Title

The Globalization of Production and Income Inequality in Rich Democracies

Journal

Social Forces, 96(1)

ISSN

0037-7732

Authors

Mahutga, Matthew C
Roberts, Anthony
Kwon, Ronald

Publication Date

2017-09-01

DOI

10.1093/sf/sox041

Peer reviewed

The Globalization of Production and Income Inequality in Rich Democracies*

Matthew C Mahutga
Department of Sociology
University of California, Riverside

Anthony Roberts
Department of Sociology
California State University, Los Angeles

Ronald Kwon
Department of Sociology
University of California, Riverside

Abstract

Despite prominent and compelling theoretical arguments linking manufacturing imports from the global South to rising income inequality in the global North, the literature has produced decidedly mixed support for such arguments. We explain this mixed support by introducing intervening processes at the global and national levels. At the global level, evolving characteristics of global production networks (GPNs) amplify the effect of Southern imports. At the national level, wage-coordination and welfare state generosity counteract the mechanisms by which Southern imports increase inequality, and thereby mitigate their effects. We conduct a time-series cross-section regression analyses of income inequality among 18 advanced capitalist countries to these propositions. Our analysis addresses alternative explanations, as well as validity threats related to model specification, sample composition and measurement. We find substantial variation in the effect of Southern imports across global and national contexts. Southern imports have no systematic effect on income inequality until the magnitude of GPN activity surpasses its world-historical average, or in states with above average levels of wage-coordination and welfare state generosity. With counterfactual analyses, we show that Southern imports would have led to much different inequality trajectories in the North if there were fewer GPNs, and the prevailing degrees of wage-coordination and welfare state generosity were higher. The countervailing effects of GPNs and institutional context call for theories of inequality at the intersection of the global and the national, and raise important questions about distributional politics in the years to come.

Key Words: Inequality, Globalization, Comparative Political Economy, Economic Sociology
Running Head: The Globalization of Production and Income Inequality
Word Count: 10,030

*The authors thank John P. Boyd, David Brady, Lane Kenworthy, Christopher Kollmeyer, Jonus Pontusson, Evan Schoefer, Andrew Schrank, Frederick Solt, David Swanson, attendees of the panel on globalization and inequality at the 2014 annual meeting of the American Sociological Association and writing workshop at the Social Science Research Center, Berlin (WZB) and anonymous *Social Forces* reviewers. This research was funded by the National Science Foundation, grant number 1528703. Send questions and comments to Matthew C. Mahutga: matthew.mahutga@ucr.edu.

Introduction

Rising inequality is one of the most salient social changes among rich democracies. From 1980 to 2007, the Gini coefficient for post-tax and transfer household income inequality increased by roughly 24 percent in the US, 19 percent in Australia, 13 percent in Belgium, 11 percent in Canada, 20 percent in Finland, 15 percent in Germany, 34 percent in the UK and just 2 percent in Austria. While rising inequality was the norm in rich democracies, income inequality *declined* by 8 percent in Denmark, 4 percent in France, 2 percent in Norway, and 5 percent in Switzerland (author's calculations from Solt 2009). After decades of detailed research, however, leading economic policy makers admit that "understanding the sources of the long-term tendency toward greater inequality remains a major challenge," a point echoed more recently by the US Congressional Budget Office (Bernanke 2007; CBO 2011).

One of the earliest explanations for rising inequality was the globalization of production, and in particular increases in Southern manufacturing imports generated by the offshoring behavior of Northern firms. As we detail below, well-developed theories of trade suggest Southern imports should increase inequality in rich democracies by widening the wage gap between high and low-skilled labor, and by reducing the labor share of income as a whole. Paradoxically, however, the empirical evidence on the distributional effects of Southern imports is decidedly mixed. Among the earliest proponents, Adrian Wood (1994) estimated that imports from the global South were the most important driver of rising inequality in the North, driven primarily by their effect on the relative demand for skilled and un-skilled labor. Others observed more muted effects—Southern imports increase inequality, but primarily in non-European countries (Gustafsson and Johansson 1999; also see Lin and Tomaskovic-Devey 2013) or have smaller effects than labor market institutions, sectoral composition, and other factors (e.g.

Alderson and Nielson 2002; Krugman 1995). Still others observe no effect of Southern imports on inequality (e.g. Lee, Kim and Shim 2011; Mahler 2004). For these reasons, former Fed Chairman Bernanke (2007) concluded the distributional consequences of production globalization remain an "open question."

In this article, we take the mixed empirical support for the distributional effects of production globalization as a puzzle in need of explanation. We argue two types of intervening processes moderate its distributional consequences. The first is the expansion and consolidation of global production networks (GPN) world-wide, which have become a modal form of industrial organization.[1] Manufacturing is increasingly embedded within networks of interfirm relations that incorporate a greater proportion of the global South overtime, and undermine the bargaining position of Southern firms. Both processes heighten the downward pressure of Southern imports on low-skill wages in the North. Thus, the expansion of GPNs exacerbates the effect of Southern imports on income inequality in rich democracies. The second is egalitarian institutions—wage coordination and welfare states—at the national level. The direct, equalizing effects of these institutions are well understood (Wallerstein 1999; Alderson and Nielson 2002; Allan and Scruggs 2002). However, we introduce a new set of moderating mechanisms by which both processes interrupt the market forces by which production globalization should increase inequality. In short, we argue production globalization has inconsistent effects in previous research because it interacts with these intervening processes.

To subject these arguments to empirical scrutiny, we conduct a time-series cross section regression analysis of post-tax and transfer income inequality among 18 rich democracies. The results support our interventions. The inequality effect of Southern imports increases with the world-wide consolidation of GPNs, and decreases with the degree of wage-coordination and

welfare state generosity across countries. These results are robust to a host of socioeconomic and sociopolitical explanations for income inequality, econometric, measurement and sampling considerations. Moreover, these moderating effects are substantial. When we decompose the effect of Southern imports across levels of each moderating condition, we find they have no significant effect on inequality until GPN consolidation surpasses the world-historical average, or in states with above average levels of wage-coordination and welfare state generosity. Similarly, inequality would have followed a much different trajectory if the rate of GPN consolidation and the prevailing degrees of wage-coordination and welfare state generosity were different from what we observe.

As we elaborate in the concluding section, the countervailing moderating effects of global and national context force us to move beyond debates about the *relative* importance of domestic and global drivers of inequality. That is, our results suggest the need for theories of inequality at the intersection of the global and the national. They also raise important questions about distributional politics in the years to come.

Theories of the Distributional Effects of Production Globalization

There are two key mechanisms by which production globalization should increase inequality in the North. The first draws largely from Heckscher–Ohlin (H-O) trade theory. International trade reduces the price of production factors toward that which prevails in the countries where they are most abundant. Because unskilled labor is relatively abundant in the global South, Southern imports reduce the demand for (relatively more expensive) unskilled labor in the North (Alderson and Nielsen 2002; Wood 1994). At the same time, Southern imports increase the demand for skilled labor in the North. In tandem, these changes in the relative

demand for skilled and unskilled labor increase inequality by reducing the relative wages of low skilled labor. That is, they increase inequality *within* the working class.

The second mechanism is rooted in sociological theories involving the social relations among labor, management and capital. Here, Southern imports effectively expand the size of the labor market beyond national borders. Because this expansion includes workers in the global South, where workers have lower wages and social protections on average, it increases labor market competition among industrial workers in the Northern countries. That is, Southern imports incorporate large reserves of "surplus" industrial labor in Southern countries. This reduces the aggregate bargaining power of labor in developed countries. Because reductions in the bargaining power of labor reduce the labor share of income *vis-à-vis* capital and/or management, it also increases inequality (Elsby, Hobijn and Şahin 2013; Lin and Tomaskovic-Devey 2013; Tomaskovic-Devey and Lin 2011). Southern imports should also increase inequality *between* labor and capital.

In theory, then, Southern imports should have large distributional effects. Despite these strong theoretical expectations, however, empirical investigations are less than conclusive. Some analyses find substantial effects, while others observe relatively small or no significant effects (e.g. Alderson and Nielsen 2002; Elsby et al. 2013; Gustafsson and Johansson 1999; Krugman 1995; Lee et al. 2011; Mahler 2004; Massey 2009; Spence and Hlatshwayo 2011; Wood 1994). We attribute this mixed empirical support to intervening processes at the global and national levels. In the next two sections, we introduce global production networks and institutional context as key intervening factors that produce variation over time and space in the distributional consequences of the globalization of production.

Global Production Networks and the Inequality Effect of Southern Imports

[Figure 1 about here]

Global production networks are increasingly central to the organizational strategies of leading firms in nearly all manufacturing industries (e.g. Bair 2009; Gereffi et al. 2005; Mahutga 2014b). Social scientists attempt to measure this dynamic in various ways, including intra-firm trade as a percentage of total trade and industry-specific trade based metrics that capture particular models of network "governance" (Feenstra 1998; Mahutga 2012; Milberg 2004). Figure 1 graphs the trend in a very general metric of GPN consolidation—the ratio of world manufacturing trade to world value added in manufacturing (Feenstra 1998; Mahutga 2012). The ratio of global trade to global value added increases with the degree of production globalization because "intermediate inputs cross borders several times during the manufacturing process… [and] while the denominator is value-added, the numerator is not, and will 'double count' trade in components and the finished product" (Feenstra 1998: 34; Mahutga 2012). That is, the divergence of global trade from value-added is proportional to the degree that finished and intermediate inputs cross national borders multiple times in the production process. The greater the divergence, the more manufacturing is organized via GPNs.[2] According to Figure 1, GPNs are increasingly consolidated, and much of this occurred in the last thirty years. In 1970, 26.74 % of world value-added in manufacturing was traded. This ratio climbed to 43.5% by 1980, 56.33% by 1990, 84.79% by 2000 and 126.55 % by 2008.

The world-wide consolidation of GPNs should exacerbate the distributional effect of Southern imports. First, recall that, in theory, Southern imports increase inequality in part by driving down the wages of low-skilled labor in the North, a dynamic that should increase with

the low-skill wage gap the North and South. The diffusion of GPNs has led to "industrial upgrading" in the global South, where the number of capable suppliers and their geographic distribution has increased dramatically over time. As such, factories migrate from higher to lower-wage Southern countries (Schrank 2004), which increases the low-skill wage gap between the North and South directly. The greater supply of capable suppliers also increases this gap through indirect channels: holding the number of leading-firms fixed, an increase in the number of capable suppliers generates asymmetrical bargaining relations between leading firms and their Southern suppliers (Mahutga 2014a). This allows lead firms to secure price concessions from Southern suppliers, which decreases Southern low-skill wages even further (Anner, Bair and Blasi 2013; Schrank 2004). In short, GPN consolidation integrates increasingly lower-wage countries into GPNs, and reduces the bargaining power of Southern firms. Both of these processes increase the downward pressure of Southern imports on low-skill wages in the North.

Second, the amount of economic activity coordinated by GPNs has increased over time (Gereffi et al. 2005; Mahutga 2014b; Milberg 2004; Yeung and Coe 2015). This should interact with the second primary mechanism by which production globalization increases inequality—its negative effect on the bargaining power of labor—even among Northern workers who are not in direct competition with Southern workers. Standard theories of wage variation start with negotiations between workers and management over the terms of employment (Fernandez and Glazer 1991). Workers who possess skills that are relatively scarce, or who reside in occupations with high demand, possess more bargaining power, and therefore command higher remuneration, than workers who possess abundant skills or reside in occupations with little demand (Wright 2000). However, the labor-market return to these resources depends on individual variation in bargaining behavior. As an increasing amount of economic activity becomes coordinated via

GPNs, workers come to believe that jobs are increasingly vulnerable to offshoring, and therefore experience heightened *perceptions* of economic insecurity (Milberg and Winkler 2009; Scheve and Slaughter 2004). Heightened perceptions of economic insecurity cause workers to accept lower rates of remuneration on average, which reduces the labor share of income and increases income inequality (Riedl 2013).

We formalize our arguments about the moderating effect of GPN consolidation with the following hypothesis:

H_1: The effect of Southern imports should increase with the consolidation of networked forms of economic organization at the global level.

Institutional Context and the Inequality Effects of Southern Imports

Wage Coordination

Rich democracies vary along institutional dimensions known to matter for a range of political economic outcomes (e.g. Epsing-Anderson 1990; Hall and Soskice 2001; Western 1997). One institution stands out as important for income inequality—wage coordination among labor, capital and sometimes the state (Kenworthy 2001; Wallerstein 1999; Alderson and Nielsen 2002; Mahler 2004). Examples of wage coordination include industry-level wage bargaining through formal relations between capital, peak labor confederations (Austria) or large unions from influential industries (Germany); between employer confederations and large firms (Japan and Switzerland) or by government imposition of wage schedules or freezes (e.g. Belgium, Denmark and the Netherlands) (Traxler 1999). Wage-coordination limits wage variation within the private sector as well as the income gap between labor and capital. Indeed, a negative association between wage-coordination institutions and income inequality has been a persistent

finding in the comparative political economy literature (Alderson and Nielsen 2002; Bradley et al. 2003; Pontusson et al. 2002; Wallerstein 1999).

