcomes, the short-run effects of trade liberalization are quite similar because they are driven by the slow reallocation of workers across sectors: inter-sectoral wage inequality increases, especially for skilled workers, and the skill premium also increases.

Economic policy in this context can have various goals. It can aim to reduce the skill premium, to reduce inter-sectoral wage inequality or to speed up the adjustment process. The policy instruments that the paper considers to reach these goals are wage taxes, consumption taxes, profit taxes, firm entry subsidies, sector migration subsidies and training subsidies. The authors find that the re-distributional and efficiency effects of these instruments differ very much. In addition, the policy instruments can have very different effects depending on whether the supply of skilled labour is endogenous or exogenous.

Most industrialized countries have well developed education systems and thus, at least in the long-run, an endogenous supply of skilled labour. For that reason, the following discussion focuses on the version of the model in which unskilled workers can train to become skilled. First, the effects of wage taxes are discussed because while wage taxes might seem the most logical tool to reduce inequality, with training they introduce serious distortions into the economy. Then, the effects of training subsidies are discussed because they are not only a widely debated policy instrument but theoretically prove to be the most potent tool to reduce inequality and speed up the adjustment after trade liberalization.

Wage tax

With training there is no long-run increase in the skill premium because increased demand for the skill-intensive good translates into more training and higher numbers of skilled workers rather than in a higher skill premium. In the short run, however, wage inequality will increase after trade liberalization. As both training and worker reallocation across sectors are costly, quantities are slow to adjust. Thus, the increase in the demand for the skill-intensive good has to have an effect on relative wages, with two distinct effects. On the one hand, overall demand for labour in the exporting sector goes up and the wages of workers in the exporting sector increase relative to the wages of workers in the import-competing sector. This leads to a temporary increase in inter-sectoral wage inequality. On the other hand, demand for skilled workers in the exporting sector goes up even more than demand for unskilled workers as the

sector produces the skill-intensive good. Therefore, the wages of skilled workers increase relative to the wages of unskilled workers and the skill premium increases as well.

For two reasons, policy makers might be tempted to increase taxes on high-skilled workers in order to reduce wage inequality. First, they might overlook that the increase in wage inequality is not permanent (and thus the argument in favour of permanently higher wage taxes is weak). Second, policymakers could be tempted to use wage taxes anyway in order to reduce inequality in the short run. At first sight, it indeed makes sense to tax the wages of the skilled and subsidize the wages of the unskilled to reduce the skill premium. However, redistribution through wage taxes also reduces the incentives to train and therefore distorts the economy.

Lechthaler and Mileva (2014) analyse the effects of a permanent increase in the tax on skilled workers' wages that is used to subsidize unskilled workers' wages. The size of the tax increase is 0.7 percentage points. The entire income generated by the tax increase is used to subsidize the wages of unskilled workers. Figure 3 illustrates the development of key measures of inequality in their analysis. The wage tax combination is implemented simultaneously with trade liberalization. In the short run, the policy considerably reduces the skill premium, thereby reducing overall wage inequality below its pre-liberalization level. Overall wage inequality is measured by a theoretical Gini index which describes the size of the deviations of skilled and unskilled wages of workers in the exporting and import-competing sector from the average wage in the economy. The tax scheme reduces the size of these deviations because it results in a smaller increase in the after-tax skilled wage and a smaller decrease in the after-tax unskilled wage. But this short-term fall in wage inequality comes at a cost, as it lowers the number of skilled workers.

A wage tax distorts the economy because it generates a decrease in the skilled wage and an increase in the unskilled wage. The resulting fall in the skill premium reduces the incentives to train. Therefore, a permanently higher tax on skilled workers permanently decreases the number of skilled workers below the efficient level. As a consequence, aggregate consumption in the new steady state lies below the level without tax distortion. In the long-run, the distortion decreases the wages of all workers, including the unskilled. Since in any case the skill premium does not increase in the long run, the long-run effect of the wage tax on overall wage inequality is only small. The wage tax slightly reduces overall wage inequality because fewer workers enjoy the skill premium.

