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**Working Paper**

## Economic Globalization, Domestic Politics and Income Inequality in the Developed Countries: A Cross-National Analysis

LIS Working Paper Series, No. 273

**Provided in Cooperation with:**

Luxembourg Income Study (LIS)

*Suggested Citation:* Malher, Vincent A. (2001) : Economic Globalization, Domestic Politics and Income Inequality in the Developed Countries: A Cross-National Analysis, LIS Working Paper Series, No. 273, Luxembourg Income Study (LIS), Luxembourg

This Version is available at:

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**ECONOMIC GLOBALIZATION, DOMESTIC  
POLITICS AND INCOME INEQUALITY IN THE  
DEVELOPED COUNTRIES: A CROSS-NATIONAL  
ANALYSIS**

**Vincent A. Mahler**

**July 2001**

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INEQUALITY IN THE DEVELOPED COUNTRIES:  
A CROSS-NATIONAL ANALYSIS**

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Paper prepared for presentation at the 2001 meeting of the International Studies Association,  
Hong Kong, 26-28 July, 2001

During the last decade, few issues have generated as much debate among scholars, policy-makers and political activists as the relationship between economic globalization and domestic income inequality in the developed world. The central aim of this paper is to offer an empirical assessment of the impact of economic globalization on the distribution of income generated by the market and the ability and willingness of states to redistribute it. Three basic analyses will be conducted. The first and most extensive is an unbalanced pooled cross-sectional time-series analysis of the international and domestic sources of cross-national variance in income distribution and redistribution for various years between the early 1980s and the early 1990s. This analysis will employ measures of post-government disposable income, pre-government earnings and fiscal redistribution that have been calculated from household-level income surveys available from the Luxembourg Income Study (LIS), which provides by far the most comprehensive, detailed and accurate cross-national data on income inequality currently available.<sup>1</sup> The second analysis will offer a full-scale pooled cross-sectional time-series analysis of less complete and comparable annual data from non-LIS sources on pre-government wage dispersion between 1970 and 1990. Finally, the paper will examine trends over an even longer period in the distribution of post-government income in a single country, the United States, for which reliable annual figures are available for the period from 1967 to 1996.

Among the questions addressed in the paper are the following: Is integration into the world economy systematically related to domestic income inequality across countries or over time? Can any economic dislocation resulting from globalization be ameliorated by the redistributive activities of the state? Are there differences in the impact of the three main modes of international integration, trade, direct foreign investment and global financial flows? To what extent are income distribution and redistribution the product of essentially domestic political variables not directly associated with economic globalization?

### **The Distributive Effect of Economic Globalization**

As might be imagined, the interaction among global economic integration, income inequality and public social benefit provision has been the subject of widely varying

interpretations in the scholarly literature. On the one hand, many commentators have argued that there is a clear positive relationship between economic globalization and market income inequality (see, e.g., Goldsmith, 1996; Hurrell and Woods, 1995; Wood, 1994; Greider, 1997; and Reich, 1992). In this view, the rapidly growing movement of goods and capital throughout the world has driven a wedge into domestic economies, separating those who are well positioned to gain from internationalization from those whose status is increasingly undermined by it. High-income groups, for their part, have reaped important new benefits from the enhanced opportunities associated with operations on a global scale. Lower income groups, on the other hand, have found themselves subject to an increasingly ruthless and unforgiving international competition that has seriously jeopardized their wages, benefits and job security.

From this critical perspective, economic globalization has had much the same pernicious effect on income received from the public sector as on market income. Governments have, in this view, found themselves in a cutthroat competition to limit the costs of public benefits in an effort to retain their position in export and capital markets, resulting in a "race to the bottom" that has "hollowed out" longstanding systems of social protection (Page, 1997; Mishra, 1999; see also Moses, 1994; Andrews, 1994). In the view of critics, this downward pressure on social benefits compounds the income effects described earlier. The ironic result is that globalization, in the words of Rodrik (1997: 53), "results in increased demands on the state to provide social insurance while reducing the ability of the state to perform that role effectively."

As would be expected, a substantial body of opinion does not accept the scenario portrayed above. Supporters of global liberalism have been skeptical of critics' claim that international economic integration has encouraged internal inequality in the developed world. On the contrary, they argue, global integration serves as a powerful engine of economic growth, to the ultimate benefit of all income groups (Burtless et al., 1998; Lawrence, 1996; Bhagwati and Dehejia, 1994: 42-46; Baily et al., 1993: 174-197). Moreover, the lower prices encouraged by international competition are seen as particularly advantageous to low-income groups, who tend to consume a greater proportion of their income than their higher-income counterparts

(Bhagwati, 1997: 39). Without the stimulation provided by globalization, economic liberals conclude, national economies would stagnate, resulting in a rigidification of barriers to class mobility that leads to more, not less, inequality (Krueger, 1974).

