



**Weatherhead Center**  
FOR INTERNATIONAL AFFAIRS  
HARVARD UNIVERSITY

● No. 09-0015

# How globalization shapes individual risk perceptions and policy preferences

A cross-national analysis of differences between globalization  
winners and losers

by  
Stefanie Walter and Linda Maduz

**Working Paper Series**

1737 CAMBRIDGE STREET • CAMBRIDGE, MA 02138 • TEL 617.495.4420 • FAX 617.495.8292  
publications@wcfia.harvard.edu • <http://www.wcfia.harvard.edu>

# How globalization shapes individual risk perceptions and policy preferences

A cross-national analysis of differences between globalization winners and losers

by

**Stefanie Walter and Linda Maduz**

Paper No. 2009-0015

August 2009

## About the Authors:

---

**Stefanie Walter** is Junior Professor for International and Comparative Political Economy in the Department of Political Science at the University of Heidelberg, Germany. Email: [s.walter@uni-heidelberg.de](mailto:s.walter@uni-heidelberg.de).

**Linda Maduz** is a Ph.D. candidate at the Institute of Political Science, University of Zurich, Switzerland. Email: [maduz@ipz.uzh.ch](mailto:maduz@ipz.uzh.ch).

Published by the Weatherhead Center for International Affairs, Harvard University.  
Copyright by the author. The author bears sole responsibility for this paper. The views expressed here are those of the author and do not necessarily represent the views of the WCFA or Harvard University.

**Beth Simmons**

Director

[bsimmons@wcfia.harvard.edu](mailto:bsimmons@wcfia.harvard.edu)

**Steven B. Bloomfield**

Executive Director

[sbloomfield@wcfia.harvard.edu](mailto:sbloomfield@wcfia.harvard.edu)

**Robert Paarlberg**

Publications Chair

[rpaarlberg@wellesley.edu](mailto:rpaarlberg@wellesley.edu)

**Amanda Pearson**

Director of Publications

[apearson@wcfia.harvard.edu](mailto:apearson@wcfia.harvard.edu)

**Sofía Jarrín-Thomas**

Publications Assistant

[sjarrin-thomas@wcfia.harvard.edu](mailto:sjarrin-thomas@wcfia.harvard.edu)

**Submission procedures:** Weatherhead Center affiliates are encouraged to submit papers to the Working Paper Series. Manuscripts are assessed on the basis of their scholarly qualities—the extent of original research, the rigor of the analysis, the significance of the conclusions—as well as their relevance to contemporary issues in international affairs. Manuscripts should range between 25 and 80 double-spaced pages and must include an abstract of no more than 150 words.

Authors should submit their paper as an e-mail attachment in a standard word processing application (Microsoft Word or Word Perfect) to the Publications Department at [publications@wcfia.harvard.edu](mailto:publications@wcfia.harvard.edu).

**WEATHERHEAD CENTER FOR INTERNATIONAL AFFAIRS  
HARVARD UNIVERSITY  
1737 CAMBRIDGE STREET  
CAMBRIDGE, MA 02138  
TEL: 617-495-4420  
FAX: 617-495-8292  
[www.wcfia.harvard.edu](http://www.wcfia.harvard.edu)**

## **Abstract**

How does globalization affect individuals and their perceptions and policy preferences? This paper uses new developments in international trade theory to propose a new way of conceptualizing and measuring the extent to which an individual can be characterized as globalization winner or loser. We argue that the distributional effect of exposure to international competition is conditional on individuals' ability. Low-ability workers exposed to the international economy face lower wages and higher risk of unemployment, and can therefore be characterized as globalization losers. In contrast, high-ability workers receive higher wages when they are exposed to international competition are therefore identified as globalization winners. To illustrate the usefulness of this approach for political scientists, the paper revisits the debate about the determinants of social policy preferences. Using cross-national survey data from 16 countries we show that globalization has significant and heterogeneous individual-level effects. Exposure to globalization increases risk perceptions and demands for more income redistribution among individuals with low levels of education (as a proxy for ability), but decreases these perceptions and demands among highly educated respondents.

Keywords: globalization, international competition, distributional effects, individual risk perceptions social policy preferences, survey data.

## **Acknowledgements**

We would like to thank Daniel Bochsler, Thilo Bodenstein, Marius Busemeyer, Jeff Frieden, Achim Goerres, Anke Hassel, Mike Hiscox, Lucas Leemann, Damian Raess, David Singer and participants in the 2008 DVPW joint section meeting “Politics and Economics” and “Comparative Welfare State Research,” the 2009 SVPW Annual Congress, the 2009 MPSA Meeting, the Social Science Speaker Series at the University of Rhode Island, the School of Politics and Economics Lunchtalk at Claremont Graduate University, and the Research Workshop in Political Economy at Harvard University for helpful comments. Stefanie Walter gratefully acknowledges financial support from the Fritz-Thyssen-Foundation.