Figure 3: Wage tax on skilled labour financing wage subsidy on unskilled labour

Tax on skilled labour rises permanently by 0.7 percentage points.
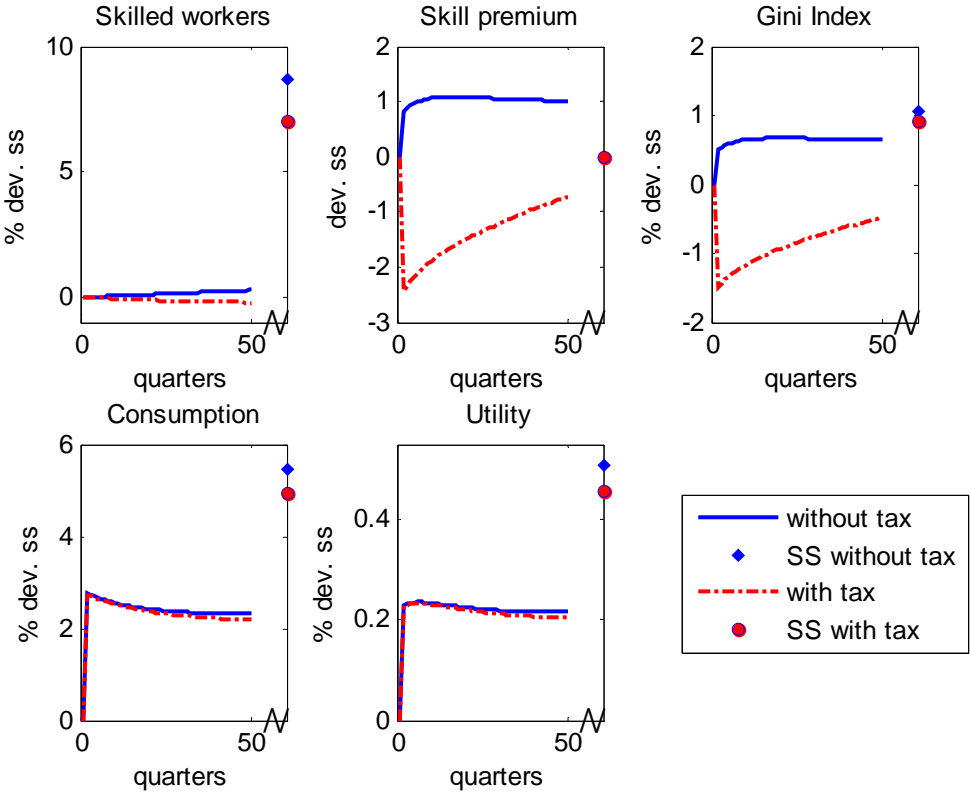
Notes: SS refers to the pre-liberalization steady state. Please refer to Lechthaler and Mileva (2014) for a full description of the theoretical model behind the figure as well as a more detailed discussion of the consequences of the wage tax scheme.

So, even though wage taxes may seem to be working, especially in the short run, they can be quite harmful in the long-run. From an aggregate perspective they reduce the gains from trade because they distort the incentives to invest in training and lead to an inefficiently low number of skilled workers.

Training subsidy

The stock of skilled and unskilled workers in the model is endogenous, and workers decide for themselves whether to train or not. The endogeneity of the training decision allows the authors to analyse training subsidies. Training subsidies are a popular instrument during adjustment periods after trade liberalization (Boix, 2011).

Figure 4 illustrates the effects of an increase in the training subsidy from 0 to 35 percentage points that lasts for 5 years, the duration of a standard legislative term. The training subsidy considerably and persistently increases the number of skilled workers even beyond its period of implementation. This makes skilled workers more abundant and unskilled workers scarcer

so that the skilled wage drops and the unskilled wage rises. As a result, the skill premium and overall wage inequality go down very persistently. Training subsidies continue to have an impact much beyond their period of implementation. The reason is that the training decision is a costly, forward-looking decision and is thus not easily reversed. Therefore, the dynamic adjustment of the number of skilled workers proves very persistent.

