

Kiel Institute for the World Economy

Application

for Research Project Funding from the Fritz Thyssen Stiftung

**“Redistributing the Gains from Globalisation
through Labour Market Policies”**

Area of Support

State, Economy, and Society - Economics

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1. Résumé of Research Project

Title	Redistributing the Gains from Globalisation through Labour Market Policies
Time span	24 Months (April 2011 to March 2013)
Collaborators	Dr. Sebastian Braun (Head), Dr. Alessio J. G. Brown, Wolfgang Lechthaler, Ph.D., N.N.
Cooperations with other scholars	Dr. Ronald Bachmann (RWI), Prof. Gabriel Felbermayr, Ph.D. (Uni Hohenheim), Prof. Dr. Mario Larch (Uni Bayreuth), Prof. Dr. Christian Merkl (Uni Erlangen-Nürnberg), Christian Spielmann (Birkbeck College London)
Abstract	<p>Since at least the mid-1980s, and thus during a time of rapid globalisation, income inequality has markedly increased in many OECD countries. While the exact contribution of globalisation to the observed increase in inequality is disputed among economists, there is broad agreement in the profession that globalisation indeed creates winners and losers and can thus induce distributional conflict. Surprisingly, however, there exists very little academic research about the optimal way to compensate those who lose from globalisation. And the few existing papers on trade and redistribution mostly use the Heckscher-Ohlin model to study the possibility of compensating the losers from trade through the tax system. Yet, the Heckscher-Ohlin model can hardly capture the increase in inequality observed since the mid-1980s. Moreover, the small existing literature does generally not consider labour market policies that are at the heart of the policy debate on displaced workers. The research project will analyse how labour market policies can be designed optimally so as to compensate the losers from the new stage of globalisation, and enhance their adaptability on the labour market, without exhausting the aggregate net benefits generated by globalisation.</p>
Plan of procedure	The research project will start with reviewing the empirical evidence on inequality, globalisation, and labour market policies. This literature

review will serve as a starting point for the following steps of the project, in which we will set up models of international trade that can capture basic developments on the labour market as observed in the data.

For the analysis of labour market policies in the context of globalisation we will use two models. On the one hand, we build on a model developed in previous work that features endogenous skill formation and skill-specific labour market outcomes and stresses between-industry reallocations. As reallocations within sectors appear to be more important empirically for inequality dynamics, we will complement this framework and develop a model of intra-industry trade that focuses on within-industry reallocations and also features within-group inequality and endogenous labour supply. We will then use both model frameworks in the third step to analyze the effectiveness of a wide range of labour market policies that can be used to compensate the losers of globalisation. In the fourth step, we account for country-specific features of national labour markets and calibrate the models to quantify the policy effects identified earlier and to obtain testable predictions about the effect of the globalisation process on labour market outcomes. This exercise will be based on stylized features of liberal and coordinated market economies such as the US and Germany.

Our results will be published in a series of research papers that we aim to publish in high-ranking *international journals*. Furthermore, we will produce a *policy paper* that summarises the main results and policy conclusions of the project and makes them accessible to a broader audience. Most importantly, however, we also intend to channel our results into a session of the *Global Economic Symposium (GES)*. The research results will thus directly feed into the international debate on globalization and redistribution by informing potential multipliers. The discussion in the virtual GES forum also allows us to receive feedback from internationally renowned decision makers already before the actual symposium takes place.

“Fears of rising income inequalities and poverty loom large in current discussions of how globalisation is affecting OECD economies and societies. Such fears are probably the single most important concern put forward by those who argue that we should resist the increased integration of our economies and societies [...].”

OECD Secretary-General Angel Gurría, 2008 (OECD, 2008)

2. Detailed Plan of Research Project

2.1 Introduction and Research Question

Background and Relevance

There is broad agreement among economists that globalisation, broadly defined as the process of integrating national economies into a world economy or a single marketplace, creates aggregate net benefits to society. Yet, there is also broad agreement both among economists and policy makers that the globalisation process will harm some groups in society (while benefiting others), with the labour market outcomes of the losers of globalisation being a particular source of anxiety. This project will analyse how labour market policies can respond to the challenges created by the globalisation process and spread its benefits more equally in society.

In developed economies, there is widespread fear that the closer economic integration of the world economy will endanger jobs and increase inequality. A recently released BBC opinion poll, for instance, revealed a general unease among respondents with the distribution of benefits and burdens of recent economic developments (BBC, 2008). According to the poll results, majorities in 27 out of 34 countries, and 64 percent of all respondents, hold the view that the benefits and burdens of “the economic developments of the last few years” have not been shared fairly. Fears of rising income inequality, the OECD Secretary-General Angel Gurría concluded, “are probably the single most important concern put forward by those who argue that we should resist the increased integration of our economies” (OECD, 2008: p. 3).

The empirical evidence indeed suggests that, at a time of rapid globalisation, the world has grown more unequal. Since at least the mid-1980s, overall income inequality has increased in most OECD countries (see Figure 1). However, the evidence also shows that the exact

magnitude of the increase has differed a lot across countries. Interestingly, both Anglo-Saxon countries, such as the US, and Continental European countries, such as Germany or Italy, have experienced a marked increase in inequality – despite of their different institutional settings. In contrast, the increase of inequality in Great Britain was only modest while in France, an economy that is often viewed as sharing many institutional features with Germany, inequality even decreased slightly. Additional evidence from the micro-level suggests that in many countries not only wage differentials by education or by occupation have increased but also residual wage inequality, i.e., the wage inequality *within* demographic and skill groups.¹ There is also evidence for a polarization of the labour market since the 1990s, with the relative employment shares of low- and high-wage jobs increasing in tandem at the expense of middle-wage jobs.²

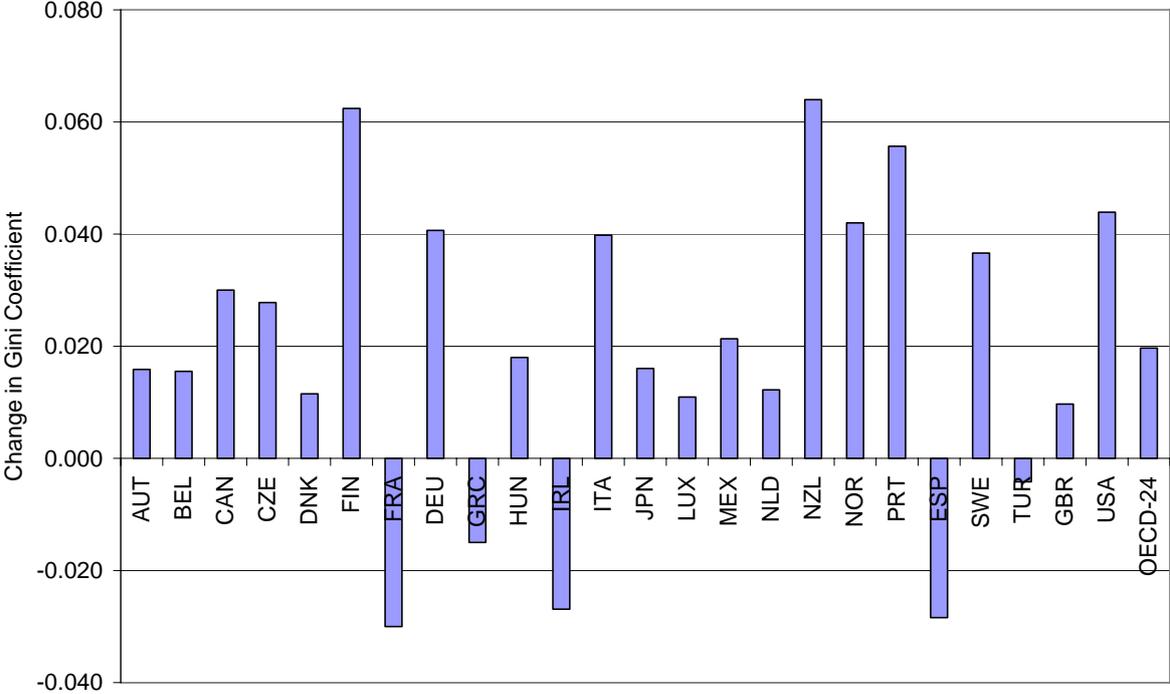


Figure 1: Change in Income Inequality in OECD Countries, Mid-1980s to Mid-2000s³

The exact contribution of trade to the increase in inequality observed in most OECD countries is disputed among economists⁴ but the view that the globalisation process is benefiting some

¹ For recent evidence see Autor et al. (2008) for the US and Dustmann et al. (2009) for Germany.
² See Autor et al. (2003, 2008) for the US evidence and Spitz-Oener (2006) for the German evidence.
³ The data is based on the OECD income distribution questionnaire and was taken from the OECD (2008). OECD-24 refers to the simple average of OECD countries. 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”. In the mid 2000s, Gini coefficients of income inequality for OECD countries ranged from 0.23 in Denmark to 0.47 in Mexico.

groups in society while harming others is widely accepted in the profession. In fact, economists have spent a lot of effort to analyse the distributional effects of international trade. In contrast, very little is known about the optimal approach to compensate the losers of globalisation. This lack of research is all the more surprising, as the support for the globalisation process at large will dwindle, and an ensuing escalation of trade protectionism may even halt the process, if the welfare state does not enable a majority of voters to reap the benefits of globalisation. Since welfare policies often distort economic incentives, and thereby reduce overall welfare, the globalisation process creates a powerful challenge to the welfare state: It has to compensate the losers of globalisation without exhausting the aggregate net benefits generated by freer trade.