## 1. Introduction

Understanding who benefits from globalization, who is hurt by it, and who remains relatively unaffected is crucial for understanding how globalization shapes distributional conflicts, politics and policy outcomes in today's highly integrated economies. Consequently, how globalization affects individuals and their perceptions and preferences has been a hot topic of research in recent years. Researchers have investigated how the distributional effects of international economic integration shape individual trade policy preferences (Scheve and Slaughter 2001b; O'Rourke and Sinnott 2002; Beaulieu 2002; Hays et al. 2005; Mayda and Rodrik 2005; Hiscox 2006; Mayda 2008; Hainmueller and Hiscox 2006), preferences on immigration (Scheve and Slaughter 2001a; Mayda 2006, 2008; Hainmueller and Hiscox 2008), as well as risk perceptions and social policy preferences (Scheve and Slaughter 2004; Rehm 2007, 2009; Walter forthcoming). Overall, these studies typically find that in developed countries, high-skilled individuals are more pro-trade and pro-immigration than low-skilled individuals, and that individuals employed in exporting or tradables industries tend to have different policy preferences than those working in the non-tradable sector. Nevertheless, some authors doubt that these differences mainly reflect the distributional effects of free trade (Hiscox 2006; Hainmueller and Hiscox 2006), and other studies find no evidence that globalization-related economic interests affects policy preferences at all (Rehm 2007, 2009; Hainmueller and Hiscox 2008).

One possible reason for these inconclusive results is that most of these studies neglect recent developments in international trade theory. To identify the distributional effects of free trade and globalization, individual-level studies typically rely on the two classic macroeconomic models of international trade theory: the factor-endowments model, which predicts a class-based

distributional conflict (Jones 1971; Samuelson 1971), and the factor-specific model, which predicts distributional conflicts among different industries (Stolper and Samuelson 1941). While political scientists have recognized that the largely separate treatment of these models in the political economy literature does not do the intricacies of trade-related distributional conflict justice (e.g. Hiscox 2002), the solutions proposed have not left the general framework of these “old” theories of trade and have typically disregarded the empirical and theoretical advances in the economics literature on international trade.

The new economic models of international trade are very relevant for political science research on the distributional and political effects of international trade and globalization, however. The newest generation of trade models (e.g. Melitz 2003; Helpman et al. 2004; Yeaple 2005; Bernard et al. 2007; Helpman et al. 2008) is motivated by empirical findings that show significant intra-industry variation in firms’ export-orientation, productivity, and wage premia. By allowing for heterogeneity among firms and/or workers, they explain why only some firms in an industry export and how trade can increase inequality and unemployment among workers even within the same industry (while still providing overall gains from trade). Exposure to global competition is thus harmful to some people, but not to others, even within the same industry. Some of these models also highlight the fact that individuals with similar skills exhibit different degrees of exposure to the globalization of production. Rather than factor-endowments or industry of employment, these models suggest that the specific combination matters for whether an individual is benefitted or hurt by international economic integration.

We apply the insights from this emerging economics literature to identify the distributional effects of trade (and globalization more generally) on individuals. One of the main results of both theoretical models and empirical work is that more productive firms are more

likely to export and that within the same industry, exporting firms hire more productive or more skilled workers, who receive higher wages than workers in the same industry who work in firms producing only for the domestic market, and higher wages than workers in the nontradables sector. Moreover, the least productive firms and workers are forced to exit the (tradables) industry. This suggests that the distributional effects of trade depend on both the individual's productivity (or skill) and his or her exposure to international competition.

To apply these insights to political science research, we suggest a new way of conceptualizing and measuring the extent to which an individual can be characterized as globalization “winner “ or “loser,” that takes these two factors into account. Our conceptualization classifies individuals of low ability who are exposed to international competition as *globalization losers*, because these individuals are most likely to lose their jobs as a result of economic integration. In contrast, highly-ability individuals exposed to international competition are likely to work in productive and internationally competitive firms and can therefore be classified as “*globalization winners*.” To operationalize this conditional effect in the context of survey data, we propose to interact individuals' education experience with their exposure to global competition, either in the form of their industry's trade-exposure, or in the form of the individual's job's potential to be moved abroad.

We illustrate the usefulness of our approach by analyzing the microlevel implications of the so-called compensation hypothesis, which argues that globalization leads to welfare state expansion, because (potential) globalization losers demand compensation for the risks associated with an open economy. Even though this hypothesis has inspired a large research program, no consensus has emerged on whether the implications of this argument hold empirically. We argue that the reasons for the inconclusive results at the individual level derive from the relatively



crude conceptualization and measurement of the individual-level effects of globalization. Using our new conditional measure of the individual impact of globalization and survey data from 16 European countries, we show that exposure to international competition has significant and heterogeneous individual-level effects. We can show that exposure to globalization increases risk perceptions and demands for more income redistribution among individuals with low levels of education, but decreases these perceptions and demands among highly educated respondents. These findings allow us to rebut recent claims that deindustrialization rather than globalization is the main driver of social policy preferences.

## **2. Identifying Globalization Winners and Globalization Losers: Insights from New Trade Theory**

Research in international political economy typically relies on two distinct trade models to identify the distributional effects of globalization. These models make different assumptions about factor mobility and either emphasize relative factor endowments (the Heckscher-Ohlin and Stolper-Samuelson models), or the comparative advantage of certain industries (the sectoral Ricardo-Viner model). Ricardo-Viner models predict that an opening of the economy to international trade and investment benefits those industries in which the country has a comparative advantage, while those at a comparative disadvantage will falter. Since factors of production cannot move easily and costlessly between industries or economic sectors, individuals employed in comparatively disadvantaged industries are the losers of globalization because they are most likely to lose their jobs as a result of increased economic competition, while individuals employed in comparatively advantaged industries gain from the economic opening (e.g. Gourevitch 1986). A variant of this approach classifies globalization winners and

losers according to their exposure to international competition, emphasizing the differences between the tradables and the nontradables sector (e.g. Frieden and Rogowski 1996; Hays et al. 2005). In contrast, the factoral models in the Stolper-Samuelson tradition argue that a country's comparative advantage lies in those goods and services predominantly produced with the factors of production with which the country is abundantly endowed. Therefore an opening of the economy increases the demand for these products and as a consequence the demand for and the price of the abundantly available factor of production. Assuming that factors of production are mobile, they can move from ailing to prospering industries, such that owners of abundant factors of production benefit from globalization, while those owning scarce factors of production are hurt economically (Rogowski 1989). An important extension of this model focuses on human-capital endowments (Findlay and Kierzkowski 1983) and predicts that the impact of globalization will affect low- and highly skilled workers differently. In advanced economies, this implies that high-skilled individuals (the abundant factors of production) are beneficiaries of globalization, while low-skilled workers lose out.<sup>4</sup>