As a point of departure, we introduce additional channels though which these institutional arrangements should lower inequality.[3] Recall that production globalization should increase inequality by both reducing (a) the relative wages of unskilled workers and (b) the bargaining power (and thus income share) of labor as a whole. In terms of the distribution of income between low and high-wage workers, the distributional effects of production globalization should depend critically on the extent that wages respond freely to changes in labor demand (Mahutga and Jorgenson 2016). In countries where wage coordination is the norm, changes in output and productivity brought on by competition from Southern imports are, to varying degrees, "decoupled" from wages: "…a wage agreement covering a work force of any size must specify a general rule" by which wages will be determined over the agreement period (Wallerstein 1999: 673). Even in the hypothetical (and unobserved) scenario where wage-coordination is regressive (i.e. results in a higher degree of dispersion than would be the case in the absence of wage-coordination), the fact that wages are set through institutional negotiations means they cannot respond instantaneously to changes in demand for particular segments of labor.

In terms of the labor-share of income, strong wage-coordinating institutions shift the locus of control over remuneration from firms to labor, and foster collective identity among differentiated workers (Wallerstein 1999). This represents an institutional source of bargaining power that should reduce the downward pressure of Southern imports on the labor share of income. The moderating effect of wage-coordination should be particularly strong with respect to the labor share of income because it has been shown to benefit the wages of those most

negatively impacted by Southern imports—low-skill workers—disproportionately (Wallerstein 1999). Thus:

H_2: The effect of Southern imports should decline with increases in wage-coordination.

However, recent scholarship argues that wage-coordination systems are declining in their significance for inequality. Capitalist firms in coordinated states might opt out of wage bargaining altogether, refuse to extend bargained wage increases to unrepresented workers, or the very nature of coordinated bargaining systems may change in significant ways. Here, the working-class solidarity underlying the moderating effect of wage-coordinating institutions breaks down between "core workers who have jobs and who are intent on preserving their relatively privileged position within the labor market, and labor market 'outsiders' who either do not have jobs or are in more precarious forms of employment and thus do not enjoy the same package of wages and benefits as insiders" (Thelen 2012: 149; Rueda 2007). As a result, historically strong wage-coordinating systems might produce labor market dualism, where wage-coordination may only equalize the core segment labor market "insiders," which may also enjoy higher average wages than labor market "outsiders." Both scenarios would tend to push the moderating effect of wage-coordination toward zero and thus suggest a theoretically informed null hypothesis (also see Huber and Stephens 2014; Scheve and Stasavage 2009).

The Welfare State

It is widely known that welfare transfer income from affluent to poor households (Bradley et al. 2003; Kenworthy and Pontusson 2005). While these direct, egalitarian effects are rather clear, we argue that strong welfare states should also weaken the link from Southern imports to wage dispersion between skilled and unskilled workers, and to the bargaining power

(and thus income share) of labor. First, strong welfare states should boost the disposable income of those most harmed by production globalization—low skill workers. Here, eligibility requirements underlying transfer payments in advanced industrial democracies are intrinsically progressive (to varying degrees), and thus disproportionately affect low-income households. Because skills are highly correlated with incomes, transfer payments increase the post-transfer incomes of low-skill *vis-à-vis* high-skill workers. Put differently, generous welfare states reduce the impact of the wage effects of Sothern imports on the post-transfer income gap between low and high-skill workers.

Second, recall that, in theory, production globalization reduces the bargaining power of labor, and exacerbates perceptions of economic insecurity among Northern workers. In a simplified bargaining game, unemployed workers can either come to terms on a given employment package or remain unemployed. In countries with strong welfare states, the income penalty to unemployment is less pronounced than in countries with weaker welfare states. Because unemployment comes with a weaker income penalty, workers should be more willing to *bargain better*—they have less to lose by asking for more. Indeed, micro level evidence suggests that strong welfare states mitigate perceptions of economic insecurity (Anderson and Pontusson 2007; Mughan 2007). If strong welfare states facilitate more strategic bargaining behavior among workers in the labor market, production globalization should have a smaller negative effect on the labor share of income (and therefore income inequality) in countries with strong welfare states. Thus, we expect that

H_3: The effect of Southern imports should decline with increases in the size and strength of the welfare state.

Data and Methods

Dependent Variable

Income inequality: Gini coefficients of post-tax and transfer income inequality are available in various forms, but the most complete and cross-nationally/temporally comparable is the Standardized World Income Inequality Database (SWIID) (Clark 2013; Solt 2009). The cross-national and temporal comparability of Gini coefficients is made problematic by definitional variation across national surveys in terms of the units of observation (household vs. individual), the definition of income, and because of differences in survey quality. Solt's approach utilizes all of the information available from World Income Inequality Database (WIID), regional inequality databases, national statistical offices, and the scholarly literature, along with high quality estimates from the Luxembourg Income Study (LIS), to inform a Monte Carlo multiple imputation procedure that harmonizes multiple estimates of Gini, and gives a sense of the reliability of those harmonized estimates.

Unlike other data sources, Solt's Ginis (1) do not require the assumption that Gini incomparability is constant across countries/time; (2) are benchmarked to the most reliable Luxembourg Income Study estimates available; (3) treat "quality" with continuous (rather than dichotomous) reliability estimates and (4) includes many more cross-national and temporally comparable Ginis than other sources. Because the LIS provides more Gini coefficients for developed countries, the SWIID estimates for our sample are even more reliable than the full sample. Nevertheless, we restrict our analysis to post-tax and transfer Gini coefficients with standard errors less than 1 and assess the robustness of our results to this threshold and to alternative sources of Gini coefficients (see Solt 2009: 238).

Independent Variable

Southern imports: A common measure of production globalization among advanced industrial countries is the value of manufacturing imports from Southern countries (see Alderson and Nielsen 2002).[4] However, trade scales linearly with country size, which complicates comparisons across countries of vastly different economic and geographical weight. A common approach to facilitate international comparisons of Southern imports is to normalize imports from Southern countries (typically defined as non-OECD and non-COMECON countries) by gross domestic product (GDP). We utilize an alternative procedure to facilitate international comparisons—we divide manufacturing imports from Southern (non-OECD) countries by total imports. Our data on manufacturing imports from Southern countries and total imports come from the OECD (2011a). We prefer this normalization to GDP for two interrelated reasons.

First, normalizing Southern imports by total imports captures the *pattern* rather than the *level* of trade, since total imports represent the maximum amount of Southern imports possible for a given country (United Nations 2014a: 332; see Beckfield 2006 on measuring EU economic integration with trade). Second, recent empirical work finds that Southern imports increase GDP by increasing profit rates among offshoring firms (Kollmeyer 2009a). This relationship allows for the possibility that GDP increases disproportionately with increases in Southern imports, such that the ratio Southern imports/GDP could either under or over-state the degree that firms in a given country integrate Southern workers into their supply chains.[5] Contrarily, temporal variation in the ratio Southern imports/total imports will depend only on the relative rate of growth in Southern manufacturing to other types of imports.[6] We nevertheless the robustness of our results to alternative measures below.

Moderating Variables

Global Production Network Consolidation: To measure the world-wide consolidation of GPNs, we follow Feenstra (1998) and Mahutga (2012) by employing the ratio of world trade in manufacturing to world value added in manufacturing as displayed in Figure 1. Data on world trade come from the United Nations (2014b). Data on value-added comes from the UNIDO's Industrial Statistics data base (UNIDO 2015). This covariate varies over time, but not across countries.

We measure *wage-coordination* with Kenworthy (2001), and updated by Huber et al. (1997, 2004, 2014). Scores ranged from 1 to 5, with 1 indicating fragmented bargaining at the plant-level and 5 indicating centralized bargaining amongst large union and business confederations, or government imposed wage schedules. This is the most preferred measure for capturing the institutionalization of wage-coordination processes because it is a measure of the institutional *capacity to coordinate* rather than the degree of achieved coordination, and because of its ability to capture the diversity of institutional arrangements conducive to coordination (Kenworthy 2001).

Welfare State Generosity: We measure the welfare state with the updated generosity index (Scruggs, Jahn and Kuitto 2014) which expands on and updates the Epsing-Anderson's (1990) decommodification index. As opposed to measuring transfer payments directly, the "generosity index" combines information on benefit replacement rates, qualifying conditions, and elements of the insurance coverage or take-up rates for unemployment, sickness and retirement programs. More generous welfare states are those that provide relatively large outlays for longer periods of time, and have minimal eligibility requirements.

Control Variables

Baseline Controls: There are a host of factors that influence cross-national and temporal levels of income inequality. First, we control for the harmonized *unemployment* rate (OECD 2011b). Unemployment should correlate positively with income inequality insofar as a loss of income among a large portion of the economically active population should inflate the lower-end of the income distribution.

Existing explanations for the inequality upswing in developed countries evoke changes in the age and gender composition of the labor force. Given the positive correlation between age and income, the aging of the labor force should expand the gap between older and younger citizens (Rubin, White-Means, and Daniel 2000). Alternatively, competing theoretical narratives argue that an increase in female labor force participation might either increase or decrease inequality (e.g. Alderson and Nielsen 2002). Thus, we also control for *the elderly population (% 65+)* and *female labor force participation* from data available from the OECD (2011a).

Three important changes to the economic and labor market governance structures of advanced industrial countries have occurred simultaneously with economic globalization. Financialization has been shown to contribute to income inequality in the United States (Lin and Tomaskovic-Devy 2013; Tomaskovic-Devey and Lin 2011) and other advanced industrial countries (Kus 2013). Thus, we follow Lee et al. (2011) by controlling for the *percentage of the labor force in the Finance, Insurance and Real Estate (FIRE) sector* (OECD 2011b). Similarly, rich democracies experienced varying rates of deindustrialization and union decline, both of which have been shown to matter for inequality elsewhere (Alderson and Nielsen 2002). Thus,

we employ data on the *percent of the labor force in industry* (OECD 2011b), and *union density* (Visser 2011).

Additional Controls: A venerable tradition in sociology finds that inequality is a function of internal developmental processes, operationalized as the *percent of the labor force in agriculture, sector dualism, the natural rate of population increase*, and *secondary education* (Alderson and Nielsen 2002). The first two control for the distributional effects of the migration of labor from the agricultural to the manufacturing sector. The latter two control for the distribution of skills and the size of the surplus labor pool. Data on these measures come from the World Development Indicators (World Bank 2016).

Finally, we also control for institutional and political processes associated with the distribution of income (see Bradley et al. 2003; Lee et al. 2011; Huber and Stephens 2014). Power resource theory suggests partisan politics play a key role in distributional outcomes. Leftist governments, in particular, reduce post-tax and transfer income inequality by enacting policies to redistribute wealth (see Bradley et al. 2003: 195-196). Thus, we control for the relative strength of leftist parties with the cumulative cabinet share of leftist parties (Huber et al. 1997, 2004, 2014).

Correlations and descriptive statistics appear in Table A1.

Time-Series Cross Section Regression

[Table 1 about here]

We conduct a time-series cross section regression analysis of income inequality among 18 rich democracies. The sample of advanced industrial countries, listed in Table 1, includes

most of Western Europe, Japan, the US, Canada, Australia and New Zealand (e.g. Alderson and Nielsen 2002; Western 1997; Lee et al. 2011). The unit of observation in the time-series cross-section regression is the country-year. As is evident in Table 1, the panels are unbalanced. Due to missing data on the left and right hand side, and our exclusion cases with Gini standard errors greater than 1, our models contain a maximum of 411 observations as described in Table 1.

A clear *strength* of this design is that it allows us to control for omitted unobservable covariates that vary across countries but not over time. The inclusion of fixed country effects in the models that follow correct for this source of omitted variable bias. Such data typically yield heteroskedastic and serially correlated disturbance terms (Wooldridge 2002). Employing available identification tests in *Stata 14.0*, we examined the error structure of our models and rejected the null hypothesis of homoscedasticity and zero serial correlation. To correct heteroskedasticity, we employ robust standard errors. To correct for serially correlated errors, we employ a first-order (AR1) autocorrelation correction with a Prais-Winston transformation that accounts for the unbalanced panels. To address biases owing to unobserved covariates that vary across time but not over countries, we also include decadal dummies (Lee et al. 2011).

Testing the hypotheses that the consolidation of GPNs, wage coordination and welfare states moderate the impact of southern imports on income inequality is straightforward in this design. We regress income inequality on interaction terms between southern imports and each covariate, along with relevant controls (Friedrich 1982; Lee et al. 2011). To mitigate collinearity between constituent and interaction terms, we mean deviated Southern imports, GPN Consolidation, Wage-Coordination and Welfare Generosity. Because this amounts to subtracting a constant from each term, this does not affect the coefficients on the interaction terms (but see

note 7). Hypotheses 1-3 are explicitly directional, and we therefore employ directional hypothesis tests.

Results

[Table 2 about here]

Table 2 reports the correlation between Southern imports and inequality as it varies across "low" and "high" levels of GPN consolidation, Wage-Coordination and Welfare State Generosity. Consistent with hypothesis 1, the effect of Southern imports increases as global production networks become consolidated among Northern manufacturing firms. Similarly, the bivariate association between inequality and Southern imports is smaller among countries with high levels of wage-coordination and generous welfare states. Indeed, Southern imports are almost uncorrelated with income inequality in countries with high welfare state generosity. Does apparent variation in the effect of Southern imports hold in conservative econometric models that control for additional correlates of inequality?

[Table 3 about here]

Model 1 in Table 3 introduces Southern imports and our controls. Consistent with the panoply of previous research, the effect is relatively small but significant at conventional thresholds. Model 2 introduces an interaction term between Southern imports and GPN consolidation to test whether the effect of Southern imports increases with the world-wide consolidation of GPNs. The interaction term is positive and highly significant. Model 3 introduces the interaction term between Southern imports and wage-coordination. The moderating effect of wage coordination is negative and highly significant. Finally, Model 4 includes the interaction between Southern imports and welfare state generosity. The interactive

effect is negative and highly significant.[7] Given the positive coefficient on Southern imports in Model 1, these results suggest that GPN consolidation exacerbates the effect of Southern imports on income inequality, while wage-coordination and welfare state generosity ameliorate this effect.