Shortcomings of the Existing Literature

While the issue of trade and compensation has received little attention in the literature, a few important studies nonetheless exist (and we will review them in greater detail in Section 2). Yet, these existing studies focus primarily on the *possibility* of compensating the losers from trade through the tax system. And they do so in the context of the neoclassical approach to international trade, and in particular in the context of the Heckscher-Ohlin model of trade between symmetric countries, with labour supply being exogenously given. From our perspective, this approach has at least four limitations.

First, there is widespread consensus among economists that the conventional Heckscher-Ohlin framework cannot explain much of the change in inequality observed in developed economies since the 1980s.⁵ More generally, the Heckscher-Ohlin model cannot account for many of the aspects that distinguish the current stage of globalisation from the first golden age of globalisation (which ended with World War I). In particular, it cannot account for the rise in intra-industry trade and the geographical fragmentation of value chains across national borders. This is particularly worrisome in the context of our project, as the new stage of globalisation can arguably lead to more complex patterns of winners and losers from globalisation, with not only the unskilled bearing the burden of adjustment (Baldwin, 2006; Snower et al., 2009). The rapid advances in information technology and the large drop in

⁴ Feenstra and Hanson (1999), for instance, suggest that offshoring alone accounted for as much as 40 per cent of the rise in the US skill premium in the 1980s while other studies arrive at more conservative estimates (see Krugman, 2008, for an overview). Other important factors discussed in the literature are technological and institutional change.

⁵ We will elaborate on this point in Section 2.

communication costs, for instance, made tasks offshorable that were previously impervious to international competition. But these newly offshorable tasks are not necessarily performed by unskilled workers so that workers' skill levels become an increasingly unreliable predictor of job security (Baldwin, 2006). It might thus become more and more difficult to identify the winners and losers of the globalisation process along the skill dimension, as it is usually done in the traditional two-factor Heckscher-Ohlin Model.⁶

Second, the existing literature on trade and compensation focuses on the *possibility* of compensating the losers from trade but does not ask for the *optimal* compensation scheme. More importantly, the set of available policies is usually restricted to income and commodity taxes, and thus exclude labour market policies that are at the core of the policy debate on displaced workers.

Third, 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. Moreover, most of the existing studies assume fully flexible labour markets, which allow the trading partners to sustain full employment at all times. Yet, unemployment is an important part of overall income inequality and may well be affected by the globalisation process (see, e.g., Helpman, 2010).

Fourth, labour supply and the skill level of workers are usually taken as exogenous. The policy analysis does therefore not consider the incentives to work or the education decision of workers. Yet, these are important aspects of the policy debate on the future of the welfare state in the era of globalisation. In fact, many observers have criticised the passive character of many welfare states, especially those in Continental Europe, which allegedly encourages welfare dependency rather than labour market participation.

Our Approach to the Problem

⁶ Another example is provided by Egger and Kreickemeier (2009a). In a model of intra-industry trade with heterogeneous firms, the authors show that freer trade, by changing the composition of heterogeneous firms, can potentially account for the observed increase in within-group wage inequality. In their model, globalisation thus has a differential effect on ex-ante identical workers.

In view of the existing literature, the aim of the project is to analyse the optimal labour market policy response of the welfare state - with its objectives to provide social insurance and redistribution - to the challenges created by the new stage of the globalisation process. Our first aim is to develop a model framework that

1. Captures important aspects of the globalisation process.
2. Replicates key empirical developments as recently observed on the labour market.
3. Incorporates (empirically relevant) labour market imperfections.
4. Considers the incentives to work, i.e., includes a labour market participation decision.

In Larch and Lechthaler (2009), we already made progress in these directions by setting up a trade model with heterogeneous firms and search and matching frictions in the labour market. Workers can engage in training to upgrade their skills and the model features both skill-specific wages and unemployment rates. However, Lach and Lechthaler (2009) focus only on between-group inequality and stress worker reallocation between rather than within industries. As the reallocation within sectors appears to be more important empirically for inequality dynamics (Bernard and Jensen, 1997; Desjonquieres et al., 1999), we will develop a complementary model of intra-industry trade that focuses on within-industry reallocation and also features *within*-group inequality.

We will then use both type of models to analyse the optimal policy responses to the distributional conflicts induced by the globalisation process. In contrast to most of the existing literature, our research project will focus on optimal labour market policies rather than on optimal tax policies. More specifically, we will address the following research questions:

1. How can labour market policies be designed optimally so as to compensate the losers of globalisation without exhausting the aggregate net benefits generated by globalisation?
2. How can labour market policies be designed optimally so that they enhance people's adaptability on the labour market and allow them to turn themselves from losers into winners of the globalisation process?

In order to address these questions, we will analyse and compare the effectiveness of various labour market policies with respect to economic efficiency (absence of waste) and equity

(redistribution). The project will not only consider “traditional” labour market policies, such as minimum wages or wage subsidies targeted at the low-skilled. It will also examine “new” labour market policies, such as unemployment benefit transfers, that were explicitly designed with the new challenges to the welfare state in mind. These new policies have in common that they do not only target a specific group of workers but are designed to assist the heterogeneous group of workers that the globalisation process may send into the arms of the welfare state.

At the final stage of the project, we will then apply our model framework to the analysis of single countries. After all, the effect of the globalisation process on national labour markets cannot be expected to be identical across (developed) economies but will depend on national idiosyncrasies in the economic environment and, in particular, on the characteristics of national labour market institutions. Optimal policy approaches might thus as well differ across countries. In this regard, the relatively rigid labour markets in coordinated market economies in Continental Europe, such as Germany and France, have been contrasted with those in liberal market economies in Anglo-Saxon countries, such as the UK and the US, characterised by a higher degree of flexibility (see, e.g., Hall and Soskice 2001). We will thus extend the model to a multi-country framework with asymmetric labour market institutions. We then analyse to what extent cross-country differences in labour market institutions may explain the observed cross-country differences in inequality dynamics (as documented in Figure 1)⁷ and, in particular, how these differences shape optimal policy responses to globalisation.

The complex structure of multi-country trade models with asymmetric institutions necessitates numerical simulations to get clear-cut results. Calibrating the model to country-specific data will also allow us to obtain insights into the quantitative dimension of our results. Furthermore, numerical models will allow us to conduct experiments that simulate the consequences of various kinds of policies and relate them to national labour market institutions. Finally, the calibrated model can also be used to obtain predictions about the differential effect of the globalisation process on labour market outcomes in countries that differ in their labour market institutions. Using cross-country data, these predictions can then be compared with direct econometric evidence to empirically test the model that we use for our policy analysis (see our own work in Felbermayr et al., 2009).

⁷ The fact that both Continental European and Anglo-Saxon countries experienced an increase in inequality tentatively suggests that other dimensions of cross-country differences may also shape the effect of the globalisation process on national labour markets and should also be considered in the analysis.

We will publish the results of the project in research papers that we aim to publish in high-ranking international journals. Furthermore, we will produce a policy paper that summarises our results, makes them accessible to a broader audience and provides policy conclusions on labour market policies as a mean to redistribute the gains from globalisation. The Economic Policy Center of the Kiel Institute for the World Economy will ensure that our policy paper will be widely disseminated to the policy community and to the media. Finally, we also intend to channel our results into a session of the Global Economic Symposium (GES), a leading forum for global dialogue, in order to receive feedback from internationally renowned decision makers and to stimulate the international debate on globalization and redistribution.