The persistent effect on the number of skilled workers is transmitted to other variables. In particular, the increase in the number of skilled workers causes consumption to increase as well. However, the increase in consumption does not imply that training subsidies increase welfare. This is because training also inflicts a utility cost on workers, and the subsidy induces an inefficiently high investment in training. Overall, the policy succeeds in reducing overall wage inequality during the adjustment process, but at the price of lower aggregate utility (although the utility decrease is rather low).

Figure 4: Training subsidy financed by a wage tax
        Subsidy rises by 35 percentage points for 5 years.
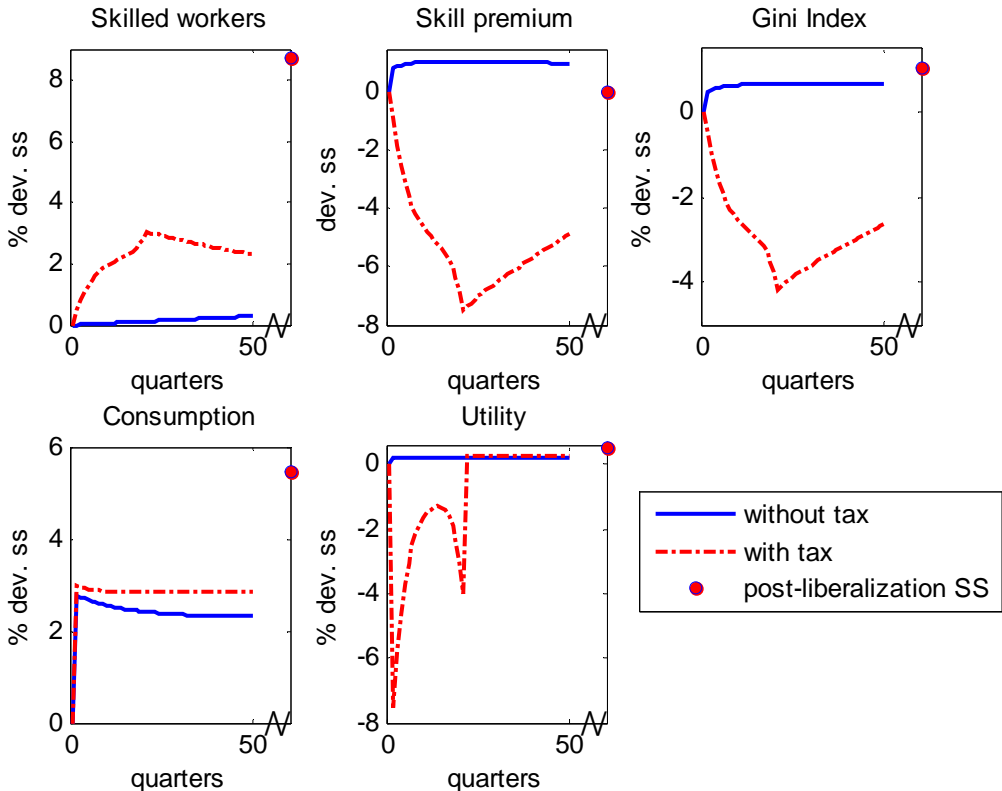
Notes: SS refers to the pre-liberalization steady state. Please refer to Lechthaler and Mileva (2014) for a full description of the theoretical model behind the figure as well as a more detailed discussion of the consequences of the wage tax scheme.