Both IPE-approaches provide important clues as to the identity of globalization winners and losers at the individual level. Nonetheless, both approaches neglect important empirical regularities. The sectoral model assumes that all firms and workers in a certain industry experience the same positive or negative effects from international trade, but empirical firm-level research has revealed substantial intra-industry variation in firms' export-orientation, productivity and wage levels (for overviews see Wagner 2007; Schank et al. 2007). More productive firms are more likely to export and within the same industry, firms that export tend to pay their workers higher wages than firms producing only for the domestic market (e.g. Bernard

---

<sup>4</sup> In contrast, less developed countries have an abundance of unskilled workers, so that these individuals are more likely to benefit from international trade than highly-skilled individuals.

and Jensen 1995).<sup>5</sup> To the extent that the factoral models predict a uniform positive effect on wages for highly skilled and a negative effect on wages for low-skilled individuals, these models can incorporate such intra-industry variation to some extent. There is also evidence that the wage premium for workers in exporting firms is positively related to firms' skill-intensity, suggesting that the skill composition of the work-force influences whether globalization is positive or negative for the firms' workers (Schott 2004; Munch and Skaksen 2008). However, factoral models cannot explain why the export-wage premium exists even among equally skilled individuals (Schank et al. 2007).<sup>6</sup>

Motivated by these empirical challenges, economists have moved beyond the two traditional approaches. A new generation of theoretical trade models provides explanations for the heterogenous distributional effects of trade. These models concentrate on intra-industry variation in the effects of trade and argue that efficient and productive firms benefit most from free trade. Many of these models use the framework developed by Marc Melitz (2003) as a starting point. Melitz assumes that to enter an export market, firms, who vary in their productivity level, have to invest a fixed cost. An opening of the economy to international trade raises the productivity threshold under which firms can still make a profit. In the closed economy the least productive firms were able to make a profit, but when exposed to international competition, they cannot survive and therefore exit the industry. At the same time, the most productive firms thrive: Not only can they take up part of the domestic market share vacated by

---

<sup>5</sup> The result that more productive firms self-select into export activities holds for both developed and developing countries (Wagner 2007).

<sup>6</sup> See also Helpman (2008) for a critique of the Stolper-Samuelson model. An additional challenge for the individual-level test of factoral models arises from the fact that it is not clear whether the strong effects of education and skills on individuals' preferences really mirror their economic interest, or rather reflect how ideas and information shape individuals' attitudes (for a discussion in the context of trade policy preferences see Hainmueller and Hiscox 2006). And even if education only mirrors individuals' economic interest, in many contexts it remains unclear whether these interests are shaped by the distributional effects of globalization or by those of other developments such as technological change. See

the firms exiting the industry, they also export their products and thus increase their overall revenue. Firms with an intermediate productivity remain in the industry. They do not export but continue to produce for the domestic market, even though their market share and profits decrease in the open economy.<sup>8</sup> The Melitz-model thus highlights three important points: First, except under rare circumstances, only some firms in a tradables industry will actually export. Second, rather than uniformly benefit or hurt firms in the same industry, trade liberalization brings significant benefits to some firms (the exporters) and substantially hurts other firms (those serving only the domestic market) within the same industry. Third, the distribution of these gains and costs from trade is related to firm productivity. The most efficient firms prosper, the least efficient firms shut down, and the remaining firms face smaller market share and lower profits. For political scientists, the Melitz-model thus implies significant intra-industry variation at the firm-level in support of and opposition to free trade.

Many macro-level theories in political science rest on assumptions about the impact of trade on individuals' policy preferences, rather than firms' preferences. Therefore we need models that go beyond the firm and can make predictions about the individual-level effects of international trade. Helpman, Itskhoki, and Redding (2008) extend Melitz's framework to investigate how trade liberalization affects individual workers.<sup>9</sup> As in the Melitz-model, firms differ in their level of productivity. However, workers in this extended model now differ in their "ability" (or "quality") as well, it is costly for employers to match and screen potential employees so as to only employ the best candidates, and workers and employers engage in wage bargaining. Firms' output depends on both their productivity and the average quality of their workforce. This implies that firms have an incentive to screen job applicants and to hire only

---

<sup>8</sup> These results are qualitatively the same for further trade liberalization of an already open economy.