2.2 Present State of Research on Trade and Redistribution

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.⁸

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 review the existing literature on trade and redistribution and sketch the challenges faced by future work in this area.

Redistribution in Neoclassical Models of Trade: The Dixit-Norman Policy

⁸ See Grossmann and Rossi-Hansberg, 2008, and Egger and Kreickemeier, 2009a, for important recent contributions.

Following the lead by Dixit and Norman (1980, 1986), most of the few existing paper on redistribution schemes concentrate on the *possibility* of compensating the losers from trade without exhausting the 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 than under autarky. Dixit and Norman (1980, 1986) show that such a policy raises non-negative revenue for the government and thus results in a Pareto improvement. Yet, some authors have subsequently questioned that the Dixit-Norman policy can work in practice. Brecher and Choudhri (1994), for instance, show that the policy may not work in the presence of unemployment.

A limitation of the literature in the tradition of Dixit and Norman (1980, 1986) is that it usually discusses the issue of redistribution and trade in the context of the neoclassical approach to international trade, and in particular in the context of the Heckscher-Ohlin model. There is, however, widespread consensus among economists that 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.⁹ 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). As the traditional Heckscher-Ohlin framework can also not account for other key developments on the labour market, such as the rise in residual wage inequality (i.e., the increase in wage dispersion within demographic and skill groups) or the polarization of the labour market, it may not be the appropriate framework to analyse optimal policy responses to the *new* stage of globalisation.

Another limitation of the literature in the tradition of Dixit and Norman (1980, 1986) is that it generally does not address the issue of *optimal* compensation but rather focuses on the *possibility* of Pareto improvements through trade. What is more, 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

⁹ See, e.g., Desjonqueres et al. (1999) for a detailed exposition of the argument.

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.¹⁰

Another limitation of the literature is that 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, countries are usually symmetric and not only product but also factor markets are generally perfectly competitive.¹¹ Hence, the literature leaves no room for studying the interactions between globalisation, inequality and national labour market institutions. What is more: By abstracting from unemployment, the literature shuts down a potentially important channel, through which the globalisation process may affect income inequality.

Future Research on Redistribution and Trade: The Challenges Ahead

In view of the existing literature, future research on the compensation of the losers from freer trade faces at least four challenges. First, researchers have to 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 on 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. Third, they should also explicitly consider the incentives to work and / or the education decision of workers. Fourth, 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.

As the winners and losers from globalisation might become increasingly heterogeneous, innovative labour market policies, such as unemployment benefit transfers that enable unemployed people to transfer a fraction of their unemployment benefits into hiring vouchers, deserve special attention. These policies have in common that they do not target just one

¹⁰ See, for instance, the recommendations of the OECD (2007) for dealing effectively with the increased vulnerability of workers in a globalising world.

¹¹ See, however, Brecher and Choudhri (1994) for an important exception.

group of 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.

Recent Advances in the Literature

Three papers dealing with trade and redistribution have recently made some headway in these directions. 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. In the context of their model, the former group of losers (the stayers) is optimally compensated by a (targeted) wage subsidy, while the latter group of losers (the movers) is optimally compensated by a (targeted) employment subsidy.

Davidson and Matusz (2006) concentrate on a specific dimension of the globalisation process, namely the liberalization of previously protected low-tech industries, and assume that labour is the only input of production. The assumption of a single input considerably simplifies the policy problem in their model, as policies can then be targeted at workers in previously protected industries only. In their model, trade liberalization induces reallocation of labour between rather than within industries. The model can thus not explain why much of the increase in the relative demand for skilled workers took place within industries. The authors also focus on a single country and abstract from the interaction between national labour market institutions and 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 restrict its analysis to tax policies.

Third, Egger and Kreickemeier (2009b) 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 (2009b) 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.

However, Egger and Kreickemeier (2009b) focus only on the *possibility* of ensuring both higher aggregate income and lower inequality but do not consider optimal policy responses. They also restrict their analysis, as Itskhoki (2008) does, to the tax system and do not consider labour market policies. Finally, they also do not consider country-specific labour market institutions¹² and thus abstract from interactions between national labour market institutions and the (optimal) response of the welfare state to the globalisation process.

¹² In contrast, Egger and Kreickemeier (2009b) do consider cross-country differences in profit-tax rates.

2.3 Plan of Procedure

The research project will start with reviewing the empirical evidence on inequality, globalisation, and labour market policies. This literature review will serve as a starting point for following steps of the project, in which we will set up models of international trade that can capture basic developments on the labour market as observed in the data.

For the analysis of labour market policies in the context of globalisation we will use two models. On the one hand, we build on the model developed by Larch and Lechthaler (2009) that features endogenous skill formation and skill-specific labour market outcomes and stresses between-industry reallocations. We will complement the framework by Larch and Lechthaler (2009) and develop a model of intra-industry trade that focuses on within-industry reallocation and also features within-group inequality. We will then use both model frameworks in the third step to analyze the effectiveness of a wide range of labour market policies that can be used to compensate the losers of globalisation. In the fourth step, we account for country-specific features of national labour markets and calibrate the models to quantify the policy effects identified earlier and to obtain testable predictions about the effect of the globalisation process on labour market outcomes. This exercise will be based on stylized features of liberal and coordinated market economies such as the US and Germany.

We intend to publish our results in the course of the project in the form of four research papers. In the final step, we will draft the final report and summarize our insights in a policy paper on globalisation and labour market policies.

The detailed plan of procedure of the research project is as follows:

Step 1: Literature Review - Empirical Evidence on Inequality, Globalisation, and Labour Market Policies

In a first step, the project will review the existing empirical evidence on how income inequality and poverty in developed economies is changing over time and on how these developments are linked to the globalisation process. In fact, there is a burgeoning empirical literature on the widening of the wage structure in developed economies (for prominent recent contributions see Autor et al., 2008, for the US and Dustmann et al., 2009, for Germany). This

literature gives a detailed overview not only of the development of overall wage inequality but also of the development of inequality at different tails of the wage distribution. It also documents the change in wage differentials by education, by occupation, by age and experience group and the change in residual wage inequality (i.e., the change of wage inequality within demographic and skill groups). In addition, a growing empirical literature analyses the link between the globalisation process and labour market outcomes and aims at identifying the winners and losers of the globalisation process. Taking stock of the evidence is of utmost importance for any analysis of the labour market policies that might be used to compensate workers harmed by globalisation. After all, optimal policy responses will depend on the type of challenges faced by the welfare state in the real world.

In a second step, we will then review labour market policies that have been proposed to offset the trend towards more inequality, such as minimum wages, hiring and employment subsidies or wage subsidies. A particular focus will lie on innovative labour market policy proposals that were explicitly designed to deal with the new challenges to the welfare state. These innovative policy proposals have in common that they do not only target a specific group of workers, say the unskilled, but more generally assist displaced workers to adapt to their changed circumstances. We will review the aim and effects of the various labour market policies as discussed in the literature.

The existing academic literature on labour market policies is, however, of limited direct relevance for the research question of our project, as economists have almost always analysed labour market policies in closed economy settings, thereby neglecting the specific labour market challenges created by the globalisation process and the fact that in an integrated world economy, national labour market institutions are likely to interact across national boundaries. As an exception, Braun and Spielmann (2010) analyse the effects of wage subsidies in a two-country model of intra-industry trade with unionized labour markets. They document both positive and negative spill-over effects and discuss the costs and benefits of international labour market policy coordination.

Step 2: Model Building - International Trade, Unemployment and Inequality

The empirical evidence summarised in the first stage of the project provides the starting point for the model building exercise of the second stage. In view of the existing literature (and its

limitations that we have discussed in greater detail in the previous sections), the key challenge is to build a model of international trade and labour markets that

1. Captures important aspects of the globalisation process.
2. Replicates key empirical developments as reviewed at the first stage of the project.
3. Incorporates (empirically relevant) labour market imperfections.
4. Explicitly considers the incentives to work, i.e., includes a labour market participation decision that is based on the incentives of workers.

We already made headway in these directions by developing a two-sector trade model with heterogeneous firms and search and matching frictions in the labour market (Larch and Lechthaler, 2009). In the model, skill formation is endogenous as workers can engage in training and both wages and unemployment rates are skill-specific. However, in Larch and Lechthaler (2009), we have focused only on between-group inequality and stress demand shifts between rather than within industries. As within-industry reallocation seems to be more important empirically for inequality dynamics, we will develop a complementary model of intra-industry trade that focuses on within-industry reallocation and also features *within*-group inequality.