3. Evidence on Trade Openness and Labour Market Policies

The economic literature on compensating the losers of globalization is mainly based on theoretical work. Since compensation assumes substantial transaction and other costs, the general aim of these theoretical studies, as surveyed above, is to contribute to the understanding of the optimal approaches in designing compensation programs. Some empirical case studies add to this work by evaluating policy reforms, such as the US-TAA (see introduction). Clear theoretical predictions coupled with empirical evidence are of course instrumental in the design and implementation of efficiency-enhancing government policy, in our context particularly through labour market programs. However, a crucial question of empirical nature – namely, whether and to what extent do governments implement such compensatory programs in practice and relative to each other – has remained unanswered. This is surprising, because without a systematic knowledge of the existence and scale of trade-induced compensatory programs, the relevance of the optimal design (as well as other characteristics and implications) of such policies would not have been complete.

In this section we aim to bridge this gap. The closest literature to our analysis is the long standing debate on the effects of trade openness on government size which goes back at least to Rodrik (1998). Rodrik provides empirical evidence to support such a positive and robust correlation, and explains this result by governments' increased incentives to provide insurance (through higher spending) when economies are exposed to greater external risk (due to more openness). Alesina and Wacziarg (1998) present additional evidence for such a link, arguing however that an alternative channel, namely country size, may be the driver behind these results. More recent studies by Garrett (2001), Garen and Trask (2005), Epifani and Garcia (2009) present further evidence in this direction.

Our work contributes to the above debate by focusing on different labour market programs which are hypothesized to be used as risk-reducing policies to smooth trade induced adjustments. A recent study by Benarroch and Pandey (2012) claims to have found evidence to reject the relationship suggested by Rodrik (1998) by looking at the amount of public spending on social security. However, we go a step further and employ disaggregate data on various labour market programs in detail. The sample consists of all OECD member states for the period from 1985 to 2011 (for the list of countries see notes of Table 1), while the dependent variable of interest is the volume of trade taken as a plausible measure of

globalization or trade openness[9]. The main questions we are interested in are: i) whether labour market programs are used to support episodes of trade openness in practice; and if so, ii) whether these programs use a considerable share of public funds; and iii) which kind of labour market programs are used and when.

3.1. Graphical Evidence

We first start with a simple graphical illustration of the data. Figure 5 shows a scatter plot with data on the trade-to-GDP ratio on the horizontal axis and data on public expenditure on active labour market programs (ALMP) as a share of GDP on the vertical axis. Both in the full sample with all years and countries (sub-figure: a) and in the cross-country samples at certain time points (sub-figures: b, c, d) there seems to be a positive correlation between the two measures, implying that countries with large trade volumes also have large ALMPs. Note that the correlation line is getting flatter with time, which is likely due to increasing levels of trade (even without major reforms of liberalization) combined with more or less stagnant expenditure on labour market programs.

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[9] The volume of trade is, of course, only an imperfect measure. However, it is a commonly used, plausible and quantifiable proxy for trade openness or globalization. For an overview of issues on measuring globalization see Dreher et al (2008).