Robustness

Alternative Estimator and Measure of Southern Imports

[Table 4 about here]

To assess the robustness of our results, we begin with models employing alternative corrections for unobserved country-invariant processes that vary over time and the traditional measure of Southern imports in Table 4. Relative to this first concern, we estimated conservative two-way fixed effects models by including a full set of T-1 dummy variables. These results (Models 1-3) were substantively and almost numerically identical.[8] Relative to the second, we examine interaction terms involving each of our three moderators and the ratio of Southern imports to GDP. Data on the ratio of Southern imports to GDP is drawn from the International Trade database (OECD 2011c). Consistent with our discussion above, an unreported model including this covariate without moderation yields a coefficient close to zero ($b = .013$; $p<.893$). Moreover, the t-statistics for the interaction terms involving Southern imports/GDP in Table 4 are much smaller than those reported above. Still, the interaction effects are significant and correctly signed: the effect of Southern imports/GDP increases with GPN consolidation and decreases with wage-coordination and welfare state generosity.[9]

Gini Coefficient Quality

[Table 5 about here]

We also consider the extent that our results are robust to the quality of the Gini coefficients we employ. We estimate six additional models reported in Table 5. Models 1, 3 and 5 restrict the analysis to Gini coefficients with standard errors less than .75. Models 2, 4 and 6 restrict the analysis to Gini coefficients with standard errors less than .5. Reassuringly, our results are substantively, and nearly numerically, identical to those reported in Table 3.

Sample Composition and Gini Coefficient Measurement

[Table 6 about here]

Table 6 considers the sensitivity of our results to the composition of our sample (Models 1-12), and the source of our Gini coefficients (Models 4-12). In Models 1-3, we employ bootstrap confidence intervals in lieu of parametric hypothesis tests. Bootstrap confidence intervals are constructed by estimating coefficients on 500 unique samples, in which the entire set of each country's observations are randomly sampled with replacement. These coefficients then form a distribution of coefficients with which to calculate confidence intervals around our observed coefficients. Hypothesis tests based on bootstrap confidence intervals are reported next to the parametric standard errors in Models 1-3 of Table 6. These confidence intervals are wider than those in Table 3, but each interaction term remains significant at conventional levels.

There are vastly fewer Gini coefficients available in the LIS data than in SWIID, which makes it difficult to observe significant coefficients in the fairly saturated models in Table 3. Thus, Models 4-6 report coefficients from a fixed-effects regression of the LIS Ginis on Southern imports, each moderator, the interactions and the decadal dummies. In these models, there are roughly 75% fewer observations than in Table 3 and the sample composition varies

significantly, but the interaction terms are significant and correctly signed. Models 7-9 add the controls that were most consistent in Table 3, which reduces the number of observations to 103-106. The interaction terms remain significant. Models 10-12 include the full set of controls, which reduces the number of observations to 86, and stretches the degrees of freedom beyond reason (the ratio n/k = 4.1, where k is the number of covariates in the model). Nevertheless, the interaction terms are significant and properly signed, though the significance level the wage-coordination interaction drops ($p<.10$). *In toto*, the analyses reported in Table 6 suggest our results our robust to sample composition (Models 1-12) and to the measurement income inequality (Models 4-12).

Additional Concerns

The null hypothesis on our interaction terms is that the effect of Southern imports does not vary across observed levels of the moderators. We can also test null hypothesis that the coefficients on Southern imports and interaction terms are *jointly* equal to zero. Such a test amounts to testing the null hypothesis that the effect of Southern imports is equal to zero at *any* level of the moderator. These (inherently non-directional chi square) tests were significant at the .05 level or greater in all models reported above except Models 4 and 6 in Table 4 (also see Figure 2 below).[10]

While we have focused upon the way GPN consolidation, wage-coordination and welfare states moderate the distributional effects of Southern imports, the interaction terms have a symmetric interpretation. Auxiliary analyses suggest Southern imports have a positive effect on the slope of GPN consolidation (see note 8 and Table A1 in the online appendix). Global-organizational processes matter more for inequality when the national economy is more deeply

articulated with them. Conversely, Southern imports have a negative effect on the slope of wage-coordination and welfare state generosity. These results appear in Figures A3-A5 in the online appendix. We explicate the theoretical implications of the latter two in the concluding section.

Finally, we examine whether our results are robust to the rise of single head households. We calculated the (weighted) percent of single headed households using the Luxembourg Income Study for as many of our cases as possible (73). The results were largely consistent with those in Table 6. The only difference was in the interaction involving wage coordination, which was correctly signed but non-significant. However, models on this reduced sample excluding single headed households produced the same result. In combination with the non-significance of single headed households, this result likely owes to sampling rather than household composition, but does suggest a degree of caution (also see Model 11, Table 6).[11]

Substantive Significance

Our analysis supports our argument that the distributional consequences of Southern imports vary by global (GPN consolidation) and national (wage-coordination and welfare state generosity) context. However, it sheds little light on the importance of this variation for the overall effect of Southern imports, or for trends in inequality more generally. To address the first question, we examine *how much* the effect of Southern imports varies across each condition. Figure 2 displays the marginal effect of Southern imports as it varies across the observed range of our moderating covariates.[12] These marginal effects are obtained from the coefficients reported in Models 2-4 of Table 3. Zero is denoted with the solid horizontal line.

[Figure 2 about here]

The left pane displays the marginal effect of Southern imports as it varies across GPN consolidation. The effect increases by just over 650 percent from the minimum to maximum observed value of GPN consolidation, is *null* at the lowest levels of GPN consolidation, and becomes significantly positive as GPNs become more consolidated. The middle pane displays the marginal effects of Southern imports across wage-coordination. The effect decreases by 104.3 across the full range, is significantly positive among countries with a range of wage-coordination from 1 to ~3, and null thereafter. The right pane displays the marginal effect of Southern imports as it varies across welfare state generosity. Here, the effect declines by 137.9 percent from the minimum and maximum, is positive and significant at low levels of generosity, but becomes null at moderate levels of generosity. The increase in inequality *per unit increase of Southern imports* varies considerably across periods of greater/lesser GPN consolidation, and across countries with different labor market and welfare state institutions.

To understand the importance of these moderating effects for overall trends in inequality, we ask how inequality would have changed, on average, if Southern imports took place in world characterized by varying global and national contexts. That is, how would inequality have changed if the overall effect of Southern imports equaled that observed at minimum, mean and maximum values of GPN consolidation, wage-coordination and welfare state generosity? To proceed, we begin with the following equation[13]:

$$GINI_t = 12.170 + \theta SPEN_t + .076UNEMP_t + -.035UD_t + .101IEMP_t + .054FLFP_t + .270ELDP_t + .199FIRE_t + 5.563AGEMP_t + -.134DUAL_t + .009ED_t + .236NRPI_t + .005LCUM_t + -.197T_{80s} + -.013T_{90s} + -.003T_{00s}$$

This equation is identical to that in Model 1 of Table 3, except that we averaged across the country-specific intercepts and the coefficient on Southern imports (θ) is allowed to vary. We then

estimate nine counterfactual models by manipulating θ to equal its marginal effect at the minimum, mean and maximum value of each of our three moderators (see Alderson 1999).[14]

[Figure 3 about here]

Figure 3 reports the results of these counterfactual equations. The dashed line in the middle of the three graphs is the observed trend. The dotted lines refer to the counterfactual equation when the coefficient on the focal moderator equals its minimum throughout the period. The solid lines are the estimated counterfactual trends when the coefficient on the focal moderator equaled its mean throughout, and the dash-dot-dot-dash line is the counterfactual trend estimated when the focal coefficient on the moderator equaled its maximum throughout. To compare the magnitude of these counterfactual trends across moderators, the Y axis (predicted Gini) is fixed across the three graphs.

On average, income inequality increased by 5.22 percent among the countries in our sample, and Gini reached a level of 28.94 in the most recent year examined. If there were fewer GPNs world-wide such that the mean ratio of trade to value added were equal to the minimum observed, Southern Imports would have produced a 2.12 percent increase in inequality, and a Gini score nearly two points lower than observed. Conversely, if GPNs had consolidated earlier such that the ratio of world-trade to world value added equaled its maximum throughout the period, Southern imports would have increased Gini by 12.24 percent. The level of inequality would have been nearly two points higher than observed in the most recent period.

Both wage-coordination and welfare state generosity paint the opposite picture. Southern Imports would have produced a 9.45 percent increase in inequality if the prevailing degree of wage-coordination equal the minimum observed, and a *level* of inequality about a point higher in

2007. If wage coordination were equal to the maximum throughout, Southern Imports would have increased inequality by 3.45 percent, and inequality would be a point and a half lower than observed in 2007. Welfare state generosity has the biggest counterfactual variance. If the prevailing level of welfare state generosity were equal to the minimum observed, Southern Imports would have increased inequality by 13 percent, and produced a level of inequality over two points higher than observed in 2007. Contrarily, Southern Imports would have slightly *reduced* inequality (-.001%) if the maximum observed Welfare State Generosity were the norm, and observed levels of inequality would be almost three points lower than observed in 2007.

Discussion and Conclusion

We argue the effects of production globalization on income inequality vary by global and national context. At the global level, the consolidation of GPNs amplifies the distributional consequences of Southern imports. As inter-firm linkages intensify across Northern and Southern countries, both an increasingly low-wage labor pool and an increasing array of economic activity become integrated into GPNs. This intensifies the downward pressure of Southern imports on low-skill wages and labor bargaining power. At the national level, wage-coordination and welfare state generosity mitigate the distributional effect of Southern imports. Wage coordination decouples changes in skill-specific labor demand from changes in wages, provides an institutional source of labor bargaining power and encourages worker solidarity, the latter two of which benefit low-skill workers disproportionately. Welfare states reduce the post-transfer income gap between low and high-skill workers, and improve the bargaining position of labor as a whole. Thus, GPN consolidation intensifies the link from Southern imports to the skill-wage premium and labor share of income, while wage-coordination and welfare state generosity weaken these links.

Our analysis provides a compelling explanation for the inconsistent effects of Southern imports. First, southern imports did not have a significantly positive effect on inequality until the ratio of global trade to global value added surpassed 64.52%, and this did not occur until 1995. It is not surprising, then, that *early* research (or research using older data) finds small or inconsistent effects for Southern imports, while more recent research suggests larger effects (e.g. Bernanke 2007; Elsby, Hobijn and Sahin 2013; Spence and Hlatshwayo 2011). Second, Southern imports only increase inequality when wage-coordination occurs at or below the industry level and is not patterned across different industries (i.e. is less than 4 on the five point scale), and when welfare state generosity is less than 33.89. But, less than half the country-years analyzed here have wage-coordination scores less than 4. Only 46 percent have welfare state generosity scores less than 33.89.[15] It is not surprising, then, that analysts typically find a greater role for production globalization when studying liberal countries like the United States than when they conduct comparative work including countries with more active labor market policies and larger welfare states (Elsby, Hobijn and Şahin 2013; Lin and Tomaskovic-Devey 2013; Massey 2009; Spence and Hlatshwayo 2011; c.f. Gustafsson and Johansson 1999; Lee et al. 2011; Mahler 2004). In sum, the distributional effects of production globalization appear inconsistent because they depend on organizational and institutional processes that vary across time and space.

Our findings further illuminate recent sociological explanations for the inequality upswing in rich democracies. Lee et al. (2011) find that a growing productivity gap between the public and private sector, driven in part by the differential exposure of the public and private sector to international competition, undermines the equalizing effect of public sector employment. Theories on the causes of global production network formation contend leading firms build these networks to solidify their own competitive positions within an industry (Bair

2009; Ponte and Gibbon 2005). Because these strategic considerations inform decisions about which phases of a production processes to retain "in-house," globalized production networks concentrate highly productive, value-adding activities within the developed countries where leading firms are located (Mahutga 2012; 2014b). Thus, at least some of the productivity gap that dampens the egalitarian effect of public sector employment is related to the boost to private sector productivity provided by GPNs in manufacturing.

Our findings also move the sociological literature on inequality beyond debates about the *relative* importance of domestic and global factors to an understanding of how they work together to produce distinct inequality trajectories across time and space. For example, recent scholarship implies the impact of wage-coordination on inequality should be on the decline either because these institutional arrangements are retrenching, or, where core segments of the labor force preserve wage-coordination, labor market dualism (Rueda 2007; Thelen 2012). As a point of departure, we find that wage-coordination matters for the distributional impact of a global diver of inequality (Southern imports) in spite of the well documented dynamics in this scholarship (also see Oskarsson 2009). Thus, we introduce a new mechanism by which wage-coordination can reduce inequality. Nevertheless, it is possible that the moderating effect of wage-coordination might be smaller in countries where dualization interrupts traditional class-based political projects underlying wage-coordination (Palier and Thelen 2010). Such an outcome appears inconsistent with our results at first glance, however, because wage-coordination has an *increasingly large* negative effect on inequality as Southern imports increase (see above).

Similarly, our findings add to our understanding of the mechanisms by which welfare states are "the single most important determinant for reducing inequality across advanced

industrial democracies" (Lee et al. 2011: 118). Welfare state generosity has the second largest moderating effect on Southern imports, and produces the most egalitarian counterfactual scenario, where inequality would have *declined* in response to production globalization if the prevailing degree of welfare state generosity were closer to the maximum observed. While this finding might seem counterintuitive, it isn't: transfers associated with the maximum level of generosity more than offset the effects of Southern imports. Indeed, as we noted above, welfare-state generosity has an increasingly large negative effect on inequality as Southern imports increase. Thus, welfare states both limit the magnitude with which global social change can lead to distributional change, and become more important domestic determinants of the distribution of income as globalization proceeds.