For doing so, we will introduce endogenous labour supply and collective bargaining at the firm-level into a heterogeneous firm model of intra-industry trade along the lines of Melitz and Ottaviano (2008). Melitz and Ottaviano (2008) present a model with firm heterogeneity - in the form of productivity differences - and endogenous mark-ups. In contrast to earlier work by Melitz (2003), on which also Egger and Kreckmeier (2009) and Itskhoki (2008) build their models of trade and redistribution, the Melitz-Ottaviano framework forges a link between bilateral trade liberalization and reductions in mark-ups, thus highlighting the pro-competitive effects often associated with the globalisation process.¹³ The model focuses on intra-industry trade and, in contrast to the Heckscher-Ohlin model, highlights the reallocation of resources within industries rather than between industries. The model also remains highly tractable and can, in its basic form, even be extended to a general framework with multiple asymmetric countries.

¹³ As a downside, the model developed by Melitz and Ottaviano (2008) abstracts from income effects in the differentiated good sector and thus has a strong partial equilibrium flavour.

In the original Melitz-Ottaviano framework, labour is supplied inelastically and labour markets are perfectly competitive. The model does therefore neither feature a labour market participation decision, nor unemployment, nor wage inequality among the employed. We will thus extend the model to incorporate collective bargaining at the firm level, a salient and empirically important feature of many labour markets in developed economies. As shown by Braun (forthcoming) for the case of a closed economy, introducing firm-level bargaining into the Melitz-Ottaviano framework generates an endogenous wage distribution, with high-productivity firms paying higher wages for ex-ante identical workers. While not considered by Braun (forthcoming), the model thus features within-group wage inequality, an important element of overall wage inequality. Firm-level bargaining also reduces industry-wide employment below its competitive level. We will thus extend the analysis of Braun (forthcoming) to an open economy framework with costly intra-industry trade. Instead of using a simple monopoly union model (as Braun did), we will consider a right-to-manage model, in which firms and unions bargain over wages. This extension is important, as countries differ in the bargaining strength of their unions. We also intend to introduce disutility from work into the utility function. In contrast to Melitz and Ottaviano (2008) (and also in contrast to our own work in Braun, forthcoming) labour supply is then endogenous and can be affected by labour market policies.¹⁴

We will then use the model to analyse the effects of trade integration (in the form of lower trading costs) on employment and the wage distribution of the employed – and thus on overall income inequality. While the analysis will, at this stage of the project, focus on symmetric countries only, it will explicitly analyse how the effects of trade integration vary by the degree of labour market flexibility, as summarised by the bargaining power of firm-level unions. We will also contrast our results to the case of sector-level bargaining, since in many Continental European countries wages are still predominantly determined in centralised collective agreements at the sector level. Importantly, we expect labour market institutions to affect overall inequality not only directly through its impact on wages and employment of existing firms but also indirectly through its effect on the number and characteristics of firms that survive in the long-run. Labour market institutions should therefore interact with the process of firm selection that is at the heart of the heterogeneous firm literature, as jump-started by Melitz (2003).

¹⁴ See Exbrayat et al. (2009) for a recent paper that introduces disutility of work into a quasi-linear utility function (which is also used by Melitz and Ottaviano, 2008).

After we have set up the model as described above, we will then use the model as well as the complementary model developed in Larch and Lechthaler (2009) to analyse the optimal labour market policy responses to the globalisation process. At the final stage, we will then extend these models to asymmetric countries and calibrate it to the data.

Step 3: Policy Analysis - Labour Market Policies, Unemployment and Inequality

The third stage is the core of the project, as it will analyse the optimal response of the welfare state - with its objectives to provide social insurance and redistribution - to the challenges created by the globalisation process.

At this stage of the project, we will pursue two separate but complementary projects. Our model framework developed at the second stage of the project stresses within-industry reallocation of workers as a potential source of rising wage inequality and focuses on within-group inequality. While within-industry changes in labour demand appear to be very important for the observed rise in income inequality, between-industry changes may as well play a role. Moreover, not only within- but also between-group inequality increased significantly since at least the mid-1980s. We will therefore analyse optimal labour market policies both in the model of within-industry demand shifts that we developed at the second stage of the project but also in the model of between-industry shifts, which we have developed earlier (Larch and Lechthaler, 2009), and that also features inequality between workers of different skill levels.

We will first introduce labour market policies into the model framework developed at the second stage of the project and compare the effectiveness of these policies with respect to economic efficiency (absence of waste) and equity (redistribution). More specifically, we will identify optimal labour market policy responses to the distributional conflict induced by globalisation using, first, an explicit policy target function and, second, a Pareto-type criterion. With an explicit policy target, as, e.g., used by Itskhoki (2008), governments maximise a specific welfare function in which a measure of inequality enters. A Pareto-type criterion is, in contrast, used by Davidson and Matusz (2006). In their approach, an optimal compensation policy is one that, among a set of alternative policies, gives the highest aggregate welfare level while fully compensating the losers from globalisation.

For the analysis of policies in a setting with between-group inequality, we use the model developed by Larch and Lechthaler (2009). This paper introduces search and matching unemployment and endogenous selection of workers into different skill-classes into a model of heterogeneous firms and comparative advantage (see Bernard et al., 2007). This approach has the advantage of being able to distinguish between the effects of trade liberalization in different industries but also across workers of different skill levels. We will analyze the effectiveness of the same labour market policies instruments as used in the model of within-industry shifts analyzed before. Given the different structures of the models, it might very well be that prescriptions differ. Moreover, the two-sector approach also allows for the analysis of new instruments, like mobility premiums, which cannot be analyzed in a one-sector setting.

We expect our analysis to provide novel insights not only into the effectiveness of labour market policies in open economies per se but also, more generally, into the effect of labour market policies on the market structure of an industry. As our models incorporate heterogeneous firms, and the productivity distribution is determined endogenously, labour market policies will have an effect on the number and, equally important, the characteristics of firms that survive in the long run. Wage subsidies, for instance, might arguably not only increase employment of existing firms but will also allow less productive firms to survive in equilibrium. This will, in turn, influence the wage distribution and overall employment – and thus also overall income inequality.

Step 4: Country-Analysis and Simulation Exercises

The effect of the globalisation process on national labour markets cannot be expected to be identical across (developed) economies. In fact, national idiosyncrasies in the economic environment might profoundly influence labour market outcomes of freer trade – and thus might also affect (optimal) policy responses. Labour market institutions indeed vary substantially across countries, as documented in Table 1. The share of workers covered by collective bargaining agreements is, for instance, typically much higher in Continental Europe than in the US or the UK. Moreover, in the Anglo-Saxon countries, bargaining between employers and unions usually takes place at the local level while in many Continental European countries wages continue to be predominantly determined in centralised collective agreements at the industry level. Davis (1998) and Krugman (1995) have suggested that such

cross-country differences in labour market institutions will lead to systematically different labour market outcomes of globalization in Continental Europe, where labour markets are relatively rigid, than in the UK and the US, where labour markets are more flexible – and are thus one potential explanation for the observed cross-country differences in inequality dynamics (as documented in extracts in Figure 1). Yet, Table 1 also shows that there exists substantial variation in labour market institutions also within the camps of Anglo-Saxon and Continental European countries. With 95 per cent, collective bargaining coverage is, for instance, almost universal in France while in Germany only 63 per cent of all workers are still covered by collective agreements. And it is almost three times higher in the UK than in the US

Differences in the level of labour market flexibility across countries can affect labour market outcomes of globalization in various ways. For instance, labour market institutions may affect the competitiveness of a country's firms and can influence the extent to which trade affects employment rather than wages. Identifying the ways in which the economic environment interacts with the labour market effects of globalisation will help to develop target-oriented policy measures. The final part of the project will thus take cross-country differences in national labour market institutions into account. In particular, we will extend both models used in stage three of the project to a multi-country setup with cross-country asymmetries and allow countries to differ in their labour market institutions. More specifically, we intend to contrast the labour market outcomes of globalization in a coordinated market economies such as Germany to those in a liberal market economy such as the US. For doing, we will replicate key features of national labour markets (as documented in extracts in Table 1) in our multi-country setting. We then analyse how such cross-country differences in labour market institutions shape optimal policy responses to globalisation.