Figure 5: Volume of Trade (% GDP) and Public Expenditures on Active Labour Market Programs (% GDP) in OECD Countries, 1985-2011
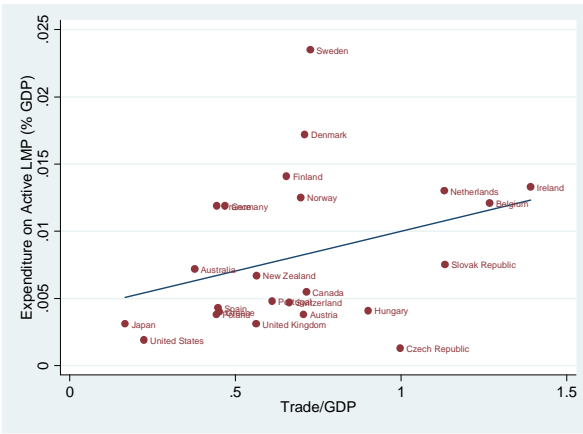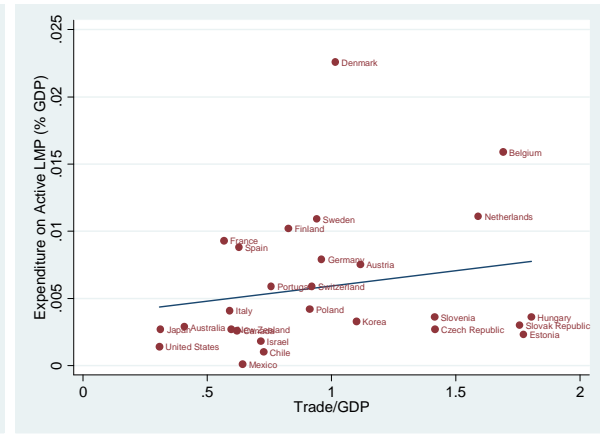
Sub-figure 3(a): Full sample
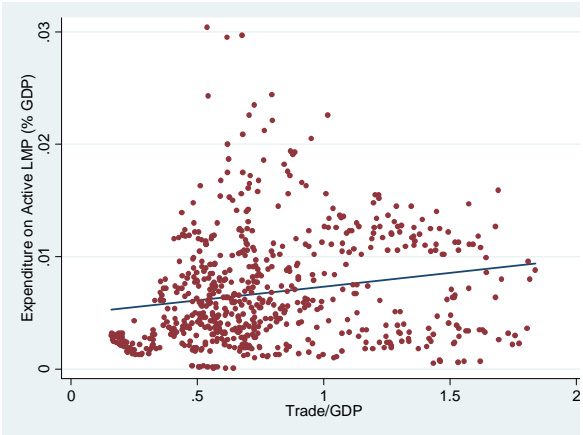
Sub-figure 3(b): 1985
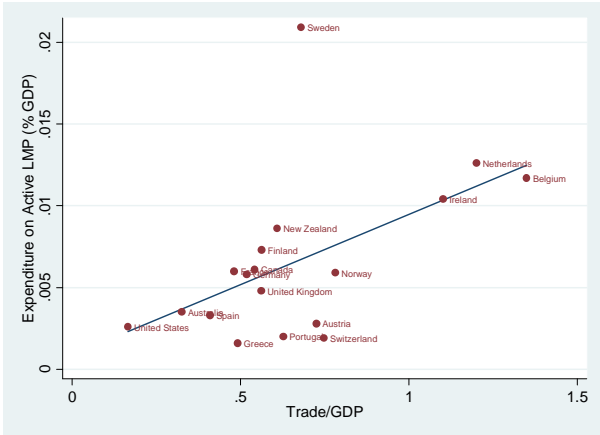
Sub-figure 3(c): 1995

Sub-figure 3(d): 2011

Source: OECD and WB

3.2. Regression Evidence

We now proceed to a more formal analysis, and estimate an OLS regression of the following form:

$$\Delta Trade/GDP_{i,t} = \alpha + \beta_1\, LMPExpenditure/GDP_{i,t,c} + \beta_2\, Controls_{i,t} + \mu_i + \gamma_t + \varepsilon_{i,t}$$

where the dependent variable is the annual growth of trade-to-GDP for country i in year t. On the right hand-side, the main variable of interest is public expenditure on labour market programs (% GDP) disaggregated to some of its different components c. In particular we consider active and passive labour market programs separately, which are in turn differentiated according to more specific programs [10]. We hypothesize that higher spending on ALMPs may be complementary to trade openness, because greater international integration

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[10] See Table 1 for all components, we discuss the relevance of these programs below when presenting the results.

and globalization may increase demands for adjustment assistance. GDP growth rate, share of the unemployed in working age population, and real effective exchange rate index (the price-adjusted value of the currency against a weighted average of several foreign currencies) are included as a standard set of control variables. μ_i and γ_t are a full set of country and year fixed effects, and $\varepsilon_{i,t}$ is the error-term.