With respect to the relationship between economic globalization and public sector redistribution, matters are not as straightforward. On the one hand, many economic liberals are skeptical of social benefits because the efficiency costs they impose are thought to be unsustainable in an increasingly competitive world economy. Richardson (1995: 52), for example, questions state efforts to accommodate groups that suffer from freer trade and investment. He draws a comparison between participation in the global economy and education, which "makes those who participate in it better off compared to those who choose not to, and may lead the former to fill jobs that would otherwise be available for the latter . . . But no one seriously argues for slowing the rate at which we educate ourselves just to keep those who gain from getting too far ahead of those who drop out."

On the other hand, many other economic liberals, while accepting that global integration is on balance desirable for participating nations, nevertheless take seriously the possibility that it will invariably produce losers as well as winners and argue that it is entirely compatible with liberal principles for the former to be compensated by the latter. Whether this will in fact happen depends on essentially domestic political factors such as the partisan orientation of governments, the level of participation in national elections, and nature of labor relations. In this view, domestic politics, far from being rendered increasingly irrelevant, has remained the central factor in determining the extent of public sector redistribution. In the words of Garrett (1998a: 824), "the coupling of openness with domestic compensation remains a robust and desirable solution to the problem of reaping the efficiency benefits of capitalism while mitigating its costs in terms of social dislocations and inequality" (see also Garrett, 1998b, Kapstein, 1996, and Evans, 1997).

*Modes of Globalization: Trade, Investment and Financial Flows.* In much of the popular literature on the distributive effects of economic globalization, global ties have been thought of as constituting a single undifferentiated whole. Increasingly, however, scholars have

distinguished between the three most important vehicles of globalization: international trade, direct foreign investment, and global financial flows.

By far the largest literature depicts the relationship between international trade and inequality, particularly as trade has purportedly undermined the wages of workers in the developed world. For over half a century, the prevailing approach among economists has been the Stolper Samuelson theorem and the closely related Factor Price Equalization hypothesis. The Stolper Samuelson theorem, first articulated in 1941, observed that groups controlling relatively abundant factors of production will benefit from free trade while those holding relatively scarce factors will suffer from it. Since in the developed countries skilled labor is abundant and unskilled labor is scarce compared to the rest of the world, the implication is that a growing premium will be placed on workplace skill (Rogowski, 1989: 177-78). A further elaboration of the Stolper Samuelson theorem, the Factor Price Equalization hypothesis (Samuelson, 1948, 1949), posits that economic integration will cause the relative prices of factors of production to equalize globally such that wages of workers at various levels of skill will converge—to the obvious detriment of low-skilled workers in the developed world.

The most common response to the Stolper Samuelson and Factor Price Equalization approaches by supporters of global liberalism is that the assumptions that underlie them are, in the words of Bhagwati and Dehejia (1994: 39, 42), so “extraordinarily demanding” that they “cannot be taken seriously.” Among other things, critics note that these approaches fail to account for gains from economies of scale, diversification and technological innovation resulting from globalization, which arguably serve as powerful engines of productivity growth—to the ultimate benefit of all income groups (Freeman, 1995: 20; Burtless, 1995: 809). More generally, the Stolper Samuelson and Factor Price Equalization approaches are sometimes contrasted with an alternative approach to the domestic distributive effects of international trade, the Ricardo-Viner model. The essential argument of this approach is that the basic units in the domestic politics of trade are not broad quasi-class entities like labor and capital but rather industrial sectors, each of which includes a wide range of income groups. In the Ricardo-Viner view, trade

would be expected to affect distribution among industrial sectors, but to have less effect on inequality among broader social groups.<sup>2</sup>

Of course, there is nothing in the Stolper Samuelson or Factor Price Equalization approaches that prevents the redistribution of any unequal gains from trade by the public sector, in the manner envisioned by Garrett and others. Indeed, Stolper and Samuelson themselves (1941: 73) considered this possibility when they observed that “it is always possible to bribe [a] suffering factor by subsidy or other redistributive devices so as to leave all factors better off as a result of trade.” A long tradition in the literature of political science has explained how trade-reliant states have accomplished this through a system of “social democratic corporatism” overseen by an active state and reinforced by supportive political actors (see, e.g., Cameron, 1978, and Katzenstein, 1985).