Table 1: Selected Labour Market Institutions

Country	Collective Bargaining Coverage 2007 (in per cent)	Level of Wage Bargaining 2007	OECD Employment Protection Index 2008 (1-5) ^a	Net-Replacement Rate 2008, Single Long-Term Unemployed ^b
France	95.0	sectoral or industry level, with additional local or company bargaining	2.90	42
Germany	63.0	sectoral or industry level, with additional local or company bargaining	2.63	46
Italy	80.0	sectoral or industry level	2.58	0
UK	34.8	local or company bargaining	1.09	45
US	13.2	local or company bargaining	0.85	11

Sources: Data on collective bargaining coverage and the level of wage bargaining is from Visser (2009), data on employment protection from Venn (2009), data on net replacement rates from the OECD tax-benefit models (www.oecd.org/els/social/workincentives).

^a The OECD employment protection index ranges from 0 (least restrictions) to 6 (most restrictions).

^b After tax and including unemployment benefits, social assistance, family and housing benefits in the 60th month of benefit receipt. Calculations are for a single person without children that had gross earnings similar to the average worker. Notice that the replacement rates vary strongly across countries depending on the number of children, the in-work earning and the marital status of a worker.

As cross-country asymmetries often preclude analytic solutions of trade models, we might resort to simulation exercises in our analysis of optimal policy responses with cross-country differences. Calibrating the model to country-specific data will also allow us to obtain insights into the quantitative dimension of our results. Finally, we will use the calibrated model for asymmetric countries to obtain predictions about the differential effect of trade liberalization on labour market outcomes in economies with different labour market institutions. Using

cross-country data, these predictions can then be compared with direct econometric evidence (see our own work in Felbermayr et al., 2009) to empirically test the model that we use for policy analysis. This is all the more important, as most of the existing literature on the effects of trade liberalisation on labour market outcomes is purely theoretical in nature.

Step 5: Policy Conclusions and Dissemination Strategy

We intend to publish the results in research papers that differ according to the general model framework, the type of labour market imperfections considered, the dimension of inequality analysed and the consideration of national country characteristics. Table 2 provides an overview of the research.

Table 2: Research Papers Planned

No.	Model Framework	Labour Market Imperfections	Dimension of Inequality	Country Characteristics
1.	Intra-industry trade model with heterogeneous firms trade and endogenous mark-ups	Collective bargaining at the firm and the sector level	Within-group inequality	Symmetric countries
2.	Intra-industry trade model with heterogeneous firms trade and endogenous mark-ups	Collective bargaining at the firm and the sector level	Within-group inequality	Asymmetric countries that differ in their degree of labour market flexibility
3.	Two-sector trade model with heterogeneous firms and endogenous selection of workers into different skill-classes	Search and matching unemployment	Between-group inequality (across sectors and skill levels)	Symmetric countries
4.	Two-sector trade model with heterogeneous firms and endogenous selection of workers into different skill-classes	Search and matching unemployment	Between-group inequality (across sectors and skill levels)	Asymmetric countries that differ in their degree of labour market flexibility

In the final step, we will also summarise the key results of the project in a final report. In addition, a policy paper will summarise the results from the four papers listed above and provide policy conclusions on labour market policies as a mean to redistribute the gains from globalisation. A specific focus of the policy paper will be on the interaction between policy responses and specific institutional features of national labour markets. The policy paper will be published in the regular policy-oriented publication series of the Kiel Institute of the World Economy. The Economic Policy Center of the Kiel Institute will ensure that our policy paper will be widely disseminated to the policy community and to the media.

Furthermore, and most importantly, we intend to channel the challenge of compensating losers from globalisation and the policy conclusion of the project into a Thyssen Foundation session on “Redistributing the Gains from Globalisation” at the GES 2012 of the Global Economic Symposium (GES), with the Thyssen Foundation being highlighted as a “Knowledge Partner” of the GES. The Executive Director of the GES, Dr. Alessio J. G. Brown, will be involved both in the research of the project and in the organization of the corresponding GES session. The purpose of the GES is to generate concrete solution proposals that address some of the most important global problems. The solution proposals draw on the expertise of leaders from business, policy making, academia and civil society. José Manuel Barroso, President of the European Commission, is Patron of the GES.

The GES is an action-oriented solution symposium, not a discussion forum. The focus is on proposed solutions to global problems. Furthermore, the GES is research-based. The research analysis underlying the solution proposals is to be found on the Virtual GES, the internet platform of the GES. The Virtual GES contains detailed rationales of proposed solutions, discussion fora, background studies, relevant facts and figures and related articles. In this virtual platform the solution proposals submitted by the panellists and the broader GES-Community are discussed in advance of the Symposium and the positions of the panellists are established, so that the discussion at the GES itself can proceed efficiently and insightfully. The discussion in the virtual GES forum will allow us to receive feedback from internationally renowned decision makers already before the actual symposium takes place.

By feeding our research and policy results into a Thyssen Foundation GES session, where the policy responses are debated by leading decision makers, we hope to stimulate the international debate on globalization and redistribution and bring in our research-based policy

responses into the debate between leading decision makers from policy and business, nobel laureates and representatives from civil society.

The results of each Symposium are published in a book entitled Global Economic Solutions. It contains summaries of solution proposals on which the GES panellists were able to achieve substantial agreement. Global Economic Solutions is submitted and presented to major international organizations and many national governments. It serves as inspiration and catalyst for policy making, business strategy and social activism and initiates an ongoing dialogue on global problem-solving.

Past Symposia have dealt with challenges related to the topic of our research project, such as “How Globalization Transforms the Welfare State” and “Creating Employments”. For the GES 2010 a large number of leading decision makers from the world of politics, business and economics have confirmed their attendance, e.g., the Nobel Laureates James Heckman, Eric Maskin and Edmund Phelps, Hans-Paul Bürkner (CEO of the Boston Consulting Group), Suzan Sabancı Dinçer (Executive Chairman of Akbank), Shumeet Banerji (CEO of Booz & Company), the European Commissioner for Trade Karel de Gucht, the Finance Ministers Mehmet Şimşek and George Papaconstantinou, the Central Bank Governors Durmuş Yılmaz and Augustín Carstens, Aart de Geus (Deputy Secretary-General of the OECD) or James P. Leape (Director General of the WWF). Further information on the GES can also be found on the web: www.global-economic-symposium.org.

2.4 Preparatory Work Done

The collaborators of the project have done preparatory work on the topic in the following three areas of research:

- i. Empirical evidence on the winners and losers of the globalisation process
- ii. Theory of international trade and labour markets
- iii. Labour market policies: Theory and simulation exercises

Members of the research team have empirically analysed the link between globalisation and labour market outcomes at the micro-level. In particular, Bachmann and Braun (forthcoming) study the effect of offshoring on labour market dynamics in Germany using German micro-

data. They identify groups of workers that gain and others that lose from offshoring. The experience with the empirical literature will speed up the literature review on inequality and globalisation at the first stage of the project and provide for a basic understanding of the empirical regularities that our model framework aims to match. The econometric expertise will also prove useful in our empirical exercise at the final stage of the project, in which we aim at testing empirically the predictions obtained from the simulated model.

The research team has, furthermore, extensive experience in blending insights from international theory and labour economics. Within the project “The Challenges from Globalisation for the Labour Market” at the Kiel Institute, we work on introducing labour market imperfections into the work-horse models used in the trade literature. Recent examples of our work include studies by Felbermayr et al. (2009), in which the authors analyse the spillovers of labour market institutions between trading countries (and also put the predictions of the model to the data), Larch and Lechthaler (2009), in which the authors analyse the effects of trade liberalisation on unemployment in a two-sector two-country model, and Braun (2010), in which the author introduces a one-sided minimum wage in a two-country model of trade with multinational firms. The experience with merging trade theory and labour economics will clearly facilitate our work on the model framework at stage two of the project.

The research team has also extensive experience with the effects of labour market policies that we analyse within the project “Employment Policies - Redistributing Incentives” and “Unemployment Accounts – Giving property rights“ at the Kiel Institute. The foci of our research area are specifically on policies that promote the adaptability on the labour market and redistribute incentives to encourage people to engage in productive activities, and thus are of particular importance for the challenges that the globalisation process poses to the welfare state.¹⁵ Brown et al. (2008), for instance, provide a detailed analysis of unemployment accounts.¹⁶ Benefit transfers are, among other labour market policies, examined in Brown et al. (2007). Boss et al. (2008, 2009) discuss how such policy reform systems could be implemented in Germany. These papers generally use models that are calibrated to country-specific data and may thus provide a starting point for our country-specific analysis at the final stage of the project. Of direct relevance to our project is also a paper by Snower et al.