The estimation results are reported in Table 1. Each column represents a regression, where the main variable of interest is one component of labour market programs. Additionally, the table is divided into three panels, where the upper (lower) panel takes a one-year backward (forward) lag of the variable on labour market expenditures, while the middle panel estimates simultaneous regressions. The rationale for specifying models with different time-structure is that some labour market programs may be preventive in nature, and thus will be implemented before changes in trade policy are made in order to avoid dislocations, while others can be reactive and will be designed in response to issues possibly arising after trade reforms.

On the most aggregate level (column 13), total spending on all labour market programs seems not to be correlated with the growth in trade. However, we observe a positive and significant correlation for active labour market programs (column 1) which make around a third of all labour market spending. This validates the initial findings based on the scatters presented in the last sub-section, thus we can argue that in practice ALMPs constitute key components of the required policy response to trade-related adjustment costs. The size of the coefficient is also significant, as a 1 percentage point increase in the active labour market spending to GDP ratio (which is 0.67% for an average country) is on average associated with around a 2 percentage point increase in the growth of trade-to-GDP (1.59% for an average country).

On a more disaggregate level, labour market measures that are generally not related to trade policy – such as direct job creation (column 6), or on early retirement schemes (column 12) – are, as expected, not correlated to our measure of trade openness. Thus, they serve as a placebo test of sorts on the validity of the earlier findings.

Table 1: Estimation Results

Dependent Variable: Annual growth of trade-to-GDP

Public Expenditure on the following Labor-Market Programs (% GDP):

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		Active measures							Passive measures				All measures
	Total active	PES and administrat.	Training	Employm. incentives	Supported employment	Direct job creation	Start-up incentives	Total passive	Income maintaine	Unemploym. insurance	Redundancy compens.	Early retirement	
Panel A: Backward Lag													
(L1) Labor-Market Expenditure	2.021**	9.584**	5.350**	4.040	4.697	1.504	-15.929***	0.000	-0.070	2.759*	-11.257*	1.412	0.463
	(0.851)	(4.743)	(2.091)	(3.518)	(3.435)	(2.552)	(3.195)	(0.664)	(0.707)	(1.660)	(6.005)	(2.270)	(0.566)
Pc GDP Growth Rate	0.055	0.054	0.050	0.075	0.043	0.040	0.021	0.065	0.056	-0.098	-0.078	0.059	0.045