Finally, our findings have implications for the future of distributional politics in the global North. On one hand, welfare states appear to be the most plausible way to actively mitigate the distributional consequences of production globalization in the future. Firms will do what firms will do. Wage-coordination developed over long and protracted periods that are somewhat unique to particular national contexts, and many doubt their long-term viability. Increasing the size and scope of welfare-states across countries may be the most viable and efficacious way to redistribute the gains from production globalization in the years to come.

On the other, the countervailing effects of GPN consolidation, wage coordination and welfare state generosity also raise important questions regarding the longer term viability of egalitarian institutions in the global North. The argument that globalization pressures states to undermine corporatist patterns of labor relations and adopt austerity measures is frequently made, but this intuition is controversial. Some find retrenchment in welfare states and corporatist labor relations since the 1980s (Allan and Scruggs 2004; Huber and Stephens 2001; Thelen

2012), others find expansion (Kenworthy 2007; Kenworthy and Pontusson 2005) and still others find little systematic effects in any direction (Brady et al. 2005). Theories linking globalization to retrenching egalitarian institutions have perhaps underspecified the mechanisms by treating globalization as a static causal category. Instead, the ability of transnational actors to impact the regulatory and institutional behavior of nation-states must depend upon the extent that these actors can themselves transcend the confines of the authority structures they wish to change. The consolidation of GPNs is one example of just such a dynamic process: as GPNs become modal organizational forms over time, the reliance of Northern capital on Northern labor declines, which in turn undermines post-war class compromises in the North. If the inconsistent effects of economic globalization on egalitarian institutions are explicable by such a dynamic relationship, then the conditional effects we identify above may *understate* the total effect of production globalization on inequality, which is a key question for future research (e.g. Kollmeyer 2009b).

Notes

[1] To be clear, we use the term "global production network" generically to encompass literatures on global commodity chains (GCC), value chains (GVC) and production networks (e.g. Gereffi et al. 2005; Yeung and Coe 2015).

[2] The GPN/GVC/GCC literature explicates multiple modes of network "governance," understood as a characteristic of the inter-firm ties within a particular production network. The ratio of trade to value added is a strategic measure of GPN consolidation because it captures offshoring as carried out in all of these modes, some of which include a high degree of trade in intermediate components, and others of which involve multiple exports of relatively finished products. (Mahutga 2012).

[3] Theoretical expectations consistent with our argument that labor market institutions should condition the effects of economic globalization have been formulated elsewhere (Kenworthy 2007;). To our knowledge, none have directly tested this proposition (c.f. Oskarsson 2009).

[4] Previous research operationalizes production globalization with both outflows of foreign direction investment (FDI) *and* imports from Southern countries. We restrict our analysis to southern imports because (a) the replacement of Northern with Southern labor does not motivate the vast majority of FDI (Alderson and Nielsen 1999) (b) Southern imports capture labor saving FDI and (c) production networks are increasingly organized via non-equity inter-firm relations rather than FDI (Milberg 2004). Unreported analyses show our results are robust to the inclusion of FDI (and other common indicators of globalization), which does not interact with our three conditional processes.

[5] Disproportionality will depend on temporal variation in the effect of Southern imports on GDP. First, denote SI with X and GDP with Y. Each will have an observed growth rate equal to

$$\frac{dx}{dt} = a\text{x and } \frac{dy}{dt} = by,$$

where *t* is the number of years. These have a well-known solution, which is the compound growth rate of $X_0 e^{at}$ and $Y_0 e^{bt}$, respectively. Y will also have a growth rate attributable to X, which we can write as $\beta X_0 e^{at}$. The ratio is thus equal to

$$r_t = \frac{X_0 e^{at}}{Y_0 e^{bt} + \beta X_0 e^{at}}.$$

To see that the ratio depends both on the relative growth rate of Y and X and on β, we can divide by the numerator

$$r_t = \frac{1}{Y_0 / X_0 e^{(b-a)t} + \beta}.$$

If β is constant, then *r* changes only with the relative growth in Y and X (i.e. *b* - *a*) as *t* increases. If β increases with *t* then, holding *a* and *b* constant, *r* decreases with *t*. If β decreases with *t* then, holding *a* and *b* constant, *r* increases with *t*.

Kollmeyer's (2009a) argument assumes a wage gap between the North and South, and GPN/GVC theorists contend that GPN consolidation widens this gap over time (see above). In a basic growth model controlling for human capital and the initial level of GDP, we observe a significantly positive β across all *t*, and a significant increase in β of about 8 tenths of one percent per year. This result is available upon request.

[6] Southern imports will add to total imports automatically, but not disproportionately. Denoting Southern imports with X and other imports with Y, the ratio is

$$r_t = \frac{X_0 e^{at}}{Y_0 e^{bt} + X_0 e^{at}}.$$

Dividing by the numerator,

$$r_t = \frac{1}{Y_0 / X_0 e^{(b-a)t}}$$

r changes only with the relative growth in Y and X (i.e. *b* - *a*) as *t* increases.

[7] See Figure 2 below for observed variation in the effect of Southern imports across the full range of observed values for each moderator.

[8] A related temporal concern is the association between our measure of GPN consolidation and time (see Figure 1). We re-estimated models 3-6 from table 3 and included a linear time trend. These results are substantively identical except in one case: the interaction involving Southern imports/GDP and GPN consolidation dropped in significance ($p<.10$) (see Table A1 in the online appendix). We thank an anonymous *Social Forces* reviewer for raising this issue.

[9] The distributional effects of Southern imports could be larger in countries more economically dependent on Southern imports. This raises the possibility that the *level* of trade "may confound the relationship between [Southern imports/total imports] and income inequality" (Beckfield 2006: note 7). Thus, we estimated additional

versions of the models in Table 3 that control for Southern imports/GDP and the sum of imports and exports/GDP. In each case, the results were substantively, and almost numerically, identical (see Table A2 in the online appendix). Moreover, the effect of Southern imports/Total imports may vary with the level of Southern imports/GDP. We do observe a positive and significant interaction between these two covariates net of controls (b = .047; p<.001). Southern imports/Total imports have a positive effect over the full range of Southern imports/GDP, but the effect of Southern imports/GDP is negative over nearly half the range of the former (see Figure A1 of the online appendix). This may provide another explanation for the varied findings in the literature, and we thank an anonymous reviewer for raising these points.

[10] In both cases, auxiliary analyses suggest that the effect of Southern imports/GDP varies more steeply across GPN consolidation and welfare state generosity than the effect of Southern imports/total imports. The lack of evidence against the joint null hypothesis thus owes to uncertainty about the point estimate for Southern imports/GDP at any level of these moderators. See Figure A2 of the online appendix.

[11] We thank anonymous *Social Forces* reviewers for bringing these additional concerns to our attention.

[12] GPN consolidation varies from 36.52 to 116.36, wage-coordination varies from 1 to 5, and welfare state generosity varies from 17.89 to 46.6.

[13] SPEN is Southern Imports, UNEMP is Unemployment, UD is Union Density, IEMP is Industrial Employment, FLFP is Female Labor Force Participation, ELDP is Elderly Population, FIRE is FIRE Sector Employment, AGEMP is Agricultural Sector Employment, DUAL is Sector Dualism, ED is Secondary Education Enrollment, NRPI is the Natural Rate of Population Increase, LCUM is the Cumulative Share of Left Cabinet Seats.

[14] The marginal effect of Southern imports at the minimum, mean and maximum observed value of each moderator is as follows. GPN consolidation: -.044, .059*, .246***; Wage-coordination: .164***, .068*, -.007; Welfare state generosity: .269***, .076, -.102*. *p<.05; **p<.01; ***p<.001.

[15] To put these thresholds into perspective, countries that typically receive wage-coordination scores below the above limit are Canada, France, Luxembourg, New Zealand, the UK and the USA. Those who typically receive welfare-state generosity scores falling below the above limit are Australia, Canada, Italy, Japan, New Zealand the UK and the USA. The liberal countries of Canada, New Zealand, the UK and USA are uniquely low on both dimensions.

About the Authors

Matthew C Mahutga is Associate Professor of Sociology at the University of California, Riverside. His research examines the global determinants of economic organization and their consequences for a range of political and socio-economic outcomes. His work appears in interdisciplinary outlets including *Europe-Asia Studies, Global Networks, Review of International Political Economy, Social Forces, Social Networks, Social Problems, Social Science Research*, *Urban Studies*, and elsewhere, and has been supported by the *National Science Foundation.*

Anthony Roberts Anthony Roberts is an Assistant Professor of Sociology at California State University – Los Angeles. His research interests include financialization, global production, income inequality, industrial relations, and comparative capitalism. His most recent work appears in *Socio-Economic Review*, *Sociology of Development*, and the *International Journal of Comparative Sociology*. A current project examines financialization and wage inequality in OECD and transition countries.

Ronald Kwon is a PhD. candidate at the University of California, Riverside. His research interests include immigration and political economy. Recent articles appear in *Population Studies*, the *Korea Journal*, and the *International Journal of Comparative Sociology*.

Bibliography

Alderson, Arthur S. 1999. Explaining Deindustrialization: Globalization, Failure or Success? *American Sociological Review* 64(5): 701-721.

Alderson, Arthur S., and Francois Nielsen. 1999. "Income Inequality, Development, and Dependence: A Reconsideration." *American Sociological Review* 64(4): 606-31.

_____. 2002. "Globalization and the Great U Turn: Income Inequality Trends in 16 OECD Countries." *American Journal of Sociology* 107(5): 1244-99.

Allan, James and Lyle Scruggs. 2004. "Political Partisanship and Welfare State Reform in Advanced Industrial Societies." *American Journal of Political Science* 48(3): 496-512.

Anderson, Christopher and Jonas Pontusson. 2007. "Workers, Worries and Welfare States: Social Protection and Job Insecurity in 15 OECD Countries." *European Journal of Political Research* 46(2): 211-35.

Anner, Mark, Jennifer Bair, and Jeremy Blasi. 2013. "Towards Joint Liability in Global Supply Chains: Addressing the Root Causes of Labor Violations in International Subcontracting Networks." *Comparative Labor Law and Policy Journal* 35(1): 1-43.

Bair, Jennifer Lynn (Ed). 2009. *Frontiers of Commodity Chain Research.* Palo Alto: Stanford University Press.

Beckfield, Jason. 2006. "European Integration and Income Inequality." *American Sociological Review* 71(6): 964-85.

Bernanke, Ben, Chairman of the Federal Reserve. 2007. Speech before the Before the Greater Omaha Chamber of Commerce, Omaha, Nebraska, February 6.

Bradley David, Evelyne Huber, Stephanie Moller, Francois Nielsen, and John Stephens. 2003. "Distribution and Redistribution in Postindustrial Democracies." *World Politics* 55(1): 193-228.

Brady, David, Jason Beckfield, and Martin Seeleib-Kaiser. 2005. "Economic Globalization and the Welfare State in Affluent Democracies,1975–2001." *American Sociological Review* 70(6):921–48.

Clark, Rob. 2013. "Convergence in National Income Distributions." *Social Forces* 92(2): 413-436.

Congressional Budget Office (CBO). 2011. "Trends in the Distribution of Household Income Between 1979 and 2007." Congress of the United States Congressional Budget Office, Washington D.C.

Elsby, Michael W.L., Bart Hobijn, and Ayşegül Şahin. 2013. "The Decline of the US labor share." Brookings Papers on Economic Activity, no. 2 (Fall), pp. 1–63.

Epsing-Anderson, Gosta. 1990. *Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.

Feenstra, Robert C. 1998. “Integration of Trade and Disintegration of Production in the Global Economy.” *Journal of Economic Perspectives* 12 (4): 31–50.

Fernandez, Raul and Glazer, John. 1991. “Striking for a Bargain Between Two Completely Informed Agents." *American Economic Review* 81(1): 240-52.

Friedrich, Robert J. 1982. “In Defense of Multiplicative Terms in Multiple Regression Equations.” *American Journal of Political Science* 26(4): 797-833.

Gereffi, Gary, John Humphrey, and Timothy Sturgeon. 2005. “The Governance of Global Value Chains.” *Review of International Political Economy* 12(1):78-104.

Gustafsson, Bjorn and Mats Johansson. 1999. “In Search of Smoking Guns: What Makes Income Inequality Vary over Time in Different Countries?” *American Sociological Review* 64(4): 585-605.

Hall, Peter A and David Soskice (Eds). 2001. *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage.* Oxford: Oxford University Press.

Huber, Evelyn and John D. Stephens. 2001. *Development and Crisis of the Welfare States: Parties and Politics in Global Markets*. Chicago: University of Chicago Press.

_____. 2014. “Income Inequality and Redistribution in Post-Industrial Democracies: Demographic, Economic and Political Determinants.” *Socio-Economic Review* 12(2): 245-67.

Huber, Evelyne, Charles Ragin, John D. Stephens, David Brady, and Jason Beckfield. 1997, 2004, 2014. *Comparative Welfare States Data Set*.

Kenworthy, Lane. 2001. “Wage-Setting Measures: A Survey and Assessment.” *World Politics* 54(1): 57-98.