<sup>9</sup> We present a simplified discussion of the very rich theoretical model. See also Yeaple (2005) and Egger and Kreickemeier (2009) for alternative new trade theory models on the distributional effects of trade.

high-quality candidates, even though this process is costly and also reduces the number of workers that can be hired. Under these restrictions, each firm chooses its own ability-threshold for hiring new potential employees. Helpman et al. show that in equilibrium, more productive firms have larger revenues, screen more people against a higher ability-threshold, and therefore also employ workers with a higher average ability. Since high-quality-workers are more difficult to replace, workers in these firms have an advantage in the wage bargaining process. As a result, more productive firms pay their workers higher wages. When the economy opens up to international trade, firms follow the same pattern as those in the Melitz-model: the least productive firms leave the industry and the most productive firms now sell their products both abroad and at home. The most productive firms therefore have higher revenues, which in turn leads to higher screening efforts. Exporters therefore hire more qualified workers, who bargain for higher wages (and hence receive a share of the additional revenues generated by trade in form of a wage premium). Workers in less productive firms in the same industry fare less well: their employers face stronger competition, a lower market share and lower revenues. These workers therefore are confronted with both lower wages and a higher risk of unemployment.<sup>10</sup> The risk of unemployment is particularly high when they are “low quality”-workers who do not fulfill the hiring requirements of the productive firms.

## 2.1 Empirical Implications: Identifying “globalization winners” and “globalization losers”

Helpman et al.’s derive several implications from their rich theoretical model. Since we are most interested in the distributional effects of trade at the individual level, we highlight the key insight most relevant in this respect. The authors show that despite overall gains from trade, the distribution of wages in an exporting industry is more unequal and the risk of unemployment

---

<sup>10</sup> Unemployment arises as a result of labor market frictions (in particular search and screening frictions).

is higher in an open economy than in autarky. This is because workers in highly productive firms benefit from an export wage premium, while those working in less productive firms either receive lower wages or lose their jobs as a result of the opening to trade.<sup>11</sup> Consequently, we can identify workers employed in highly productive and exporting firms as *globalization winners*, whereas workers in the same industry employed with less productive firms can be characterized as *globalization losers*. This identification seems intuitive, especially in the context of advanced economies:<sup>12</sup> Consider, as an example, the textile industry. Workers in low-productivity textile firms (such as seamstresses) are likely to be hurt from international trade competition, while creative and productive fashion designers benefit from access to global markets.

Even though most countries (and all developed countries) today are relatively open to trade, important within-country variation exists in the trade openness of various industries. In particular, many individuals work in industries and professions that produce nontradable goods and services, such as education, cleaning services, health services etc. While the Helpman et al. model does not explicitly address the differences between workers in tradable industries open to trade and nontradable industries, we can conceptualize the nontradable industries as an industry in which the costs of exporting are too high, so that all firms choose to serve the domestic market only. Helpman et al. show that in this case, the inequality of wages between more and less productive firms is smaller than in industries in which some firms export. Workers in more productive firms in the sheltered industry still get higher wages than those in less productive

---

<sup>11</sup> Helpman et al also show that the relationship between sectoral wage inequality, unemployment and further trade openness is nonmonotonic once the economy is open to trade and depends to an important degree on the proportion of firms in an industry involved in exporting.

<sup>12</sup> Note, however, that the Helpman et al. Model can be applied to developing countries as well and provides a potential explanation why

firms in the same industry, but their wage is lower than that of workers in highly productive exporting firms.<sup>13</sup>

In this type of model, the impact of trade on the individual is thus determined by two factors: First, whether the individual is employed in a tradable or nontradable industry (i.e. the individual's exposure to international competition) and second, whether the individual is employed in a more productive or less productive firm. Since firms screen workers for their ability, individuals working in more productive firms are on average themselves more productive, while those working in less productive firms tend to have a lower ability. Taken together, this discussion implies that on average, low-ability individuals who work in a tradable industry (such as assembly-line workers) are most at risk of losing their job and receiving low wages. We can therefore classify such individuals as "*globalization losers*." Individuals with an equally low ability working in sheltered industries (e.g. cleaning personnel) are better off than their counterparts in the exposed industry, but receive lower wages than high-ability workers in the sheltered industry (such as doctors or teachers). Finally, highly productive and able workers in the tradable industry (such as engineers) receive the highest wages and can therefore be characterized as "*globalization winners*."<sup>14</sup>

## 2.2 Measuring the Individual-Level Impact of Globalization: Operationalization

Empirically, this discussion implies that whether a person can be characterized as a "globalization losers" or a "globalization winner" is conditional on two factors: how exposed the individual is to international competition, and his or her ability or productivity. Studies that only

---

<sup>13</sup> This is consistent with empirical evidence that a export wage premium exists even after controlling for individual characteristics such as the level of education (Schank et al. 2007).

<sup>14</sup> These conjectures are in line with empirical studies on trade exposure, productivity and wage levels (e.g. Bernard and Jensen 1995; Munch and Skaksen 2008)

focus on one of these dimensions, rather than taking their conditional nature into account, are therefore likely to overlook important variation in the effects of globalization on the individual.

In what follows we suggest a way to operationalize these concepts in the context of cross-country survey data such as the European Social Survey (ESS) or the International Social Survey Programme (ISSP). The goal is to enable researchers to investigate how the distributional effects of globalization predicted by the new theories of trade affect individuals' risk perceptions, policy preferences and political attitudes.