	(0.213)	(0.204)	(0.187)	(0.186)	(0.192)	(0.189)	(0.163)	(0.179)	(0.179)	(0.226)	(0.240)	(0.186)	(0.209)
Eff. Exchange Rate Index	-0.001*	-0.001*	-0.001***	-0.001*	-0.001***	-0.001*	-0.001***	-0.001*	-0.001*	-0.001***	-0.001***	-0.001*	-0.001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Unemployment Rate	0.615***	0.638***	0.575***	0.617***	0.624***	0.612***	0.586***	0.621***	0.623***	0.304**	0.520***	0.621***	0.561***
	(0.137)	(0.137)	(0.126)	(0.127)	(0.134)	(0.129)	(0.116)	(0.154)	(0.159)	(0.145)	(0.130)	(0.135)	(0.148)
Observations	593	600	629	637	633	632	638	644	639	303	319	640	593
R-squared	0.581	0.583	0.590	0.583	0.585	0.581	0.592	0.582	0.583	0.739	0.721	0.582	0.578
Panel B: Simultaneous													
Labor-Market Expenditure	2.390***	8.322**	3.728**	4.131	6.497**	2.724	-12.346**	0.404	0.426	1.662	35.930**	-0.106	0.862
	(0.878)	(4.069)	(1.701)	(3.304)	(2.686)	(3.690)	(4.850)	(0.678)	(0.735)	(1.666)	(14.470)	(2.324)	(0.550)
Pc GDP Growth Rate	-0.016	-0.002	-0.009	0.002	-0.025	-0.023	0.003	-0.015	-0.007	-0.066	-0.028	-0.016	-0.004
	(0.184)	(0.186)	(0.177)	(0.179)	(0.178)	(0.174)	(0.182)	(0.179)	(0.184)	(0.199)	(0.222)	(0.178)	(0.193)
Eff. Exchange Rate Index	-0.001***	-0.001**	-0.001***	-0.001**	-0.001**	-0.001**	-0.001**	-0.001**	-0.001**	-0.001**	-0.001**	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
Unemployment Rate	0.579***	0.615***	0.565***	0.582***	0.607***	0.587***	0.586***	0.559***	0.542***	0.314*	0.301**	0.596***	0.476***
	(0.126)	(0.137)	(0.123)	(0.125)	(0.133)	(0.124)	(0.128)	(0.135)	(0.139)	(0.169)	(0.141)	(0.134)	(0.123)
Observations	613	620	649	657	654	653	660	664	659	327	345	661	613
R-squared	0.568	0.565	0.571	0.569	0.571	0.566	0.571	0.567	0.568	0.718	0.703	0.568	0.566
Panel C: Forward Lag													
(F1) Labor-Market Expenditure	1.846*	6.423**	2.496	3.873	6.934**	2.594	-21.809***	0.142	0.169	0.318	56.573***	0.084	0.496
	(0.992)	(2.909)	(1.830)	(2.861)	(2.993)	(3.421)	(3.616)	(0.649)	(0.685)	(1.438)	(19.460)	(1.510)	(0.565)
Pc GDP Growth Rate	0.012	0.012	-0.014	0.009	-0.021	-0.031	-0.035	-0.045	-0.031	-0.219	-0.142	-0.038	0.018
	(0.192)	(0.192)	(0.188)	(0.186)	(0.188)	(0.184)	(0.184)	(0.193)	(0.201)	(0.283)	(0.278)	(0.185)	(0.210)
Eff. Exchange Rate Index	-0.001**	-0.001**	-0.001***	-0.001**	-0.001**	-0.001**	-0.001***	-0.001**	-0.001**	-0.001***	-0.002***	-0.001**	-0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Unemployment Rate	0.622***	0.643***	0.608***	0.609***	0.646***	0.622***	0.624***	0.626***	0.605***	0.445***	0.347***	0.623***	0.578***
	(0.138)	(0.148)	(0.132)	(0.133)	(0.143)	(0.134)	(0.130)	(0.125)	(0.127)	(0.155)	(0.151)	(0.143)	(0.121)
Observations	591	597	626	634	632	630	637	640	636	326	344	638	591
R-squared	0.557	0.557	0.563	0.561	0.564	0.560	0.569	0.557	0.558	0.704	0.694	0.559	0.555