_____. 2007. “Inequality and Sociology.” *American Behavioral Scientist* 50(5): 584-602.

Kenworthy, Lane and Jonas Pontusson. 2005. “Rising Inequality and the Politics of Redistribution in Affluent Countries.” *Perspectives on Politics* 3(3): 449-71.

Kollmeyer, Christopher. 2009a. “Consequences of North-South trade for affluent countries: A new application of unequal exchange theory.” *Review of International Political Economy* 16(5): 803-826.

_____. 2009b. “Explaining Deindustrialization: How Affluence, Productivity Growth, and Globalization Diminish Manufacturing Employment.” *American Journal of Sociology* 114(6):1644-74.

Krugman, Paul. 1995. “Growing World Trade: Causes and Consequences.” Brookings Papers on Economic Activity, Volume 1.

Kus, Basak. 2013. “Financialisation and Income Inequality in OECD Nations: 1995-2007.” *The Economic and Social Review* 43(4): 477-95.

Lee, Cheol-Sung, Young-Bum Kim and Jae-Mahn Shim. 2011. “The Limit of Equality Projects: Public-Sector Expansion, Sectoral Conflicts, and Income Inequality in Postindustrial Economies.” *American Sociological Review* 76(1): 100-24.

Lin, Ken-Hou and Donald Tomaskovic-Devey. 2013. "Financialization and U.S. Income Inequality, 1970-2008." *American Journal of Sociology* 118(5): 1284-329.

Mahler, Vincent A. 2004. "Economic Globalization, Domestic Politics, and Income Inequality in the Developed Countries: A Cross-National Study." *Comparative Political Studies* 37(9): 1025-153.

Mahutga, Matthew C. 2012. “When do Value Chains go Global? A Theory of the Spatialization of Value-Chain Linkages.” *Global Networks* 12(1): 1-21.

_____. 2014a. “Global Models of Networked Organization, the Positional Power of Nations and Economic Development.” *Review of International Political Economy* 21(1): 157-94.

_____. 2014b. “Production Networks and the Organization of the Global Manufacturing Economy.” *Sociological Perspectives* 57(2): 229-55.

Mahutga, Matthew C. and Andrew K. Jorgenson. “Production Networks and Varieties of Institutional Change: The Inequality Upswing in Post-Socialism Revisited.” *Social Forces* 94(4): 1711-1741.

Massey, Douglas S. 2009. “Globalization and Inequality: Explaining American Exceptionalism.” *European Sociological Review* 25(1): 9-23.

Milberg, William. 2004. “The changing structure of international trade linked to global production systems: what are the policy implications?” Working paper No. 33, Policy Integration Department, World Commission on the Social Dimension of Globalization. Geneva: International Labour Office.

Milberg, William and Deborah Winkler. 2009. “Globalization, Offshoring and Economic Insecurity in Industrialized Countries.” DESA Working Paper No. 87. New York: United Nations.

Mughan, Anthony. 2007. "Economic Insecurity and Welfare Preferences: A Micro-level Analyses." *Comparative Politics* 39(3): 293-310.

OECD. 2011a. Historical Statistics. Paris: OECD

_____. 2011b. Employment Database. Paris: OECD

_____. 2011c. International Trade by Commodity Statistics Database. Paris: OECD

Oskarsson, Sven. 2009. "Divergent Trends and Different Causal Logics: The Importance of Bargaining Centralization When Explaining Earnings Inequality Across Advanced Democratic Societies." *Politics and Society* 33: 359.

Palier, Bruno and Kathleen Thelen. 2010. "Institutionalizing Dualism: Complementarities and Change in France and Germany." *Politics and Society* 38(1): 119–48.

Ponte, Stefano and Peter Gibbon. 2005. *Trading Down: Africa, Value Chains and the Global Economy*. Philadelphia: Temple University Press.

Riedl, Maximilian. 2013. "Wage Bargaining, Job Loss Fears and Offshoring". Center for European Governance and Economic Development Research Discussion Paper No. 174.

Rubin, Rose M., Shelley I. White-Means, and Luojia Mao Daniel. 2000. "Income distribution of older Americans." *Monthly Labor Review* (Nov.): 19-30.

Rueda, David. 2007. *Social Democracy Inside Out: Government Partisanship, Insiders and Outsiders in Industrialized Democracies*. Oxford: Oxford University Press.

Scheve, Kenneth and David Stasavage. 2009. "Institutions, Partisanship and Inequality in the Long Run." *World Politics* 61(2): 215-53.

Scheve, Kenneth and Matthew J. Slaughter. 2004. "Economic Insecurity and the Globalization of Production." *American Journal of Political Science* 48(4): 662-74.

Schrank, Andrew. 2004. "Ready-to-Wear Development? Foreign Investment, Technology Transfer, and Learning-by-Watching in the Apparel Trade." *Social Forces* 83(1): 123-56.

Scruggs, Lyle, Detlef Jahn and Kati Kuitto. 2014. "Comparative Welfare Entitlements Dataset 2. Version 2014-03." University of Connecticut & University of Greifswald.

Solt, Fredrick. 2009. "Standardizing the World Income Inequality Database." *Social Science Quarterly* 90(2):231-42.

Spence, Michael and Sandile Hlatshwayo. 2011. "The Evolving Structure of the American Economy and the Employment Challenge." Working Paper, Council on Foreign Relations, Center for Geoeconomic Studies.

Thelen, Kathleen. 2012. “Varieties of Capitalism: Trajectories of Liberalization and the New Politics of Social Solidarity.” *Annual Review of Political Science* 15(1): 137-59.

Tomaskovic-Devey, Donald and Ken-Hou Lin. 2011. " Income Dynamics, Economic Rents, and the Financialization of the U.S. Economy." *American Sociological Review* 76(4): 538-59.

Traxler, Franz. 1999. “The State in Industrial Relations: A Cross-National Analysis of Developments in Socioeconomic Effects.” *European Journal of Political Research* 36(1): 55-85

UNIDO. 2015. INDSTAT2 Vienna: United Nations.

United Nations 2014a. *Indicators of Sustainable Development: Guidelines and Methodologies, Third Edition.* New York: United Nations.

_____. 2014b. *COMTRADE.* New York: United Nations.

Visser, Gelle. 2011. “Data Base on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts, 1060-2010.” Amsterdam Institute for Advanced Labour Studies: University of Amsterdam.

Wallerstein, Michael. 1999. "Wage-Setting Institutions and Pay Inequality in Advanced Industrial Societies." *American Journal of Political Science* 43(3): 649-80.

Western, Bruce. 1997. *Between Class and Market: Postwar Unionization in the Capitalist Democracies.* Princeton: Princeton University Press.

Wood, Adrian. 1994. *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-Driven World*. Oxford: Oxford University Press.

Wooldridge, Jeffrey M. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge: MIT Press.

World Bank. 2016. World Development Indicators. Washington D.C.: World Bank

Wright, Erik Olin. 2000. “Working-Class Power, Capitalist-Class Interests, and Class Compromise.” *American Journal of Sociology* 105(4): 957-1002.

Yeung, Henry Wai-chung and Neil M. Coe. 2015. “Toward a Dynamic Theory of Global Production Networks.” *Economic Geography* 91(1): 29-58.

Tables and Figures

Table 1: Country-Years Included

Country	Year
Austria	1993-2006
Belgium	1993-1999, 2001-2002
Canada	1975-1993
Denmark	1975-1979, 1981-2007
Finland	1975-2007
France	1975-2007
Germany	1991-2007
Ireland	1981-1999, 2001-2006
Italy	1975-2006
Japan	1975-1977, 1986, 1987, 1989, 1990, 2000-2006
Netherlands	1975-1979, 1981-2007
New Zealand	1990-1998
Norway	1975-2007
Portugal	2003, 2006
Sweden	1975-2007
Switzerland	1991-2006
United Kingdom	1975-2004
United States	1975-2002
Total: N = 18;	**n = 411**

Table 2: Zero-order correlation between Southern imports and GINI across high and low Global Production Network Consolidation, Wage-Coordination and Welfare State Generosity.

	Low	High
GPN Consolidation	.186***	.217***
Wage Coordination	.422***	.315***
Welfare State Generosity	.551***	-0.027

Notes: Observations country-mean deviated. Low GPN Consolidation and Welfare State Generosity is below median; high is median and above. GPN Consolidation is drawn from UNCOMTRADE (See Figure 1). Welfare state generosity is from Scruggs, Jahn and Kuitto (2014). Low wage-coordination is less than or equal to 3; high is 4 or 5. Wage-coordination is drawn from Huber et al. (1997, 2004, 2014). ***p<.001

Table 3: Coefficients from fixed effects regression of Gini on Southern Imports, moderators and select independent variables.

	(1)	(2)	(3)	(4)
Southern Imports (SPEN)[a]	0.075**	0.054*	0.070*	0.073**
	(0.031)	(0.031)	(0.030)	(0.030)
SPEN*GPN Consolidation		0.004***		
		(0.001)		
SPEN*Wage Coordination			-0.049***	
			(0.014)	
SPEN*Welfare State Generosity				-0.014***
				(0.003)
GPN Consolidation[a]		-0.026*		
		(0.014)		
Wage Coordination[a]			-0.240**	
			(0.079)	
Welfare State Generosity[a]				-0.172***
				(0.033)
Unemployment	0.076*	0.090*	0.076*	0.077*
	(0.041)	(0.043)	(0.041)	(0.040)
Union Density	-0.035	-0.026	-0.025	-0.007
	(0.023)	(0.023)	(0.022)	(0.022)
Industrial Employment	0.101*	0.113*	0.123*	0.088
	(0.057)	(0.058)	(0.057)	(0.056)
Female Labor Force Participation	0.054***	0.057***	0.051***	0.065***
	(0.014)	(0.014)	(0.013)	(0.013)
Elderly Population	0.270**	0.123	0.249**	0.124
	(0.105)	(0.113)	(0.102)	(0.103)
FIRE Sector Employment	0.199*	0.326***	0.208*	0.175*
	(0.096)	(0.099)	(0.094)	(0.093)
Agricultural Employment	5.563**	4.765**	4.573**	4.004*
	(1.918)	(1.969)	(1.918)	(1.900)
Sector Dualism	-0.134	-0.147	-0.121	-0.156
	(0.110)	(0.112)	(0.109)	(0.106)
Secondary Education	0.009	0.012	0.008	0.008
	(0.008)	(0.009)	(0.008)	(0.008)
Natural Rate of Population Increase	0.236	0.052	0.015	0.356
	(0.692)	(0.688)	(0.687)	(0.670)
Cumulative Left Cabinet Share	0.005	0.063	0.014	0.035
	(0.052)	(0.055)	(0.050)	(0.050)
1980s	-0.197	-0.084	-0.270	-0.192
	(0.237)	(0.245)	(0.241)	(0.234)
1990s	-0.013	0.240	-0.121	-0.104
	(0.312)	(0.330)	(0.317)	(0.310)
2000s	-0.003	0.184	-0.181	-0.039
	(0.386)	(0.418)	(0.395)	(0.386)
Constant	10.580*	13.182**	10.173*	14.318**
	(5.043)	(5.224)	(5.049)	(5.347)
ρ	.755	.718	.731	.719
N	411	411	411	411
R^2	0.956	0.957	0.957	0.959

Notes: a This coefficient is the effect of the focal covariate when the other term in the interaction equals the sample mean. Heteroskedasticity and serial correlation consistent standard errors in parentheses; * p<0.05, ** p<.01, *** p<.001 (one-tailed tests). ρ is the first-order (AR1) auto-regressive term.

Table 4: Sensitivity to Model Specification and Alternative Measure of Southern Imports.

	(1)	(2)	(3)	(4)	(5)	(6)
Southern Imports/Total Imports (SPEN1)[a]	0.062*	0.092**	0.097**			
	(0.035)	(0.033)	(0.033)			
Southern Imports/GDP (SPEN2)[a]				-0.107	0.165	0.096
				(0.115)	(0.113)	(0.103)
SPEN1*GPN Consolidation	0.004***					
	(0.001)					
SPEN1*Wage Coordination		-0.057***				
		(0.014)				
SPEN1*Welfare State Generosity			-0.016***			
			(0.003)			
SPEN2*GPN Consolidation				0.005*		
				(0.003)		
SPEN2*Wage Coordination					-0.179**	
					(0.065)	
SPEN2*Welfare State Generosity						-0.022*
						(0.012)
GPN Consolidation[a]	-0.072***			-0.003		
	(0.021)			(0.014)		
Wage Coordination[a]		-0.243***			-0.213**	
		(0.077)			(0.083)	
Welfare State Generosity[a]			-0.140***			-0.139***
			(0.032)			(0.033)
Female Labor Force Participation	0.074***	0.075***	0.085***	0.056***	0.049***	0.059***
	(0.014)	(0.014)	(0.014)	(0.014)	(0.013)	(0.014)
Unemployment	0.072*	0.054	0.062	0.075*	0.064	0.059
	(0.044)	(0.043)	(0.042)	(0.042)	(0.040)	(0.040)
Elderly Population	0.242*	0.343***	0.186*	0.349***	0.315***	0.302**
	(0.116)	(0.106)	(0.110)	(0.099)	(0.096)	(0.099)
FIRE Sector Employment	0.393***	0.337***	0.285**	0.218*	0.202*	0.150
	(0.111)	(0.109)	(0.109)	(0.100)	(0.096)	(0.097)
Union Density	-0.010	0.002	0.015	-0.042*	-0.037	-0.034
	(0.024)	(0.024)	(0.023)	(0.024)	(0.022)	(0.023)
Industrial Employment	0.083	0.086	0.048	0.087	0.095*	0.059
	(0.059)	(0.059)	(0.059)	(0.058)	(0.057)	(0.057)
Agricultural Employment	2.632	1.295	1.113	4.573*	4.021*	3.223*
	(2.137)	(2.141)	(2.072)	(1.967)	(1.883)	(1.883)
Sector Dualism	-0.053	-0.026	-0.063	-0.128	-0.088	-0.110
	(0.111)	(0.108)	(0.105)	(0.112)	(0.107)	(0.106)
Secondary Education Enrollment	0.008	0.010	0.011	0.011	0.009	0.008
	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)
Natural Rate of Population Increase	-0.807	-1.185*	-0.657	0.131	-0.068	0.131
	(0.726)	(0.719)	(0.695)	(0.702)	(0.686)	(0.686)
Cumulative Left Cabinet Share	0.105*	0.070	0.094*	-0.006	-0.020	-0.026
	(0.055)	(0.053)	(0.052)	(0.055)	(0.050)	(0.051)
1980s				-0.184	-0.271	-0.121
				(0.242)	(0.241)	(0.235)
1990s				0.041	-0.088	-0.007
				(0.328)	(0.315)	(0.308)
2000s				0.098	-0.142	0.080
				(0.419)	(0.392)	(0.379)
Fixed Yearly Effects	Included	Included	Included	---	---	---
Constant	9.087*	12.467**	14.719**	10.991*	13.032**	15.093**
	(5.050)	(5.124)	(5.127)	(5.046)	(5.052)	(5.063)
ρ	.737	.747	.743	.746	.746	.758
N	411	411	411	411	411	411
R^2	0.961	0.961	0.963	0.956	0.956	0.927

Notes: **a** This coefficient is the effect of the focal covariate when the other term in the interaction equals the sample mean. Heteroskedasticity and serial correlation consistent standard errors in parentheses; * p<0.05, ** p<.01, *** p<.001 (one-tailed tests). ρ is the first-order (AR1) auto-regressive term.