¹⁵ See for example Snower et al. (2009) for an overview.

¹⁶ With unemployment accounts, people make withdrawals from their own unemployment accounts when they become unemployed (instead of receiving unemployment benefits). Unemployment accounts are financed through compulsory savings.

(2009), in which the authors reflect on the challenges that globalisation makes on welfare states and on how states should respond to these challenges. Finally, Braun and Spielmann (2010) analyse the effects of wage subsidies in a simple model of international trade with unionised labour markets, and thus present a first attempt to analyse labour market policies in an international context.

More generally, our research project can draw on the competence of other research groups here at the Kiel Institute. In particular, we will work in close cooperation with the research area “The Global Division of Labour”, headed by Prof. Holger Görg, Ph.D. The research area analyses major aspects of the international division of labour in the globalizing world economy. Of particular importance for our project is their wide-ranging work on the effects of offshoring on labour market outcomes of heterogeneous workers (see, e.g., Geishecker and Görg, 2008; Geishecker et al., 2010).

2.5 Methods

We will start our project with a detailed literature review of the existing empirical evidence on how income inequality in developed economies has evolved in recent decades and on the links of these developments to the globalisation process. The empirical regularities identified in the literature review will then provide the benchmark, to which we compare the model of international trade and labour markets that we set up at the second stage of the project.

Our model framework will blend insights from international trade theory and labour economics, two fields that have, for a long time, evolved independently from one another (see Davidson and Matusz, 2004). While international trade theory has, until recently, largely ignored micro-founded models of unemployment, and relied on long-run general equilibrium models with fully flexible labour markets, we will incorporate micro-based models of unemployment, such as firm-level bargaining and search and matching, into models of international trade. We will then use this model to analyse the effects of labour market policies that are the topic of extensive research in labour economics (and, to a certain extent, also in public economics) but were, so far, mostly analysed in closed economy settings.

While the second and the third part of the project aims at deriving analytic closed-form solutions (in the tradition of most of the trade literature), the introduction of country-specific

features into our basic model framework at the last stage of our project will most likely force us to resort to numerical simulations. Calibrating the model to country-specific data will also allow us to put numbers to our results. Using cross-country data, we also plan to confront the predictions of the simulated model with direct econometric evidence.

2.6 Time Schedule

The project is meant to last for 24 month, starting in April 2011. The time and working schedule is as follows:

Table 3: Time Schedule

	Short Description	Time Period
Step 1	Literature review on the empirical evidence on inequality, globalisation, and labour market policies proposed to offset the trend towards more inequality.	Month 1 to 2
Step 2	Development of a model of international trade than can capture basic developments on the labour market as observed in the data.	Month 3 to 8
Step 3	Analysis of the effectiveness of a wide range of labour market policies that can be used to compensate the losers of globalisation. Distinction between policy analyses in models of between- and within-industry reallocations that feature within- and between group inequality. Discussion of preliminary results in virtual GES.	Month 9 – 15
Step 4	Extension of the models to account for country-specific features of national labour markets. Calibration of the models to quantify the identified policy effects. Econometric evidence on the predictions of the simulated models. Discussion of preliminary results in virtual GES.	Month 16 – 20
Step 5	Thyssen Foundation session on “Redistributing the Gains from Globalisation” at the GES 2012. Dissemination of the Global Economic Solutions that result from the GES. Policy paper on how labour market policies can be designed to redistribute the gains from globalisation based on GES feedback and policy discussion. Conclusion of final report.	Month 18 -24

2.7 Collaborators

The project will be led by Dr. Sebastian Braun, post-doctoral researcher at the Kiel Institute for the World Economy and deputy head of the research area “Reforming the Welfare Society” at the Kiel Institute.

Furthermore, Alessio J. G. Brown, head of the research area “Reforming the Welfare Society” at the Kiel Institute, and Wolfgang Lechthaler, Ph.D., head of the research area “Monetary Policy under Market Imperfections” at the Kiel Institute and postdoctoral researcher of the research area “Reforming the Welfare Society”, will be part of the research team. In addition, Prof. Dennis Snower, Ph.D., president of the Kiel Institute, will actively contribute to the research project.

As the research task is rather complex and involves the formulation of a new model framework, the integration of various labour market policies into this and a previously developed model framework, and the extensive numerical analysis of the interaction of optimal labour market policies and idiosyncratic labour market features, a full-time postdoctoral researcher and one research assistant will have to complement the team. The full-time postdoctoral researcher that we would hire in case the proposal is accepted will co-author the research and policy papers with the other members of the project team.

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3. Curriculum Vitae and Publication Lists of Collaborators

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Humboldt-Universität zu Berlin, Germany
Fields of specialization: Statistics and econometrics |
| 09/2001 - 06/2003 | B.Sc. in Economics
University of St Andrews, Scotland, UK |
| 10/1999 - 07/2001 | Vordiplom (B.A.) in Economics
Universität Hamburg, Germany |

Research Visits

- | | |
|-------------------|---|
| 11/2008 | Birkbeck College, University of London, UK |
| 01/2007 - 03/2007 | Centre for Economics and Business Research, Copenhagen, Denmark |

Professional experience

- | | |
|-------------------|--|
| 09/2009 - present | Post-doctoral researcher, Kiel Institute for the World Economy |
|-------------------|--|

	Deputy head, research area “Reforming the Welfare Society” at the Kiel Institute
01/2008 - 08/2009	Research and teaching assistant, Institut für Wirtschaftstheorie II, Humboldt-Universität zu Berlin
01/2008 - 06/2009	Researcher, project “The Impact of ICT on Employment”, financed by the European Commission
04/2005 - 08/2009	Research associate, Collaborative Research Center 649 “Economic Risk”
04/2005 - 12/2007	Researcher, project “InterVal - Internet and Value Chains”, financed by the German Federal Ministry of Education

Awards

2005	Price of the Wirtschaftswissenschaftliche Gesellschaft e.V. awarded for the best Diplom in Economics, Humboldt-Universität zu Berlin
2003	William Blair Memorial Prize awarded for the best performance in (Senior) Honours Economics in 2002-03, University of St Andrews
2002	Nisbet Prize awarded for the best performance in (Junior) Honours Economics in 2001-02, University of St Andrews

Conferences, workshops & invited seminar presentations

2010	European Economic Association, annual conference in Glasgow
2009	American Economic Association, annual conference in San Francisco Center on Capitalism and Society, annual conference in Berlin
2008	Verein für Socialpolitik, annual conference in Graz European Economic Association, annual conference in Milan Workshop “Internationale Wirtschaftsbeziehungen” in Göttingen
2007	Verein für Socialpolitik, annual conference in Munich Brown Bag Seminar, RWI Essen
2006	European Trade Study Group, annual conference in Vienna Seminar “Quantitative Wirtschaftsforschung”, Universität Hamburg 2nd Lindau Meeting of the Winners of the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel
2005	Summer school on “Trade, Innovation and Technology Diffusion: Implications for Developing Countries”, Centro Studi Luca d’Agliano

Publications

A. Journal articles

- Braun, S. (forthcoming), "Unionisation Structures, Productivity and Firm Performance: New Insights from a Heterogeneous Firm Model", *Labour Economics*.
- Bachmann, R., and S. Braun (forthcoming), "The Impact of International Outsourcing on Labour Market Dynamics in Germany", *Scottish Journal of Political Economy*.
- Braun, S., Dwenger, N. and D. Kübler (2010), "Telling the Truth May Not Pay Off: An Empirical Study of Centralized University Admissions in Germany", *The B.E. Journal of Economic Analysis & Policy (Advances)*, 10(1), Article 22.
- Braun, S. (2010), "Foreign Competition, Multinational Firms, and the Effects of One-Sided Wage Rigidity", *Global Economy Journal*, 10(2), Article 4.
- Braun, S. and N. Dwenger (2009), "Success in the University Admission Process in Germany: Regional Provenance Matters", *Higher Education*, 58(1), pp. 71-80.
- Braun, S. (2009), "Should Trade Unions Welcome Foreign Investors? First Evidence from Danish Matched Employer-Employee Data", *Economics Bulletin*, 29(2), pp. 1183-1189.
- Braun, S. (2008), "Economic Integration, Process and Product Innovation, and Relative Skill Demand", *Review of International Economics*, 16(5), pp. 864-873.
- Braun, S. (2006), "Core Labour Standards and FDI: Friends or Foes? The Case of Child Labour", *Review of World Economics / Weltwirtschaftliches Archiv*, 142(4), pp. 765-791.
- Busse, M. and S. Braun (2004), "Export Structure, FDI and Child Labour", *Journal of Economic Integration*, 19(4), pp. 804-829.
- Busse, M. and S. Braun (2003), "Trade and Investment Effects of Forced Labour: An Empirical Assessment", *International Labour Review*, 142(1), pp. 49-71.