### *Individual Ability, Productivity, and Education*

The Helpman et al. (2008) model argues that more productive firms, particularly those who export, invest more effort in screening workers and in hiring the more “able” individuals. Wages and the risk of unemployment are thus directly related to an individual's ability or productivity. Unfortunately, much of this ability is unobservable: The individual's productivity, the fit between the firm and the worker and other qualifications are difficult to measure with survey data. Nonetheless, it is plausible to argue that education is correlated with productivity, ability, and skills. For example, the more educated an individual, the more likely he or she will employ technology in a productive manner. Since survey data typically lacks more detailed information on individuals' ability and productivity, we therefore suggest using the number of years of education an individual has had as an approximation of his or her ability.<sup>15</sup>

### *Individual Exposure to International Competition*

---

<sup>15</sup> Questions F6 in the 2002 and 2004 ESS questionnaires. As a robustness check, we use education levels (F7) instead.





change their industry of employment, individual labor market risks are strongly related to the occupation. Even though the new trade models speak specifically of industries, it appears plausible that some occupations are more prone to international competition than others. For example, a worker in an unproductive manufacturing factory will have a much harder time changing the industry, than the cleaning personnel employed in the same firm. Similarly, doctors, IT professionals, and bank managers vary in their ability to eschew international competition.

These occupations differ with regard to one crucial characteristic: the degree to which jobs in a given occupation can be substituted by jobs abroad, i.e. their offshoreability. Individuals with jobs that can easily be offshored – such as seamstresses or telephone operators – are much more exposed to international competition than individuals whose jobs cannot be substituted with jobs abroad – examples are nurses, hairdressers, or teachers. Non-offshoreable professions are typically occupations, in which personal services are provided, or which require physical presence and/or face-to-face contact. In contrast, other (more impersonal) services are more ‘tradable’ – and thus potentially much more vulnerable to offshoring (Blinder 2007). To capture the ease, with which jobs can be moved to other countries, we suggest using the “Offshorability-Index” developed by Blinder (2007). This index measures a job’s *potential* to be moved abroad, i.e. whether the service the job provides can theoretically be delivered over long distances with little or no degradation in quality. It is based on more than 800 occupational categories as defined by the US Labor Department’s Standard Occupational Classification (SOC), which we adapted for the corresponding ISCO-codes (International Standard Classification of Occupations) available in a large number of cross-national survey datasets.<sup>17</sup> While this

---

<sup>17</sup> The ISCO-codes are provided in the ESS dataset. Occupations were classified based on questions F21-F23 in the 2002 ESS questionnaire and questions F22-24 in the 2004 questionnaire respectively about the title, nature, and



individual productivity. In line with the discussion above, this suggests that individuals who have only had a few years of education and work in a tradable industry or have a highly offshoreable jobs are classified as “globalization losers.” These individuals are most at risk of globalization-induced job and income loss. At the same time, well-educated individuals in exposed industries or occupations are the winners of globalization, because they receive higher wages. The proposed operationalization also classifies individuals in sheltered industries and occupations. These more intermediate cases are ranked on the continuum between clear globalization winners and losers according to their exposure to international competition and their skill-level.

Of course, such a more nuanced identification of globalization losers and winners is not an end in itself, but is only helpful if it allows us to better answer important questions in political science. The next section therefore presents an example of how using the insights from new trade theory can help disentangle the causal mechanisms implied by macro-level globalization-theories at the micro-level.

### **3. Application: Globalization, Deindustrialization, and Welfare State Preferences**

We illustrate the usefulness of using the insights from the new generation of trade models by analyzing the demand-side implications of the so-called *compensation hypothesis* (e.g. Cameron 1978; Ruggie 1982; Katzenstein 1985; Rodrik 1998). This hypothesis suggests that economic openness leads to higher public spending, because governments seek to ensure their citizens against the risks associated with increased globalization by expanding the welfare state. The underlying argument rests on two components: a demand and a supply side component. On the demand side, it postulates that globalization increases voters’ demand for better social protection, because increased integration in the global economy leads to more insecurity among



authors report survey evidence that supports the argument that globalization increases insecurity and the demand for social protection among individuals. For example, Scheve and Slaughter (2004) find that individuals in more exposed sectors in Britain are more likely to experience feelings of economic insecurity. Walter (forthcoming) finds that globalization winners and losers in Switzerland exhibit significantly different policy and partisan preferences, and Hays et al. (2005) show that individuals in more generous welfare states view free trade more favorably.

Other scholars, however, increasingly challenge the assumption that globalization exposes individuals to higher risks and therefore increases their demands for compensation. Some studies investigate the openness-volatility nexus and find no evidence that more open economies face more economic volatility (Iversen and Cusack 2000; Iversen 2001; Kim 2007; Down 2007). This skepticism towards the compensation hypothesis has been bolstered by survey evidence presented by Rehm (2007, 2009), which finds no evidence of systematic and statistically significant differences between individuals working in non-tradable industries, in tradable industries with a comparative advantage, and individuals employed in tradable industries with a comparative disadvantage. Iversen and Cusack (2000) provide a potential explanation for these findings.<sup>23</sup> They argue that deindustrialization, rather than globalization, is the relevant determinant of labor market risks and social policy preferences. The challenge in evaluating this claim at the individual level has been to empirically distinguish between individuals' exposure to globalization-induced and deindustrialization-induced structural change.

Our approach of conceptualizing the individual-level impact of globalization as a combination of skills and occupational exposure to international competition allows us to discriminate between these two explanations. Since deindustrialization typically leads to structural change towards service-oriented and skill-intensive industries, low-skilled workers are

---

<sup>23</sup> See also Iversen (2001).