Table 5: Sensitivity to Gini Coefficient Quality

	(1)	(2)	(3)	(4)	(5)	(6)
Southern Imports (SPEN)[a]	0.050	0.038	0.066*	0.054*	0.075**	0.065*
	(0.031)	(0.032)	(0.030)	(0.030)	(0.030)	(0.030)
SPEN*GPN Consolidation	0.004***	0.004***				
	(0.001)	(0.001)				
SPEN*Wage Coordination			-0.051***	-0.052***		
			(0.013)	(0.013)		
SPEN*Welfare State Generosity					-0.014***	-0.014***
					(0.003)	(0.003)
GPN Consolidation[a]	-0.028*	-0.023				
	(0.014)	(0.014)				
Wage Coordination[a]			-0.228**	-0.199**		
			(0.079)	(0.078)		
Welfare State Generosity[a]					-0.193***	-0.199***
					(0.035)	(0.034)
Female Labor Force Participation	0.060***	0.060***	0.056***	0.056***	0.071***	0.071***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Unemployment	0.129**	0.127**	0.117**	0.114**	0.121**	0.116**
	(0.045)	(0.045)	(0.043)	(0.043)	(0.042)	(0.042)
Elderly Population	0.058	0.089	0.181*	0.202*	0.049	0.071
	(0.113)	(0.108)	(0.103)	(0.097)	(0.103)	(0.098)
FIRE Sector Employment	0.379***	0.373***	0.264**	0.266**	0.231**	0.227**
	(0.100)	(0.101)	(0.095)	(0.092)	(0.094)	(0.091)
Union Density	-0.043*	-0.048*	-0.037*	-0.043*	-0.016	-0.022
	(0.023)	(0.023)	(0.022)	(0.022)	(0.022)	(0.022)
Industrial Employment	0.151**	0.140**	0.165**	0.151**	0.132*	0.119*
	(0.060)	(0.060)	(0.058)	(0.058)	(0.057)	(0.057)
Sector Dualism	-0.061	-0.052	-0.048	-0.034	-0.096	-0.095
	(0.120)	(0.121)	(0.116)	(0.115)	(0.111)	(0.110)
Agricultural Employment	3.617*	3.729*	3.564*	3.515*	2.987	2.844
	(2.011)	(2.029)	(1.945)	(1.922)	(1.922)	(1.896)
Secondary Education Enrollment	0.011	0.012	0.008	0.008	0.007	0.007
	(0.009)	(0.009)	(0.008)	(0.009)	(0.008)	(0.008)
Natural Rate of Population Increase	-0.781	-0.797	-0.807	-0.873	-0.470	-0.549
	(0.721)	(0.710)	(0.721)	(0.704)	(0.704)	(0.684)
Cumulative Left Cabinet Share	0.050	0.029	-0.000	-0.012	0.018	0.006
	(0.054)	(0.054)	(0.049)	(0.048)	(0.049)	(0.049)
1980s	-0.187	-0.211	-0.383	-0.386	-0.279	-0.301
	(0.247)	(0.242)	(0.245)	(0.241)	(0.237)	(0.230)
1990s	0.194	0.140	-0.203	-0.224	-0.156	-0.191
	(0.335)	(0.334)	(0.325)	(0.325)	(0.316)	(0.312)
2000s	0.096	0.028	-0.309	-0.312	-0.137	-0.152
	(0.427)	(0.434)	(0.411)	(0.416)	(0.397)	(0.398)
Constant	10.409*	10.691*	11.470*	11.748**	7.01	7.587
	(5.114)	(4.976)	(5.133)	(4.925)	(5.126)	(4.980)
ρ	.688	.677	.687	.676	.683	.673
N	401	381	401	381	401	381
R^2	0.964	0.973	0.963	0.973	0.966	0.975

Notes: a This coefficient is the effect of the focal covariate when the other term in the interaction equals the sample mean. Models 1, 3 and 5 includes cases with Gini standard errors less than .75. Models 2, 4 and 6 include cases with Gini standard errors less than .5. Heteroskedasticity and serial correlation consistent standard errors in parentheses; * p<0.05, ** p<.01, *** p<.001 (one-tailed tests). ρ is the first-order (AR1) auto-regressive term.

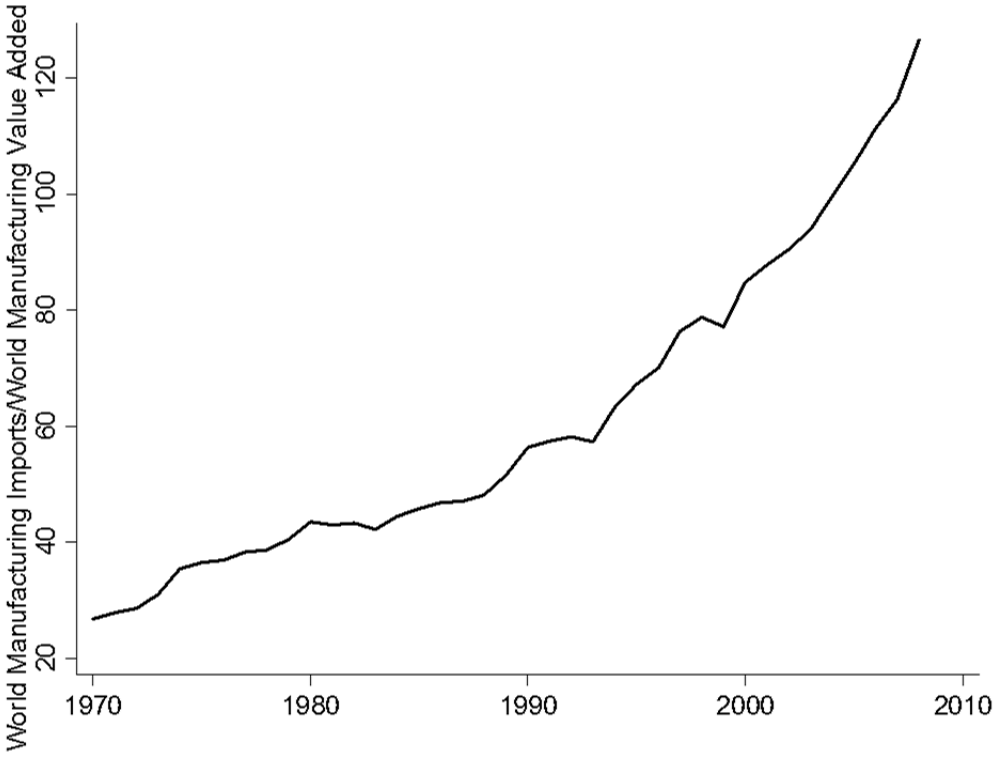
Table 6: Sensitivity of Results to Sample Composition and Gini Source

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Bootstrap Resampling			**Luxembourg Income Study Gini Coefficients**								
Southern Imports (SPEN)[b]	0.054*	0.070*	0.073**	0.095	0.090	0.128	0.003	0.080	0.053	0.084	0.251**	0.228**
	(0.031)N.S.	(0.030)N.S.	(0.067)N.S.	(0.098)	(0.079)	(0.079)	(0.111)	(0.079)	(0.085)	(0.106)	(0.095)	(0.085)
SPEN*GPN Consolidation	0.004***			0.003*			0.005*			0.008***		
	(0.001)++			(0.002)			(0.002)			(0.002)		
SPEN*Wage Coordination		-0.050***			-0.084***			-0.056*			-0.049†	
		(0.014)++			(0.025)			(0.028)			(0.032)	
SPEN*Welfare State Generosity			-0.014***			-0.013**			-0.016**			-0.018**
			(0.003)+			(0.005)			(0.006)			(0.007)
GPN Consolidation[b]	-0.026*			-0.012			-0.039			-0.058		
	(0.014)N.S.			(0.023)			(0.035)			(0.043)		
Wage Coordination[b]		-0.240**			-0.340			0.010			-0.316	
		(0.079)+			(0.255)			(0.222)			(0.268)	
Welfare State Generosity[b]			-0.173***			-0.192**			-0.350***			-0.321***
			(0.033)+++			(0.071)			(0.069)			(0.084)
Controls	Full	Full	Full	Decades	Decades	Decades	Decades, Female Labor, Elderly Population, Agriculture Employ			Full	Full	Full
ρ	.718	.731	.719	.016	.031	.004	.029	.028	-.007	.012	.010	-.002
N	411	411	411	116	113	113	106	103	103	86	86	86
R^2	0.958	0.957	0.959	0.880	0.872	0.888	0.887	0.878	0.905	0.923	0.916	0.930

Notes: a Hypothesis tests based on bias corrected and accelerated (BCa) bootstrap confidence intervals reported next to parametric standard errors: +95% BCa confidence interval does not include zero; ++99% BCa does not include zero. b This coefficient is the effect of the focal covariate when the other term in the interaction equals the sample mean. Heteroskedasticity and serial correlation consistent standard errors in parentheses; †p<.10; * p<0.05, ** p<.01, *** p<.001 (one-tailed tests). ρ is the first-order (AR1) auto-regressive term.

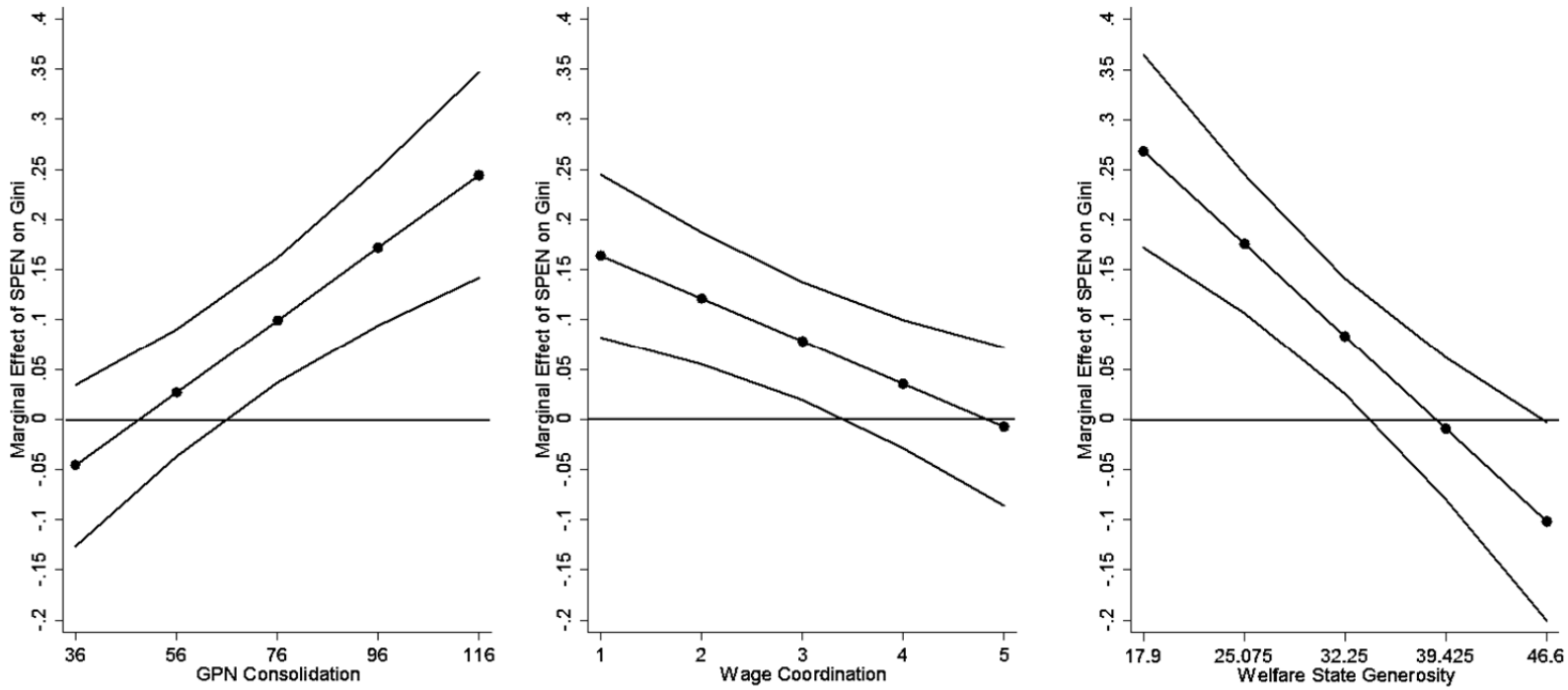
Figures

Figure 1: Consolidation of Globally Networked Models of Economic Organization.