B. Selected working papers

- Braun, S. and M. Kvasnicka (2010), "Men, Women, and the Ballot. Gender Imbalances and Suffrage Extensions in US States", *Kiel Working Papers 1625*.
- Braun, S. and C. Spielmann (2010), "Wage subsidies and international trade: When does policy coordination pay?", *Kiel Working Papers 1599*.

C. Policy-oriented publications

- Braun, S., N. Dwenger and T. Oechsle (2010), "Chancen auf einen Studienplatz: Regionale Herkunft erheblich", *Kiel Policy Brief*, 16.
- Braun, S., N. Dwenger and D. Kübler (2008), "Studienplatzvergabe: die cleversten Bewerber kommen zum Zug", *DIW Wochenbericht*, 75(16), pp.198-202.

Dr. Alessio J. G. Brown

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24105 Kiel, Germany

Phone: +49-2431-8814-259

Email: alessio.brown@ifw-kiel.de

Born: August 30, 1975—Rome, Italy

Nationality: British-Italian

Current position

Post-doctoral researcher and economist, Kiel Institute for the World Economy

Head of the Research Area “Reforming the Welfare Society”

Co-Founder and Executive Director, Global Economic Symposium

Senior Advisor to the President of the Kiel Institute for the World Economy

Areas of specialization

Global economic challenges and solutions, globalisation and the welfare state, employment incentives and policies, labour market dynamics, adjustment to trade

Education

- | | |
|-------------------|---|
| 10/2004 – 11/2009 | Doctor scientiarum politicarum (summa cum laude)
International Ph.D. Program in Quantitative Economics at CAU Kiel |
| 08/2003 – 05/2004 | Advanced Studies Programme in Economic Policy Research at the Kiel
Institute for the World Economy |
| 10/1997 – 06/2003 | Diploma in Business Administration
University of Passau, thesis on “Exchange Rate Risks and Hedging Methods”. |
| 09/1999 – 12/1999 | University College Dublin, Bachelor of Commerce, Erasmus Studies. |

Professional experience

- | | |
|-------------------|---|
| 06/2008 – present | Head of the Research Area “Reforming the Welfare Society” , Kiel Institute
for the World Economy |
| 09/2007 – present | Co-Founder and Executive Director, Global Economic Symposium, Kiel
Institute for the World Economy |
| 03/2007 – present | Senior Advisor to the President, Kiel Institute for the World Economy |
| 10/2004 – 03/2007 | Coordinator Presidential Department, Kiel Institute for the World Economy |
| 10/2004 – 09/2008 | Teaching Assistant, Chair of Economic Theory, CAU Kiel. |

01/2000 – 04/2000	Internship with Dresdner Kleinwort Benson, in Global Corporate Finance, MidCaps, in Frankfurt am Main.
03/1999 – 04/1999	Practical Training in Marketing and Management at Panzeri Diffusion, Varese, Italy, (European Programme EuroModuli).
03/1998 – 10/1998	Working Student at the Stadtparkasse Dortmund - Online Banking Department
01/1997 – 08/1997	Consultant at the Stadtparkasse Dortmund
08/1994 – 01/1997	Trainee Banker at the Stadtparkasse Dortmund

Selected scholarships

2007	European Economic Association Travel Grant, EEA-ESEM, Budapest 2007.
2006/2007	Presentation Grant, VfS AM 2007 by the Swiss Nationalbank and 2006 by the Deutsche Bundesbank.
2006	Handelsblatt Fellow for the Lindau Nobel Laureates' 2nd Meeting in Economic Sciences 2006.

Presentations

A. Research Conferences

2010	Contributed and organised session VfS Annual Meeting 2010, Kiel, September 2010. Contributed session EEA 2010, Glasgow, Aug. 2010.
2007	2nd IAB Workshop "Evaluation of Passive and Active Labour Market Policies for the Long-Term Unemployed and Social Benefit Recipients", Nuremberg, Nov. 2007. RWI Research Seminar, Essen, Nov. 2007. Panel Chair „Reforming Labour Market Policy“ at VfS Annual Meeting, Munich, Oct. 2007. Contributed session at VfS Annual Meeting 2007, Munich, Oct. 2007. Contributed session EEA-ESEM 2007, Budapest, Aug. 2007. 10th. IZA European Summer School in Labor Economics, Buch am Ammersee, Apr. 2007.
2006	1st IAB Workshop "Evaluation of Passive and Active Labour Market Policies for the Long-Term Unemployed and Social Benefit Recipients", Nuremberg, Nov. 2006. Contributed session at VfS Annual Meeting 2006, Bayreuth, Sept. 2006. Contributed session EEA-ESEM 2006, Vienna, Aug. 2006. CEPR Annual Public Policy Symposium, Kiel, Nov. 2006.

B. Economic Policy Presentations, Meetings and Speeches

- 2010 Jacquemin Seminar “Global Solutions for Global Challenges”, with Snower, D.J., at BEPA, European Commission, Brussels, June 2010.
- 2009 World Economic Forum - Global Risk Network, “Strong Signals, Tough Choices”, London, Oct 2009.
Welcome Address at the 2nd Global Economic Symposium (GES), Plön, Sept. 2009.
- 2007 Seminar “Science meets Politics” at the German Federal Ministry of Economics, Mar. 2007
- 2006 Seminar “Science meets Politics” at the German Federal Ministry of Finance, Dec. 2006.

C. Press Conferences

- 2010 Press conference “GES 2010 in Istanbul”, with Turhan, Ibrahim, Deputy Governor, Central Bank of Turkey, Sept. 2010.
- 2009 Interim press conference at the GES 2009, with Snower, D.J. and Minister of the Economy of Schleswig-Holstein Biehl, J., Sept. 2009.
Press conference “Solutions for Global Economic Problems”, with Snower, D.J. and Minister of the Economy of Schleswig-Holstein Biehl, J., Berlin, June 2009.
- 2008 Interim press conference at the GES 2008, with Snower, D.J. and Minister of the Economy of Schleswig-Holstein Marnette, W., Sept. 2009.

Publications

A. Journal articles

- Brown, A.J.G., C. Merkl and D.J. Snower (2009), “Globalization and the Welfare State: A Review of ‘Can Germany Be Saved?’”, *Journal of Economic Literature* 47 (1), pp. 136-158.
- Boss, A., A.J.G. Brown, C. Merkl and D.J. Snower (2009), “Hiring Vouchers – Effectivity and Implementation”, *Journal for Labour Market Research* 42 (3), pp. 255-266.
- Brown, A.J.G., M. Orszag and D.J. Snower (2008), “Unemployment Accounts and Employment Incentives”, *European Journal of Political Economy* 24 (3), pp. 587-604.
- Boss, A., A.J.G. Brown, and D.J. Snower (2008), “Unemployment Accounts for Germany”, *Perspektiven der Wirtschaftspolitik* 9 (2), pp. 139-155.

B. Working Papers

Brown, A.J.G., and D.J. Snower (2009), “The Incentives and Complementarities of Flexicurity”, with Snower, D.J., *Kiel Working Paper 1526*.

Brown, A.J.G., C. Merkl and D.J. Snower (2009), “An Incentive Theory of Matching”, *IZA Discussion Paper 4145*.

Brown, A.J.G., C. Merkl and D.J. Snower (2007), “Comparing the Effectiveness of Employment Subsidies”, *CEPR Discussion Paper 6334*.

Brown, A.J.G. (2004), “A GDP Growth Forecasting Exercise - Competing Real-Time Approaches”, *Kiel Advanced Studies working paper 418*.

Brown, A.J.G. and Ž. Žarnic (2003), “Explaining the Increased German Credit Spread: the Role of Supply Factors”, *Kiel Advanced Studies working paper 412*.

C. Economic Policy Contributions

Brown, A.J.G., and D.J. Snower (2010), “Tax Reforms and Social Accounts: Incentives for Efficient Re-distribution”, in: *Poverty or Prosperity? Tax, Public Spending and Economic Recovery*, Lawlor, Sheila (ed.), Politeia and Imprint Academic: London, pp.104-117.

Brown, A.J.G., and D.J. Snower (2009) “Banking Benefit: Welfare Accounts for the Individual”, *Politeia Policy Series 62*.