*you wanted to?*<sup>26</sup> We recoded the 11-point scale such that higher values denote more insecurity (the scale ranges from 0 “*extremely easy*” to 10 “*extremely difficult*”).<sup>27</sup> Respondents’ preferences on income redistribution are operationalized as respondents’ opinion on the statement “*The government should take measures to reduce differences in income levels.*” Answers on the recoded five-point-scale range from 1 “*disagree strongly*” to 5 “*agree strongly*”.<sup>28</sup> Since this question explicitly mentions the role of the government, we interpret low values as a preference for welfare state expansion, while high values reveal a preference for welfare state retrenchment.<sup>29</sup>

As discussed above, we operationalize the individual-level distributional impact of globalization with an interaction term between the number of years respondents invested in their education and their exposure to global competition, measured as the respondent’s type of industry and his or her job offshoreability respectively. The compensation hypothesis and the deindustrialization hypothesis make different predictions about this interaction term. The expectations generated by the compensation hypothesis are that that globalization losers systematically experience more labor market risk and demand more income redistribution than globalization winners. This suggests that the interaction term should be negative and statistically significant, implying that the differences between uneducated and well-educated individuals becomes increasingly pronounced the more these individuals are exposed to international competition. Furthermore, the conditional effect of globalization exposure is expected to vary

---

<sup>26</sup> Question E35\* in the 2002 ESS questionnaire and question G79 in the 2004 questionnaire. This is obviously not a perfect measure of individual employment risk, but the best approximation available in the context of this survey.

<sup>27</sup> The results are robust to recoding this variable into dummy variables that codes as „insecure“ all responses with values equal or greater than 5, 6, 7, 8, 9, and 10, respectively.

<sup>28</sup> Question B44 in the ESS questionnaire of 2002; question B30 in the 2004 questionnaire

<sup>29</sup> Reducing income inequality through redistributive policies is a central issue in welfare state policies, so that responses to this question have been used to operationalize respondents’ social policy preferences, even though this question does not directly measure respondents’ opinion about welfare state expansion per se (e.g. Svallfors 1997; Cusack et al. 2006; Rehm 2007).





trade union or a similar organization (F28 in ESS 2002; F30 in ESS 2004). Individuals are coded as unemployed when they are currently unemployed and actively looking for a job (F8a in ESS 2002 and 2004).<sup>35</sup> Tables A1 and A2 in the appendix provide the descriptive statistics.

We use ordered logit analyses to test the empirical implications of the compensation and the deindustrialization arguments. Since respondents from the same country share a common context, observations within the same country are not independent. To account for this context-dependence, we include country dummies and additionally cluster the standard errors on the country level to address the related problem of within-country correlation of errors. We also include a dummy variable that controls for the fact that we combine data from two survey waves. The data are weighted by the product of the design and the population size weights.<sup>36</sup>

### 3.2 Results

The results of ordered logit analyses estimating how exposure to international competition and skills affect individuals' perception of job insecurity and their preferences for redistribution are presented in Tables 1 and 2 respectively.

#### *Job insecurity.*

Models 1 to 4 estimate the probability that a respondent experiences job insecurity, measured as the perceived difficulty of finding an adequate alternative job. For all specifications, the results for the control variables are in line with the results of several other individual-level studies on the determinants of economic insecurity (Mughan and Lacy 2002; Scheve and

---

<sup>35</sup> The results reported are robust to using a wider definition of unemployment (irrespective of whether the respondent is actively looking for a job or not) and to including a number of additional control variables that control for respondents' labor market status (such as whether they are retired, disabled, or studying), and his or her religiosity.

<sup>36</sup> Variables „dweight“ and „pweight,“ respectively.



Model 1 and 3 represent the conventional approach of including a measure of exposure to international competition and a measure of the respondent's skills as separate explanatory variables. These models serve as baseline models that neglect the conditional effects discussed above. The results suggest that education decreases and exposure to international competition modestly raises respondents' perceptions of job insecurity, thus providing some support for both the deindustrialization and the compensation hypothesis. As we have argued above, however, this model specification neglects important differences in the effects of exposure to globalization conditional on individual ability.

Model 2 and 4 therefore include the interaction term between an individual's years of education and his or her exposure to globalization.<sup>38</sup> As expected, both interaction terms are negative and statistically significant at the 5% level (for the tradeables-dummy) and 1% level (for job offshoreability).<sup>39</sup> This result confirms the intuition of the new trade models that international exposure has heterogeneous effects. Whether the impact of exposure to international competition decreases or increases job insecurity is conditional on an individual's education: while uneducated individuals feel significantly more insecure than uneducated individuals in sheltered sectors, this effect is reversed for well-educated individuals. Among well-educated respondents, individuals with more exposure to the international economy feel more secure than their similarly educated counterparts in sheltered sectors.<sup>40</sup> The finding that the highly-educated feel least at risk when they work in highly internationalized industries and occupations corroborates the argument that these individuals can be characterized as globalization winners.

---

<sup>38</sup> Our results are robust to using education levels instead of years of education and to using more continuous measures of trade exposure and offshoreability.

<sup>39</sup> For a discussion of how to interpret interaction terms see Braumoeller (2004) and Brambor et al. (2006).

<sup>40</sup> Working in the nontradables sector decreases job insecurity for all individuals with at least 14 years of education, higher levels of offshoreability decrease insecurity for all individuals with at least 18 years of education.



insecurity than globalization winners: The difference is 16.3% between educated and uneducated respondents in the tradables sector and 22.4% between educated and uneducated respondents in highly offshorable occupations. Approximately every second globalization loser perceives high labor market risk. These individuals also experience much more job insecurity than individuals with equally low levels of education, who work in sheltered industries or occupations. In contrast, only about every third high-skilled individuals experiences similar levels of insecurity, and exposure to international competition has no strong effect.