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

All regressions include time and country fixed effects (coefficients not reported).

Standard errors are robust to heteroscedasticity and are clustered at the level of countries and years.

The sample is an annual panel for the period 1985-2011, for the following 29 high-income OECD countries: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, United Kingdom, United States.

On the other hand, some of those labour market measures that are expected to be used to compensate the losers of increased trade show up with significant coefficients in Table 1. The timing of the policy response seems to also be important. In particular, there are four components of labour market programs that are the main drivers of the relationship: (i) spending on public employment services and administration (e.g. budgets of institutions that help with job search) is positively associated with growth in trade-to-GDP in all periods under consideration (column 2); (ii) spending on training programs before and during high levels of trade but not after (column 3); (iii) spending on employment subsidies and vocational rehabilitation during and after trade openness (column 5); and, most notably, (iv) spending on redundancy compensation (that is broadly defined as compensation in capital transfers paid from public funds to employees who have been dismissed through no fault of their own by an enterprise that is ceasing or cutting down its activities) during and after high levels of trade, but an opposite effect for the year before (column 11).

Although these simple estimations do not allow for a causal interpretation of the results, the analysis provides with some descriptive evidence to argue that governments may be using labour market policies to cushion the negative effects of increased trade. In line with the recommendations of the theoretical literature, governments seem to use active labour market policies rather than passive ones. They thus subsidize employment rather than unemployment. Interestingly, the correlation between active labour market policies and trade openness is to a good degree driven by public expenditures on employment services and administration. Such policies might help to make the search process more efficient (which might be more be important in post-liberalization periods) and are observed in practice in the TAA program in the US and in the EGAF in the EU, but have not received adequate consideration by the theoretical literature on trade and compensation. In contrast, the positive correlation between employment subsidies and trade openness tentatively suggests that a measure recommended by the theoretical literature is indeed used in practice.

4. Conclusion

Fears of rising wage inequality and job loss loom large in current debates on free trade. While economists usually stress the net aggregate benefits of trade liberalization, there is also broad agreement in the profession that globalisation indeed creates winners and losers and can thus induce distributional conflict. Surprisingly, however, there exists little academic research on how to compensate those who lose from free trade. This policy paper has reviewed the existing theoretical literature on trade and redistribution, and has summarized new insights from two recently published *WWWforEurope* discussion papers. The paper has also presented new empirical evidence on the link between trade openness and expenditure on labour market policies—as one promising way to compensate the losers of free trade.

Our literature review has identified several key findings that might serve as a guideline for implementing compensation schemes in practice.

1. Compensation schemes should be targeted to workers harmed by trade liberalization. This reduces the overall costs/distortions of compensation schemes (of course, such compensation schemes will not displace other compensation schemes for disadvantages workers).

2. A particular focus should be on those workers who are displaced because of liberalization (i.e., lose their jobs). Workers who are "trapped" in declining industries but will be able to keep their jobs will typically suffer "only" in the form of slower earnings growth. In contrast, losses from displacement might be quite high.

3. Since workers who have lost their jobs because of freer trade can usually not be identified, compensation could be more generally paid to displaced workers in import-competing industries (perhaps conditional on moving to expanding sectors, see point 5).

4. In addition, the level of compensation might differ between workers with different characteristics. For instance, the level of compensation might be higher for older workers who bear a particularly high burden of adjustment.

5. Compensation should subsidize employment, not unemployment. Existing studies therefore favour employment or wage subsidies over unemployment subsidies. Such active labour market policies have been shown to either compensate the

losers of globalization at the lowest efficiency cost or to even increase aggregate efficiency by channelling workers from declining to expanding sectors.

6. The effect of a specific policy will depend crucially on the time horizon considered (short-/long-run) and the national idiosyncrasies in the economic environment.

In the empirical part of our policy paper, we find a positive correlation between trade openness and expenditures on labour market policies. This finding tentatively suggests that governments indeed appear to use labour market policies to mitigate the negative effects of free trade. Interestingly, and in line with the recommendations emerging from the the theoretical literature, governments seem to use active labour market policies rather than passive ones. Clearly, our aggregate empirical analysis does not reveal whether active labour market policies are sufficiently focused on workers displaced by trade liberalization. Likewise, it also does not reveal whether compensation schemes account for worker heterogeneity, as they should do according to Coşar (2013)'s analysis. Answering these and other questions will require careful case studies of individual countries and policy proposals perhaps best based on micro-level data.

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Project Information

Welfare, Wealth and Work for Europe

A European research consortium is working on the analytical foundations for a socio-ecological transition

Abstract

Europe needs change. The financial crisis has exposed long-neglected deficiencies in the present growth path, most visibly in the areas of unemployment and public debt. At the same time, Europe has to cope with new challenges, ranging from globalisation and demographic shifts to new technologies and ecological challenges. Under the title of Welfare, Wealth and Work for Europe – WWWforEurope – a European research consortium is laying the analytical foundation for a new development strategy that will enable a socio-ecological transition to high levels of employment, social inclusion, gender equity and environmental sustainability. The four-year research project within the 7th Framework Programme funded by the European Commission was launched in April 2012. The consortium brings together researchers from 34 scientific institutions in 12 European countries and is coordinated by the Austrian Institute of Economic Research (WIFO). The project coordinator is Karl Aiginger, director of WIFO.

For details on WWWforEurope see: www.foreurope.eu

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