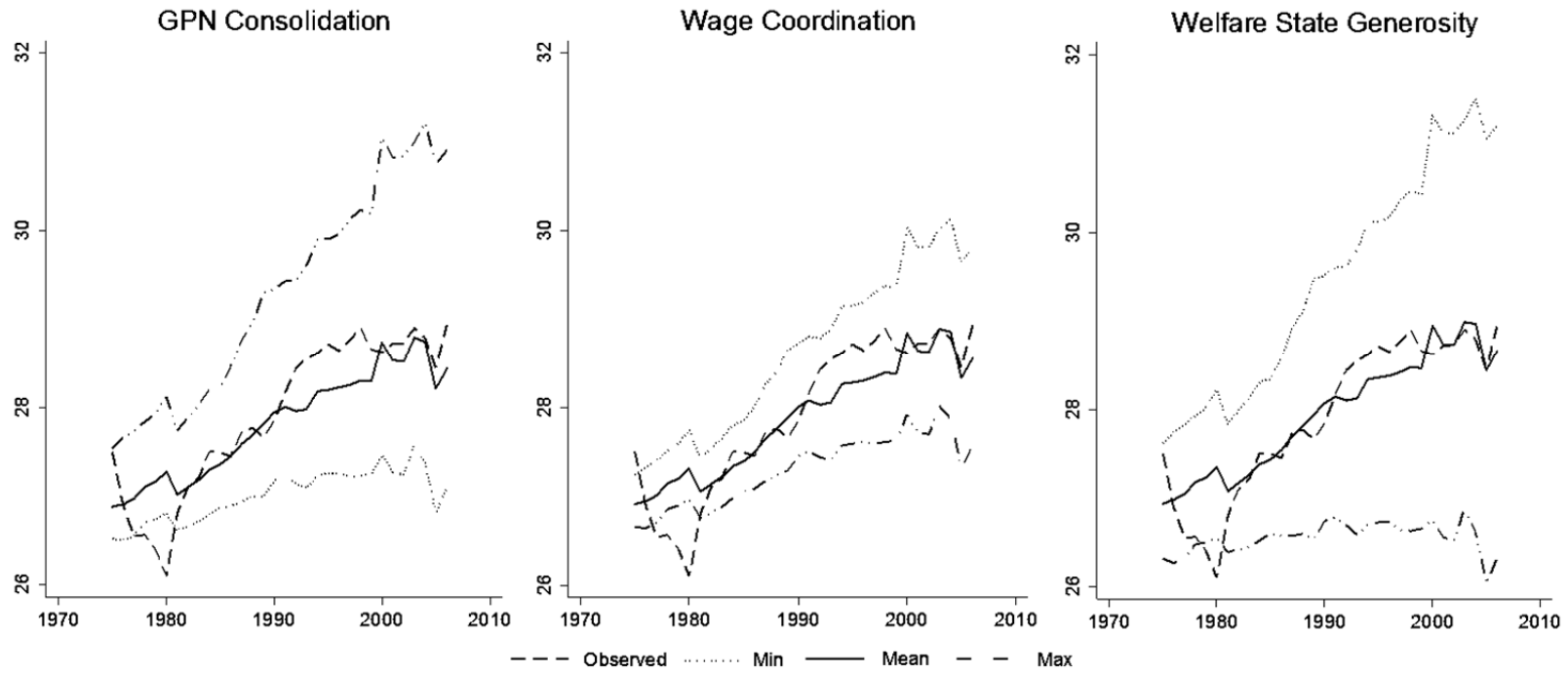
Notes: Trade data are from UNCOMTRADE, Value-added data are from UNIDO (2015).

Figure2: Marginal effect of Southern Imports across GPN consolidation, Wage-Coordination and Welfare State Generosity.



Notes: The Y axes display the marginal effects obtained from Models 6-8 of Table 2. X axes display the observed range of each moderator. Upper and lower lines are 95% confidence intervals.

Figure 3: Counterfactual Trends in Income Inequality



Notes: Observed is the observed inequality trend. Min, Mean and Max are the trends that would have been observed of Southern Imports occurred in a world characterized by the minimum, mean and maximum observed level of GPN consolidation, Wage-coordination and Welfare State Generosity.

Appendix

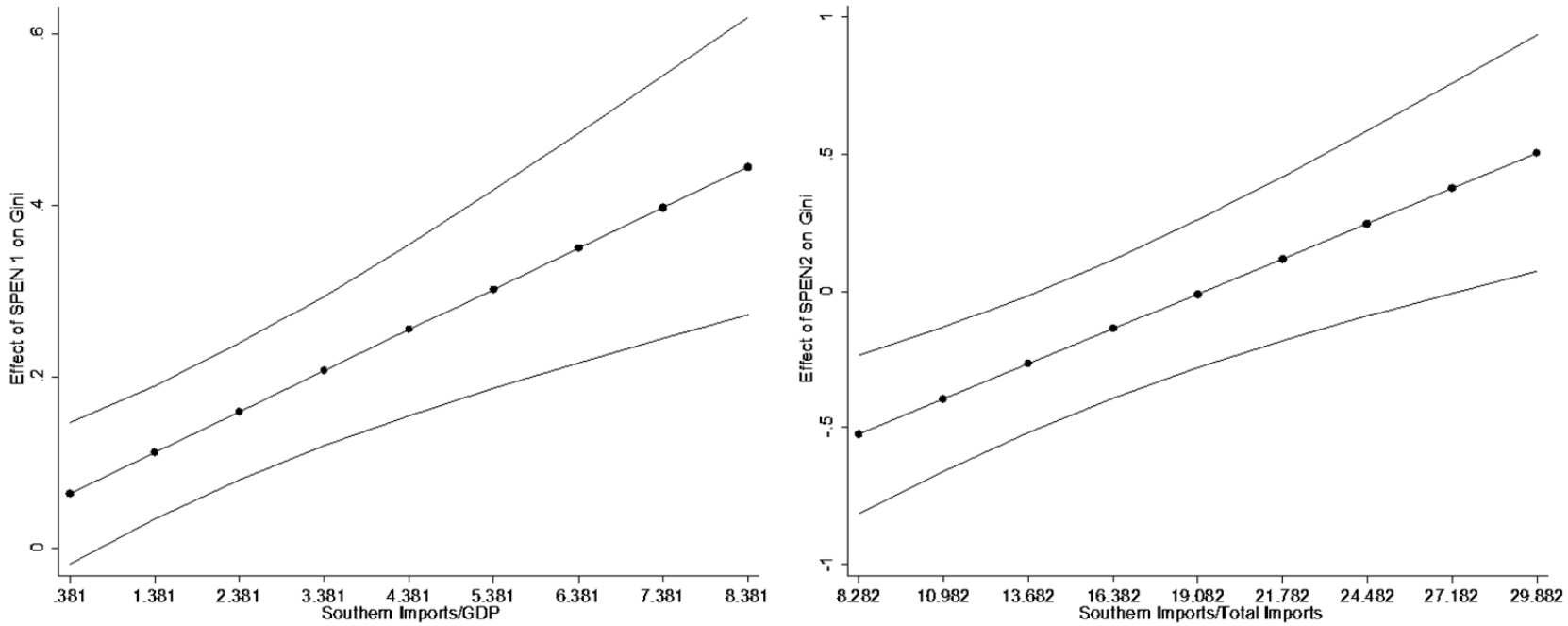
Table A1: Correlations and Descriptive Statistics

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Gini															
2	Southern Imports [a]	.400														
3	GPN Consolidation [a]	.097	.575													
4	Wage Coordination [a]	-.521	-.225	.081												
5	Welfare State Generosity [a]	-.694	-.304	.178	.494											
6	Unemployment	.301	-.133	-.083	-.190	-.217										
7	Union Density	-.611	-.434	-.155	.370	.415	-.019									
8	Industrial Employment	-.055	-.341	-.503	.209	-.192	-.144	.050								
9	Female Labor force Participation	.177	.109	.043	-.331	-.155	-.101	.001	.040							
10	Elderly Population	-.173	.219	.510	.188	.473	-.090	.174	-.043	.207						
11	FIRE Sector Employment	.312	.592	.608	-.265	-.015	-.016	-.550	-.527	.335	.250					
12	Agricultural Sector Employment [b]	-.059	-.441	-.447	.229	-.137	.080	.197	.363	-.510	-.436	-.801				
13	Sector Dualism	.093	-.166	-.103	.227	-.220	-.079	.001	.434	-.313	-.178	-.550	.732			
14	Secondary Education	-.308	.171	.498	.230	.422	.091	.227	-.603	-.093	.216	.367	-.335	-.337		
15	Natural Rate of Pop Increase	.292	.009	-.317	-.330	-.442	.034	-.259	-.195	-.213	-.825	-.117	.335	.084	-.137	
16	Cumulative Left Cabinet Share	-.479	-.150	.331	.188	.528	-.161	.571	-.190	.174	.508	.009	-.239	-.283	.419	-.455
	Mean	27.5	0	0	0	0	7.29	43.7	26.4	5.5	14.3	12.4	.667	1.84	102	.312
	SD	4.22	5.46	22.4	1.39	6.93	3.72	22.4	4.25	37.3	2.35	3.89	.241	1.64	15.9	.274

Notes: a Sample mean deviated. b base-10 logarithm.

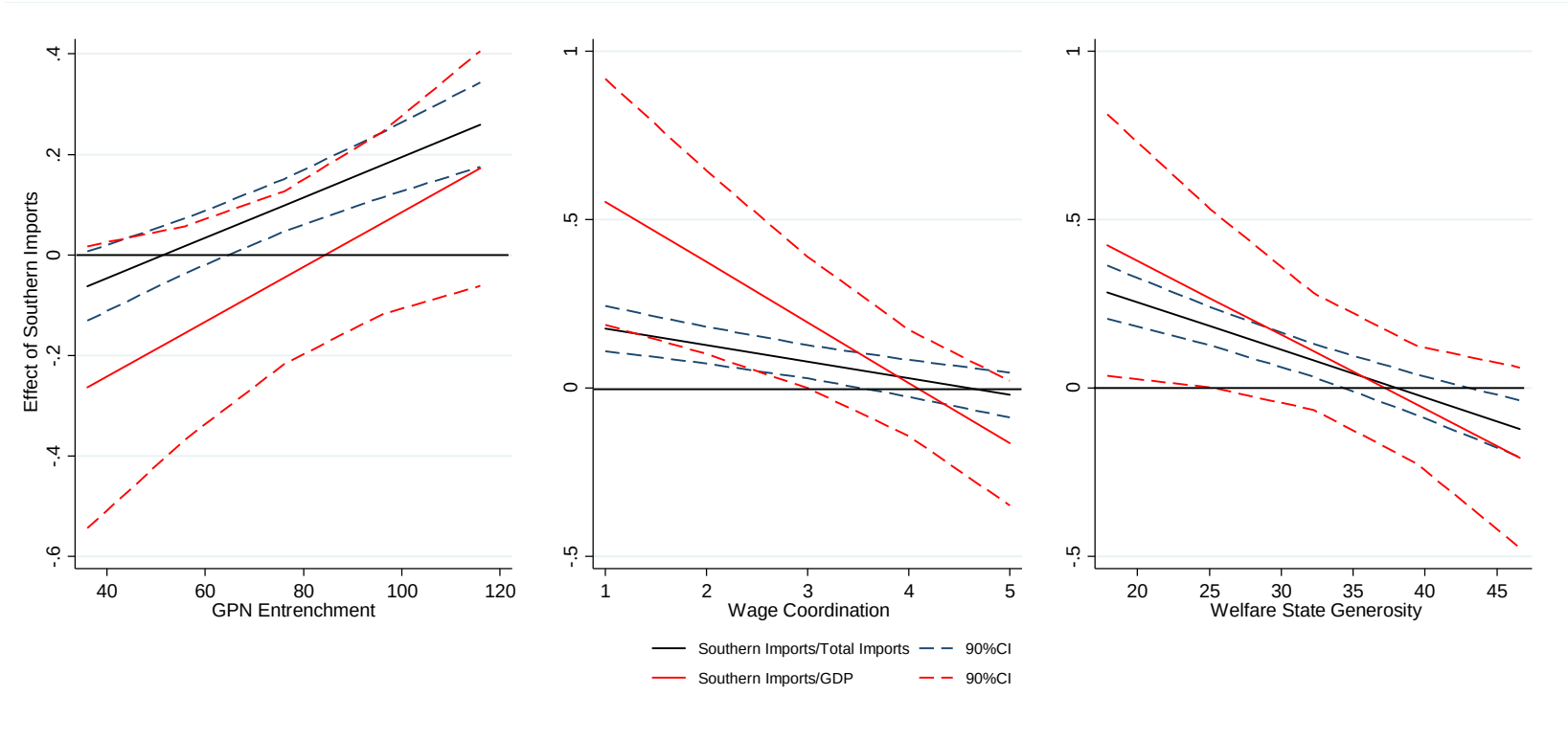
Online Appendix

Figure A1: Marginal Effects of SPEN1 by SPEN2 and SPEN2 by SPEN1.