This result has important implications for the deindustrialization vs. globalization debate. If deindustrialization were the only driver of individuals' risk perceptions, we would expect a large difference between high- and low-skilled individuals, but this difference and the level of insecurity should not be affected by the individual's exposure to the international economy.<sup>42</sup> While figure 1 supports the notion that low-skilled individuals face more labor market risks than high-skilled individuals, it clearly rejects the notion that globalization has no effect on job insecurity. In line with the theoretical predication from new trade models, the within-group differences are systematically related to individuals' exposure to the international economy. Both deindustrialization and globalization seem to affect individuals' risk perceptions. Because low-skilled individuals in highly exposed occupations are faced with two adverse risks – the risk of losing their job to technological change and the risk of losing it to international competition – these individuals feel most insecure.

---

<sup>42</sup> Essentially we would expect two parallel and horizontal lines, with higher level of insecurity for low-skilled individuals.



**Table 2: Ordered Logit Analyses for Preferences for Redistribution**

	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>	<b>Model 8</b>
Years of Education	-0.029*** (0.008)	-0.024*** (0.007)	-0.029*** (0.007)	-0.025*** (0.007)
Tradeable Industry (Dummy)	-0.097*** (0.026)	0.147 (0.115)		
Tradeable Industry *Education		-0.020*** (0.007)		
Job Offshoreability			-0.042*** (0.008)	0.034** (0.017)
Offshoreability* Education				-0.006*** (0.001)
Skill Specificity	0.182*** (0.050)	0.175*** (0.049)	0.173*** (0.038)	0.170*** (0.038)
Income	-0.121*** (0.008)	-0.121*** (0.008)	-0.118*** (0.008)	-0.118*** (0.008)
Female	0.326*** (0.029)	0.321*** (0.029)	0.315*** (0.029)	0.312*** (0.029)
Age in Years	0.001 (0.001)	0.001 (0.001)	0.000 (0.002)	0.000 (0.002)
Labor Union Member (Dummy)	0.232*** (0.029)	0.230*** (0.029)	0.240*** (0.025)	0.238*** (0.025)
Unemployed (Dummy)	0.499*** (0.120)	0.500*** (0.120)	0.489*** (0.099)	0.488*** (0.099)
ESS Wave 2004 (Dummy)	0.079*** (0.030)	0.078*** (0.030)	0.097*** (0.030)	0.097*** (0.030)
Country Dummies	yes	yes	yes	yes
N	36395	36395	41847	41847
Countries	16	16	16	16
Log pseudolikelihood	-46981.21	-46974.458	-54027.32	-54023.61
BIC	-6253.22	-6256.23	-6919.32	-6916.09
Pseudo R2 (McFadden's)	0.0636	0.0637	0.0612	0.0613

Values in parentheses are robust standard errors, clustered on country.  
Cutoff points and estimates for country dummies are not reported. \*  $p \leq .1$ ; \*\*  $p \leq .05$ ; \*\*\*  $p \leq .01$

Figure 2 plots the predicted probabilities that a respondent prefers more income redistribution for respondents with little education (black line) and well-educated (grey line) respondents. In contrast to the findings on risk perceptions, the effect of globalization exposure now is stronger for well-educated individuals and significantly reduces their preference for government-led income redistribution. Globalization winners are least likely to prefer such





#### 4. Conclusions

To what extent does a person's exposure to the global economy shape her perceptions, policy preferences, and political actions? We have argued in this paper that in order to adequately answer this question, we can make use of new developments in international trade theory. These models suggest very heterogeneous effects of trade (and globalization more generally) that depend on both individuals' exposure to the international economy and his or her "ability" as a worker. To make these insights useful for political scientists, we have suggest a new way of conceptualizing and measuring the extent to which an individual can be characterized as globalization winner or loser. This conceptualization of a conditional effect of globalization acknowledges that uneducated individuals exposed to global competition face much higher labor market risks than uneducated individuals in sheltered occupations and well-educated individuals able to successfully compete in global markets.

Our approach improves on existing measures in a number of ways. First, it takes into account that the effects of globalization are much more heterogeneous than previous research has assumed. Second, it incorporates the finding of recent studies that individuals' economic interests are more likely to be driven by occupational risks rather than risks associated with the sector of employment (Iversen and Soskice 2001; Rehm 2009). Finally, we suggest a viable way of implementing this approach in the context of cross-country survey research. While we demonstrated the applicability and usefulness of this approach in the context of debates surrounding the determinants of social policy preferences, it is by no means limited to this research area. Quite the contrary, our approach could fruitfully be applied to any research question concerned with the individual-level effects of globalization. It can also be used to study the effect of globalization on electoral politics and partisan preferences.