Brown, A.J.G., C. Merkl, W. Lechthaler and D.J. Snower (2009) “Firing Costs and the Business Cycle: policy Implications in Light of the Financial Crisis”, in: *The Crisis and Beyond*, Klodt, H. and Lehment, H. (eds.), Kiel Institute for the World Economy: Kiel.

Brown, A.J.G., C. Merkl and D.J. Snower (2007) “Hiring Vouchers More Effective than Low-Wage Subsidies”, *ifo-Schnell-dienst* 60, 4, Reform Concepts for Increasing Employment in the Low-Income Sector, pp. 37-41.

D. Books

Brown, A.J.G., and D.J. Snower (2010), “Global Economic Solutions 2009/10: Proposals from the Global Economic Symposium”, in cooperation with Vaitilingam, R., Kulesz, Micaela, Kiel Institute for the World Economy: Kiel

Brown, A.J.G. (2009) “Incentive Models of the Labour Market”, Kiel University, Dissertation: Kiel.

Brown, A.J.G., and D.J. Snower (2009) “Global Economic Solutions 2008/09: Proposals from the Global Economic Symposium”, in cooperation with Vaitilingam, R., Kiel Institute for the World Economy: Kiel.

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24105 Kiel, Germany
Phone: +49-2431-8814-272
Email: wolfgang.lechthaler@ifw-kiel.de

Born: 25th of November 1973

Nationality: Austria

Current position

Post-doctoral researcher, Kiel Institute for the World Economy, Head of the Research Area “Monetary Policy under Market Imperfections”

Areas of specialization

Labor Economics , Monetary Economics (New-Keynesian Macro), Trade economics, Human Capital, Firm Training

Education

10/2001-9/2005	PhD in Quantitative Economics and Finance, University St. Gallen, Switzerland, with distinction
10/2000-6/2005	Post-graduate Program in Quantitative Economics, Institute for Advance Studies (IHS), Vienna, Austria
10/1994-6/2000	Master in Economics, University Innsbruck, Austria, with distinction

Awards, grants and scholarships

2008	Award for the best paper (Comparative Advantage and Skill Specific Unemployment) at the FIW-conference on International Economics
2007	Scholarship of the Swiss National Science Fund
2005	Travel-grant of the University of Milan to visit the “Brucchi Luchino” Labor Workshop
2005	Travel-grant for the IZA Summer School in Labor Economics
2002/2003	Travel-grant for the European Science Days in Steyr, Austria
2000/2001	Scholarship of the Institute for Advanced Studies, Vienna
2000	Award of the Austrian Chamber of Commerce for the master-thesis: one of the ten best at the Department of Social and Economic Sciences

Professional experience

8/2010 - present	Head of the research area “Monetary Policy under Market Imperfections” at the Kiel Institute
1/2009-7/2010	Deputy-head of the research area “Monetary Policy under Market Imperfections” at the Kiel Institute
9/2008 - present	Researcher at the Kiel Institute
4/2008-5/2008	Temporary researcher at the Kiel Institute
6/2007-7/2007	Temporary researcher at the Kiel Institute
10/2006-8/2008	Free researcher based in Lira, Uganda
10/2005-9/2006	Visiting scholar at the Kiel Institute for the World Economy (IFW), Germany; Host: Prof. Dennis Snower
11/2003-12/2003	Lecturing Macroeconomics at Ramkhamhaeng University, Bangkok, Thailand
4/2002-9/2004	Collaboration at the project: Education, Training and Labor Market Search, financed by the Swiss National Science Foundation
10/2001-9/2005	Research-assistant of Prof. Keuschnigg (IFF) and graduate student (Doktorandenprogramm) in St. Gallen, Switzerland
10/2000-9/2001	Post-graduate program at the Institute for Advanced Studies, Vienna
June 2000	Master in Economics (Mag. rer. soc. oec.) at the University of Innsbruck, with distinction

Publications

A. Journal articles

- Larch, M. and W. Lechthaler (forthcoming), “Firm Training and Public Policy”, *Journal of Institutional and Theoretical Economics*.
- Larch, M. and W. Lechthaler (forthcoming), “Multinational Firms and Heterogeneous Workers”, *Review of International Economics*.
- Larch, M. and W. Lechthaler (forthcoming), “Diversification as Income Maximizing Strategy”, *Journal of Income Distribution*.
- Lechthaler, W., C. Merkl and D. Snower (2010), “Monetary Persistence and the Labor Market: A New perspective”, *Journal of Economic Dynamics and Control* 34(5), pp. 968-983.
- Lechthaler, W., J. Boysen-Hogrefe, D. Groll and Christian Merkl (2010), “The Role of Labor Market Institutions in the Great Recession”, *Applied Economics Quarterly* 56(61), pp. 65-88.
- Lechthaler, W. (2009), “The Interaction of Firing Costs and Firm Training”, *Empirica* 36, pp. 331-350.
- Lechthaler, W. and D. Snower (2009), “Minimum Wages and Training”, *Labour Economics* 15, pp. 1223-1237.

B. Working papers

- Faia, E., C. Merkl and W. Lechthaler (2010), “Fiscal Multipliers and the Labour Market in the Open Economy”, *Kiel Working Papers* 1592
- Larch, M. and W. Lechthaler (2009), “Why "Buy American" is a Bad Idea but Politicians Still Like it”, *Kiel Working Papers* 1570.
- Felbermayr, G., M. Larch and W. Lechthaler (2009) “Unemployment in an Interdependent World”, *Kiel Working Papers* 1540.
- Larch, M. and W. Lechthaler (2009), “Comparative Advantage and Skill-specific Unemployment“, *Kiel Working Papers* 1538.
- Faia, E., C. Merkl and W. Lechthaler (2009), “Labor Turnover Costs, Workers' Heterogeneity and Optimal Monetary Policy,” *Kiel Working Papers* 1534.
- Lechthaler, W. (2008), “Firm-Training and Wage-Rigidity”, *Kiel Working Papers* 1452.
- Lechthaler, W. and D. Snower (2007), “Institutions and Training Inequality”, *Kiel Working Papers* 1372.

4. Cooperation with Other Scholars

We have ongoing joint research projects in areas directly related to the proposed research project with the following scholars:

- Dr. Ronald Bachmann, RWI Essen, Deputy Division Chief "Labor Markets, Education, Population", ronald.bachmann@rwi-essen.de.
- Prof Gabriel Felbermayr, Ph.D., Universität Hohenheim, g.felbermayr@uni-hohenheim.de.
- Prof. Dr. Mario Larch, Universität Bayreuth, mario.larch@uni-bayreuth.de.
- Prof. Dr. Christian Merkl, Universität Erlangen-Nürnberg, Christian.Merkl@wiso.uni-erlangen.de.
- Christian Spielmann, Birkbeck College London, cspielmann@ems.bbk.ac.uk.

More generally, our research project can draw on the competence of other research groups here at the Kiel Institute. In particular, we will work in close cooperation with the research area “The Global Division of Labour”, headed by Prof. Holger Görg, Ph.D.

5. Personal and Material Support from the Budget of the Institution or from Other Sources

The Kiel Institute for the World Economy will match the 24 PM for a full time post-doctoral researcher for two years by equivalent own personal inputs by the research team. The research team will also be supported by the administration and the Research Grants team for handling the funds. The Economic Policy Center will support the dissemination of the results, especially of the policy paper to be drafted at the end of the project. In addition, the GES organizers will organize the virtual discussion as well as the panel discussion planned in order to receive feedback on our preliminary results and feed them back into the policy debate.

6. Itemised Budget

6.1 Personnel Costs

Two-year full-time post-doc research position
(EG 13 according to LBesA considering wage increases of 2 percent
for 2011 (63.799 €) and 2012 (65.075 €) respectively)

128.874 €

24 months research assistance (à 475 €)

11.400 €

6.2 Travel expenses

Project related travel expenses are to be expected for organizing five research stays of our
cooperation partners at the Kiel Institute

5.000 €

6.3 One-time Expenditures for Apparatus, Relevant Literature

None

6.4 Annual Running-costs

None

6.5 Other costs

Thyssen Foundation Session at the Global Economic Symposium 2012, with the Thyssen
Foundation being highlighted as a “Knowledge Partner” of the GES
(Content Management, setting-up costs of the session in the Virtual GES, transportation and
accommodation costs for six high ranking international panellists, session logistics and
printed materials)

30.000 €

6.6. Total Amount Requested from the Fritz Thyssen Stiftung

175.274 €