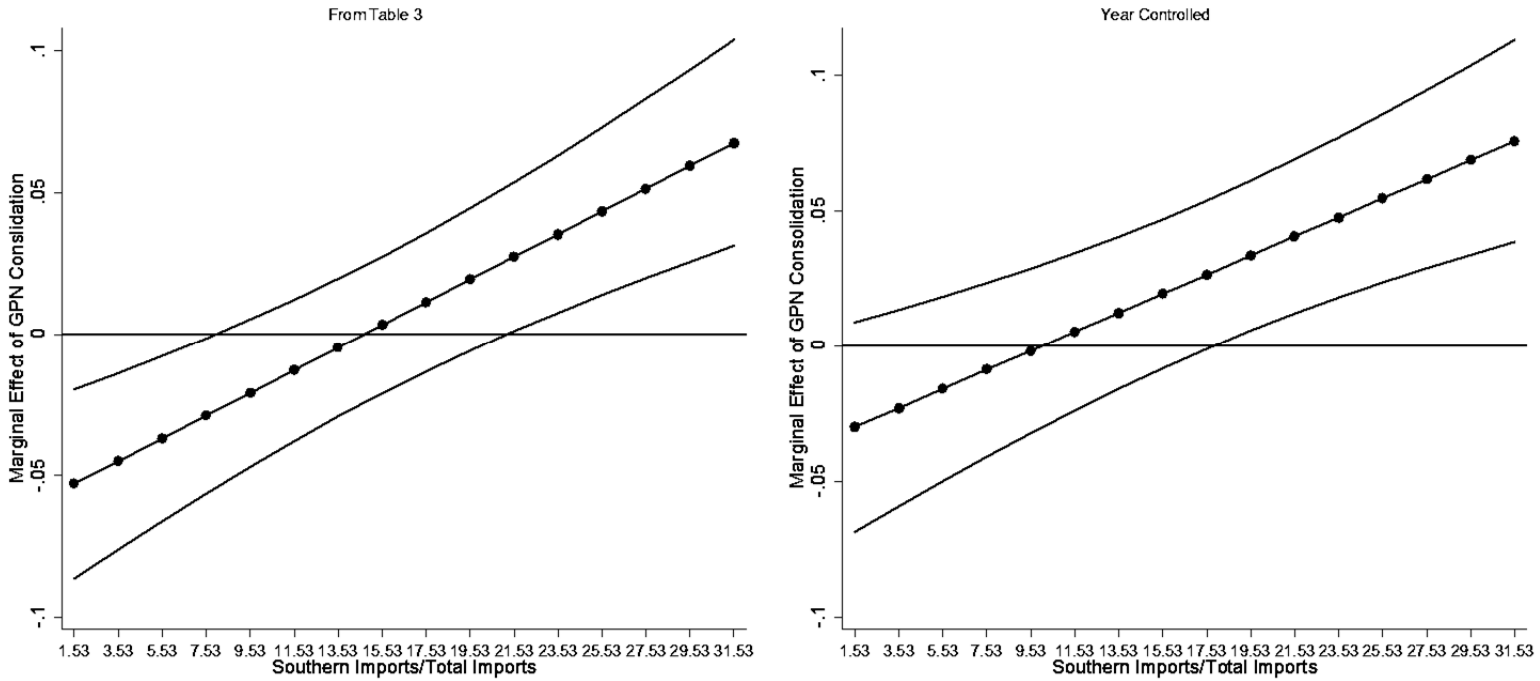
Notes: SPEN1 = SI/Total Imports. SPEN2 = SI/GDP. The slope is .047, with a standard error of .012 ($p<.001$).

Figure A2: Comparative Effects of Southern Imports/Total Imports and Southern Imports/GDP



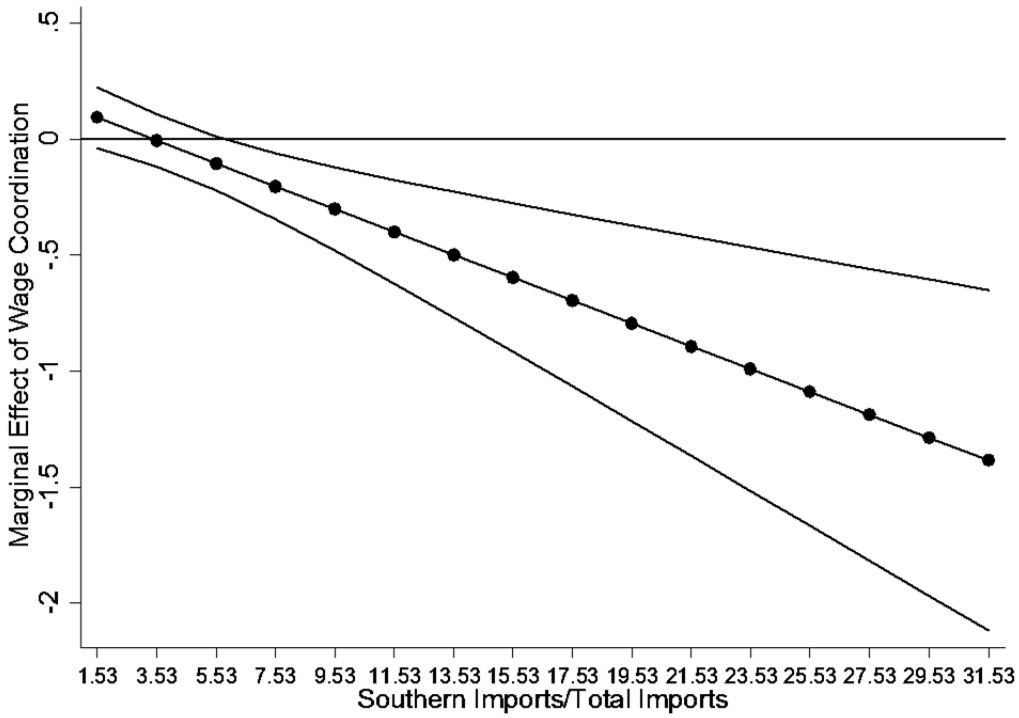
Notes: Southern Imports/Total Imports coefficients from Table 3; Southern Imports/GDP coefficients from Table 4.

Figure A3: Marginal Effect of GPN Consolidation by Southern imports, with and without time controlled.



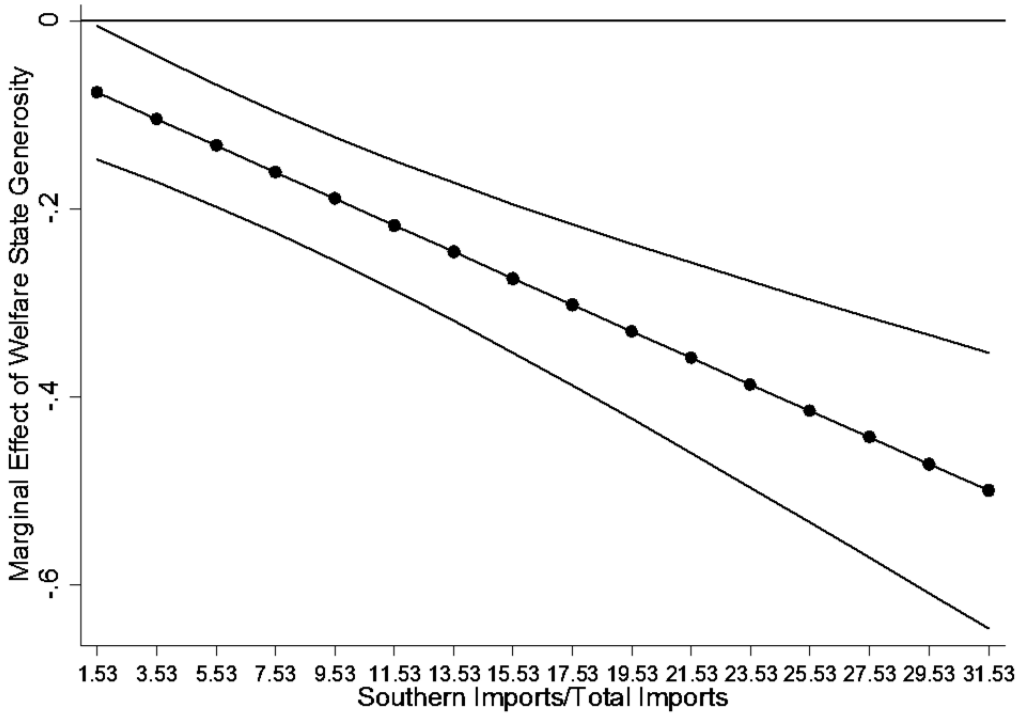
Notes: Coefficients on left hand side come from model 2 of Table 3; Coefficients on right hand side come from an equivalent model including time.

Figure A4: Marginal effect of Wage-Coordination by Southern Imports



Notes: Coefficients based on Model 3 of Table 3.

Figure A5: Marginal effect of welfare state generosity by Southern imports.



Notes: Coefficients based on Model 4 of Table 3.

Table A2: Unstandardized coefficients on GPN consolidation interactions for all models, controlling for linear time trend.

	(1) **b**	(2) **c**	(3)	(4) **d**	(5) **e**	(6)	(7) **f**	(8)
			SWID Gini				LIS Gini	
Replication from	Table 3 and 6	Table 4		Table 5			Table 6	
Southern Imports/Total Imports (SPEN1) **a**	0.073*	0.048		0.070*	0.062*	0.050	0.010	0.054
	(0.035)N.S.	(0.036)		(0.035)	(0.035)	(0.102)	(0.119)	(0.109)
Southern Imports/GDP (SPEN2) **a**			-0.072					
			(0.124)					
SPEN1*GPN Consolidation	0.004***	0.004***		0.003***	0.003***	0.004**	0.005*	0.009***
	(0.001)+	(0.001)		(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
SPEN2*GPN Consolidation			0.004†					
			(0.003)					
GPN Consolidation **a**	-0.009	-0.077***	0.010	-0.011	-0.004	-0.058	-0.033	-0.084
	(0.016)N.S.	(0.021)	(0.016)	(0.017)	(0.017)	(0.046)	(0.051)	(0.064)
Year	-0.157**	0.005*	-0.110*	-0.152**	-0.160**	0.149	-0.025	0.136
	(0.061) N.S.	(0.003)	(0.062)	(0.062)	(0.062)	(0.124)	(0.155)	(0.217)
Fixed Yearly Effects		Yes						
Controls	Full	Full	Full	Full	Full	Decades	+ FLP, EP, ASE	Full
ρ	.718	.737	.750	.694	.683	.018	.028	.011
N	411	411	411	401	381	116	106	86
R^2	0.958	0.961	0.956	0.964	0.974	0.881	0.887	0.923

Notes: Heteroskedasticity and serial correlation consistent standard errors in parentheses; † p<.10; * p<0.05, ** p<.01, *** p<.001 (one-tailed tests). ρ is the first-order (AR1) auto-regressive term.

a This coefficient is the effect of the focal constituent term when the other is equal to the sample mean.

b From table 3, model 2 and table 6, model 1. (BCa) bootstrap confidence intervals reported next to parametric standard errors: +95% BCa confidence interval does not include zero; ++99% BCa does not include zero.

c From table 4, model 1

d From table 5, model 1

e From table 5, model 2

f Includes decade dummies. FLP is Female Labor Force Participation, EP is Elderly Population, ASE is Agricultural Sector Employment.

Table A3: Unstandardized coefficients on trade pattern and interactions, controlling for trade level.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Southern Imports (SPEN1)[a]	0.075**	0.131***	0.039	0.088*	0.066*	0.090*	0.100***	0.101**
	(0.031)	(0.041)	(0.032)	(0.041)	(0.030)	(0.043)	(0.030)	(0.040)
SPEN1*GPN Consolidation			0.004***	0.004***				
			(0.001)	(0.001)				
SPEN1*Wage Coordination					-0.049***	-0.045**		
					(0.014)	(0.015)		
SPEN1*Welfare State Generosity							-0.014***	-0.014***
							(0.003)	(0.003)
GPN Consolidation[a]			-0.033*	-0.023				
			(0.015)	(0.015)				
Wage Coordination[a]					-0.196**	-0.181**		
					(0.071)	(0.075)		
Welfare State Generosity[a]							-0.159***	-0.159***
							(0.033)	(0.033)
Trade Openness	0.001		0.008		0.002		0.003	
	(0.010)		(0.011)		(0.010)		(0.010)	
SPEN2[b]		-0.248		-0.232		-0.105		-0.006
		(0.131)		(0.134)		(0.141)		(0.142)
Controls	Full	Full	Full	Full	Full	Full	Full	Full
ρ	.755	.741	.715	.716	.731	.731	.718	.717
N	411	411	411	411	411	411	411	411
R^2	0.956	0.956	0.957	0.957	0.957	0.957	0.959	0.959

Notes: Heteroskedasticity and serial correlation consistent standard errors in parentheses; † p<.10; * p<0.05, ** p<.01, *** p<.001 (one-tailed tests). ρ is the first-order (AR1) auto-regressive term.

a This coefficient is the effect of the focal constituent term when the other is equal to the sample mean.

b SPEN2 is Southern Imports/GDP