Although both critics and supporters of globalization generally consider direct foreign investment to be as important as trade, economic theory in this area is less developed. A summary is provided by Caves (1996: 110-132; see also Baldwin, 1995), who distinguishes between short-term and long-term distributive effects of direct investment. Short-term effects are seen as a manifestation of the standard Heckscher Ohlin model of international trade. According to this model, outbound investment harms domestic workers by removing capital from the local economy and by replacing goods that had previously been produced locally and then exported with foreign-produced goods, while inbound investment benefits domestic workers for the opposite reason. Economists have, however, considered whether these short-term effects continue to hold over the longer term. On the one hand, it is possible that multinational firms will use threats to relocate as a bargaining tool in negotiating with their workers, thus bidding down wages (Ibid.: 125). On the other hand, it is also conceivable that multinational corporations will be required to share any profits from their expanded operations with their workers, along the “democratic corporatist” lines described earlier. Similarly, it is possible that outbound investment, instead of forestalling investment in a local industry, will actually encourage it by spurring local investors to fill a vacuum in that sector (Ibid.: 117). Which of



these very different scenarios applies in the real world is uncertain. As Caves (1996: 115) concludes, “the distributional consequences of foreign investment in the long run remain a strictly unsettled issue.”

Finally, it is often claimed that the liberalization of global financial markets contributes to income inequality (see, for summaries, Simmons, 1999: 62-66 and Garrett, 1996: 88-89). In particular, it is frequently noted that the benefits of a wider range of investment opportunities tend to accrue to high-income groups, which are most likely to have significant investable assets. Moreover, private businesses, even those not directly affected by trade or investment, may find it increasingly necessary to trim workers’ pay or benefits in an effort to retain access to highly competitive global financial markets. On the other hand, it is just as often argued that state efforts to ameliorate the volatility associated with international financial markets provide a valuable collective good—stability—that is under-supplied by the private sector and that the economic as well as the political logic of financial globalization encourages state intervention to protect vulnerable groups (Alesina and Perotti, 1996). Beyond this, state compensation to groups undermined by liberalization of financial flows is said to forestall opponents of globalization who would otherwise seek to restrict capital flows through political action (Quinn, 1997: 534).

As might be expected, given the sharp division in the theoretical literature on the impact of economic globalization on income inequality, empirical analyses have shown mixed results. In a recent review of no fewer than 31 empirical studies on the impact of trade on income distribution in the U.S., Cline (1998: 140-143) found estimates of the share of variance in inequality explained by economic integration ranging from as high as 2/3 to as low as zero. Among the much smaller number of cross-national studies on the topic, Gottschalk and Joyce (1995) concluded that international trade was one of a number of factors explaining changes in earnings inequality in seven industrial nations in the 1980s. Lawrence (1996: 31-34; see also Iversen and Wren, 1998), on the other hand, found little relationship between trade and earnings across four developed countries in the 1990s, concluding that wage trends were instead explained by the growth of (largely non-traded) service sectors. In one of the most comprehensive cross-

national studies to date, Alderson and Nielsen (2001) found some—although weak—evidence that several aspects of globalization were associated with income inequality in the developed world, although these variables were considerably less important than domestic economic and political factors such as the percentage of the labor force in agriculture and union membership.

With respect to the relationship between globalization and public sector redistribution, the prevailing wisdom for over two decades has been that developed countries that are heavily reliant on international trade tend to have large and active public sectors that absorb some of the attendant adjustment costs (Cameron, 1978; Katzenstein, 1985). In the last few years, empirical analyses of the relationship between trade and redistribution have been extended to other modes of international economic integration, with results that can only be characterized as mixed. Huber and Stephens (1998: 354), for example, found that financial internationalization (but *not* trade openness) undercut governments' redistributive activities in four social democratic countries. Bernauer and Achini (2000), however, found the opposite relationships for both variables in an analysis of a larger number of OECD countries, findings that were also in evidence in Hicks's (1999) cross-national study. Quinn (1997), for his part, found a positive (but not especially strong) relationship between financial liberalization and the level of government expenditures. Cusack (1997), however, found no relationship in either direction between financial integration and changes in non-defense public spending. Finally, Garrett and Mitchell (forthcoming) found a negative relationship between increases in, but not levels of, trade openness and social benefit provision, but little evidence of relationships with other modes of economic globalization. In sum, just as was the case for income inequality, the evidence on the impact of globalization on public sector redistribution is decidedly mixed.