## APPENDIX

**Table A1: Summary Statistics**

Variable	Observations	Mean	Std. Deviation	Min	Max
Job Insecurity	21099	5.00	2.93	0	10
Preference for Redistribution	41847	4.00	1.07	1	5
Tradables-Sector (Dummy)	36395	0.28	0.45	0	1
Job Offshoreability	41847	0.76	1.05	0	3
Years of Education	41847	12.12	4.08	0	40
Education Level	39138	3.05	1.50	0	6
Skill Specificity	41847	1.08	0.62	.45	4.05
Income	41847	6.91	2.31	1	12
Female (Dummy)	41847	0.50	0.50	0	1
Age in Years	41847	46.77	16.71	16	96
Labor Union Member (Dummy)	41847	0.31	0.46	0	1
Unemployed (Dummy)	41847	0.03	0.18	0	1
ESS Wave 2004 (Dummy)	41847	0.52	0.50	0	1



- Burgoon, Brian. 2001. "Globalization and Welfare Compensation: Disentangling the Ties That Bind." *International Organization* 55 (3):509-51.
- Busemeyer, Marius. 2009. "From Myth to Reality: Globalization and Public Spending in OECD Countries revisited." *European Journal of Political Research* 48 (4):455-82.
- Cameron, David. 1978. "The Expansion of the Public Economy." *American Political Science Review* 72 (4):1243-61.
- Cerny, Philip G. 1995. "Globalization and the Logic of Collective Action." *International Organization* 49 (4):595-625.
- Cusack, Thomas, Torben Iversen, and Philipp Rehm. 2006. "Risks at Work: The Demand and Supply Sides of Government Redistribution." *Oxford Review of Economic Policy* 22 (3):365-89.
- Down, Ian. 2007. "Trade Openness, Country Size and Economic Volatility: The Compensation Hypothesis Revisited." *Business and Politics* 9 (2).
- Egger, Hartmut, and Udo Kreickemeier. 2009. "Firm Heterogeneity and the Labor Market Effect of Trade Liberalization." *International Economic Review* 50 (1):187-216.
- Findlay, Ronald, and Henryk Kierzkowski. 1983. "International Trade and Human Capital: A Simple General Equilibrium Model." *The Journal of Political Economy* 91 (6):957-78.
- Frieden, Jeffrey A., and Ronald Rogowski. 1996. "The Impact of the International Economy on National Policies: An Analytical Overview." In *Internationalization and Domestic Politics*, ed. R. Keohane and H. Milner. Cambridge: Cambridge University Press.
- Garrett, Geoffrey. 1998. *Partisan Politics in the Global Economy*. New York: Cambridge University Press.



- . 2006. "Through a Glass and Darkly: Attitudes Toward International Trade and the Curious Effects of Issue Framing." *International Organization* 60 (3):755-80.
- Iversen, Torben. 2001. "The Dynamics of Welfare State Expansion: Trade Openness, Deindustrialization, and Partisan Politics." In *The New Politics of the Welfare State*, ed. P. Pierson. Oxford: Oxford University Press.
- Iversen, Torben, and Thomas Cusack. 2000. "The Causes of Welfare State Expansion. Deindustrialization or Globalization?" *World Politics* 52:313-49.
- Iversen, Torben, and David Soskice. 2001. "An Asset Theory of Social Policy Preferences." *American Political Science Review* 95 (4):875-93.
- Jones, Ronald. 1971. "A Three-Factor Model in Theory, Trade and History." In *Trade, Balance of Payments, and Growth*, ed. J. Bhagwati, R. Jones, R. Mundell and J. Vanek. Amsterdam: North-Holland.
- Katzenstein, Peter. 1985. *Small States in World Markets: Industrial Policy in Europe*. Ithaca NY: Cornell University Press.
- Kim, So Young. 2007. "Openness, External Risk, and Volatility: Implications for the Compensation Hypothesis." *International Organization* 61:181-216.
- Mares, Isabela. 2004. "Economic Insecurity and Social Policy Expansion: Evidence from Interwar Europe." *International Organization* 58:745-74.
- . 2005. "Social Protection Around the World: External Insecurity, State Capacity, and Somestic Political Cleavages." *Comparative Political Studies* 38 (6):623-51.
- Mayda, Anna Maria. 2006. "Who is Against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants." *The Review of Economics and Statistics* 88 (3):510-30.





- Rogowski, Ronald. 1989. *Commerce and Coalitions: How Trade Affects Domestic Political Alignments*. Princeton: Princeton University Press.
- Ruggie, John. 1982. "International Regimes, Transactions and Change: Embedded Liberalism in the Postwar Economic Order." *International Organization* 36 (2):379-415.
- Samuelson, Paul A. 1971. "Ohlin was Right." *Swedish Journal of Economics* 73 (4):365-84.
- Schank, Thorsten, Claus Schnabel, and Joachim Wagner. 2007. "Do exporters really pay higher wages? First evidence from German linked employer-employee data." *Journal of International Economics* 72 (1):52-74.
- Scheve, Kenneth, and Matthew Slaughter. 2001a. "Labor Market Competition and Individual Preferences over Immigration Policy." *The Review of Economics and Statistics* 83 (1):133-45.
- . 2001b. "What determines individual trade-policy preferences?" *Journal of International Economics* 54:267-92.
- . 2004. "Economic Insecurity and the Globalization of Production." *American Journal of Political Science* 48 (4):662-74.
- Scheve, Kenneth, and David Stasavage. 2006. "Religion and Preferences for Social Insurance." *Quarterly Journal of Political Science* 1:255-86.
- Schott. 2004. "Across-Product versus Within-Product Specialization in International Trade." *Quarterly Journal of Economics* 119 (2):647-78.
- Stolper, Wolfgang F., and Paul A. Samuelson. 1941. "Protection and Real Wages." *Review of Economic Studies* 9 (1):58-73.
- Svallfors, Stefan. 1997. "Worlds of Welfare and Attitudes to Redistribution: A Comparison of Eight Western Nations." *European Sociological Review* 13 (3):283-304.