*Domestic Political Explanations.* Finally, a large theoretical and empirical literature has explored the domestic political sources of cross-national variance in both the distribution of income and the redistributive nature of social benefit packages. One of the most persistent questions is whether an egalitarian distribution of income and highly redistributive public policies are associated with the political ascendancy of leftist political parties (see, e.g., Hicks

and Swank, 1992). One's initial expectation is that this would indeed be the case, since leftist parties typically place income inequality at the top of their agendas. It has, however, been argued that an equally relevant variable is the strength of free-market rightist political parties—as opposed to Christian Democratic conservatives, whose traditions predate and coexist somewhat uncomfortably with laissez faire principles and who are generally not opposed in principle to state intervention in the economy (Castles, 1982).

A second domestic political factor said to affect income distribution and redistribution is the rate of participation in national elections (Lijphart, 1997; Boix, 2001; Hicks, 1999; Pampel and Williamson, 1989). It has often been observed that low electoral turnout tends to be especially characteristic of social groups that have little stake in the political system and are thus difficult to mobilize—among which low-income households are disproportionately represented. Without the political mobilization represented by voting, it is claimed, these groups are less likely than more active groups to benefit from social transfers, progressive taxes and favorable regulatory policies, which will in turn be reflected in a less egalitarian distribution of income. As summarized by Lijphart (1997: 2-3, 5), “low voter turnout means unequal and socio-economically biased turnout. . . . Who votes, and who doesn't, has important consequences for who gets elected and for the content of public policies.”

A third broad tradition argues that the critical factor in explaining cross-national variance in income inequality and state redistribution is the nature of labor relations. A good deal of attention, particularly among economists, has been devoted to the proportion of the labor force that is unionized, which varies widely across the developed countries. Unions, it is argued, not only seek to raise the income of their members, but also favor social expenditures that benefit them by providing medical, disability and pension coverage (Stephens, 1986).

Finally, a number of observers have argued that income inequality is strongly affected by the degree of centralization of wage-setting institutions—a factor which is said to be quite resistant to global forces (Wallerstein, 1999; Golden and Londregan, 1998). In the words of Wallerstein (1999: 650), “the data strongly indicate that the more wages are determined in a

centralized fashion, the more equal the distribution of earnings. Conversely, the more wages are set in decentralized bargaining, between unions and firms at the plant level or between individual workers and their employees, the more unequal the wage distribution.”

## **Variables**

*Dependent Variables: Income Distribution and Redistribution.* As has been indicated, the central aim of this paper is to explore the sources of cross-national variance in both income inequality and public sector redistribution. In so doing, the intention is not so much to break new theoretical or methodological ground as to re-examine much-studied questions with reference to data on income inequality and redistribution that are substantially more detailed, comparable and reliable than those employed in previous work.

More specifically, the indicator of income inequality in most previous studies has been a summary measure representing overall inequality in a country. Since the late 1990s, an increasingly commonly employed source of comparative data on income inequality has been the United Nations University’s World Income Inequality Database (WIID) (2001), which incorporates and extends an earlier database assembled for the World Bank by Deininger and Squire (1996). The aim of the WIID project is to present all available figures on income inequality for a given country (often reporting multiple estimates for a single year), together with an assessment of estimates’ quality. The large size of this data set and, especially, the fact that it provides annual estimates for many countries, have made it attractive to cross-national researchers who can for the first time examine income inequality using the pooled cross-sectional time-series methods that have become standard in other areas of cross-national analysis.

Unfortunately, as researchers have looked more closely at the WIID data set, they have noted some serious measurement problems that render its uncritical use in analyses of the developed countries quite problematic (Atkinson and Brandolini, forthcoming). For one thing, WIID data, even those judged to be of “high quality,” are inconsistent as to whether income is measured before or after direct taxes and social insurance contributions—an inconsistency that

matters greatly in comparing the industrial countries. Estimates are also inconsistent with respect to whether distributions adjust for household size; whether figures that are adjusted for household size are also subjected to “welfare weighting,” that is, weighted according to the number of members; whether data derive from income or (less desirable) expenditure surveys; and whether surveys include or exclude certain forms of income, especially income from investments and property. On the surface, these measurement issues might appear narrow and technical, of little importance to broad cross-national comparisons of whole countries. In fact, quite the opposite is true. When Atkinson and Brandolini related Deininger and Squire’s figures for some 20 OECD countries to LIS figures for the same countries and years, they found a correlation of only +.48, indicating that the two alternative estimates share less than a quarter of their variance in common. As they go on to demonstrate, over-time comparisons based on WIID data are as hazardous as cross-country comparisons, with many of the measurement issues described above compounded by the fact that national time series are often cobbled together from several sources. Not surprisingly, when Atkinson and Brandolini replicated several studies that employed Deininger and Squire’s data using LIS figures, they found the results to be very different. They conclude that “users could be seriously misled if they simply download the [Deininger and Squire] ‘accept’ series [i.e., data that are judged to be of acceptable quality] . . . Moreover, if the user goes on to utilize the variable in econometric work, then it may make a significant difference to empirical findings” (Ibid.: 8).

As has been indicated, the LIS data employed here are much more strictly comparable across countries than the figures that have been used in most previous work. Among other advantages, LIS data allow consistent adjustments for household size.<sup>3</sup> In common with many previous studies employing micro-data, household income is divided by the square root of household size, which reflects economies of scale in supporting progressively larger households, and the resultant value is weighted by the number of persons in the household. In addition, LIS figures are quite comprehensive with respect to income coverage, offering data on wages and salaries; income from self-employment; interest, rents and property income received on a regular

basis; occupational pensions; regular inter-household cash transfers; and court-ordered payments such as alimony and child support. Finally, LIS figures are derived from large income surveys covering the entire population that have been conducted by national statistical authorities.

Another important measurement issue concerns the index used to summarize the degree of inequality among income groups within a country. For calculations from raw LIS data, a common approach is to employ "percentile ratios," which measure the ratio of the size-adjusted income of households at high and low percentile points on the income scale (Atkinson et al., 1995; see also Wallerstein, 1999: footnote 5). The analyses that follow will focus primarily on the ratio of the size-adjusted income of a household at the 90th percentile to that of one at the 10th percentile, called the 90/10 ratio. A major advantage of percentile ratios is that, because top-coded incomes do not extend as low as the 90<sup>th</sup> percentile, they are immune from problems arising from the common practice of "top coding" in national surveys, in which the highest incomes are coded at an arbitrary maximum value in the interest of confidentiality.<sup>4</sup>

Aside from reliability and comparability issues, and just as important, LIS household-level micro-data data are unusually flexible in that they permit one to measure several specific aspects of income inequality.<sup>5</sup> For purposes of this paper, three separate measures have been constructed. The most traditional measure of inequality focuses on what the LIS calls disposable personal income, which includes income from all sources received by all inhabitants of a country, net of taxes and social insurance contributions.<sup>6</sup> This measure is useful not only because it taps the distribution of all income actually accruing to all inhabitants of a country but also because it is the measure most often employed in previous cross-national work.

In assessing the effect of economic globalization on income inequality, it is also useful to focus specifically on what the LIS calls "earnings," that is, income from wages, salaries and self-employment. This is the form of private sector income that is most frequently said to be directly affected by economic globalization. In measuring the distribution of earnings, it is common to focus on households headed by persons between the ages of 25 and 55, whose income is less likely than that of younger or older workers to be affected by continuing education or early

retirement (Atkinson et al., 1995: 81).<sup>7</sup>

The third major dependent variable seeks to measure the distributive impact of the public sector, in an effort to assess whether state redistribution has been undermined by economic globalization. Most of the previous work on this topic (see, e.g., Hicks and Swank, 1992; Crepaz, 1998; and Garrett and Mitchell, forthcoming) has focused on public social benefit expenditures as a proportion of GDP, a major advantage of which is that consistent and reliable time series spanning some 40 years are available for all major developed countries. A problem with this approach, however, is that countries vary widely on the extent to which public expenditures are internally redistributive. In particular, comparisons of social benefit expenditures are affected by the fact that the largest social programs in most developed countries are pensions, which represent transfers across age groups rather than across income groups per se. Moreover, data on social benefit expenditures fail to capture redistribution through taxes; not only may this be substantial, but in some cases tax allowances may substitute for social transfers, compromising cross-national comparability.

A more direct indicator of the extent of state-directed income redistribution would focus on the difference between pre- and post- tax and transfer income.<sup>8</sup> Just such a measure can be constructed from LIS household-level micro-data. Specifically, this paper will employ a measure of “fiscal redistribution.”<sup>9</sup> This variable is constructed by first calculating the distribution of “market income,” which includes all of the sources of private sector income listed above. (This variable differs from our “earnings” variable in that it includes income from sources other than wages, salaries and self-employment and covers all households, not just those whose heads are between the ages of 25 and 55.) One then adds any income from a wide array of public benefit programs, including those that offer sick pay; disability pay; social retirement benefits; child or family allowances; unemployment compensation; maternity pay; military, veterans' and war benefits; and means-tested cash and near-cash benefits.<sup>10</sup> Finally, one subtracts direct taxes and social insurance contributions, which are among the most important redistributive tax mechanisms in the developed world, to arrive at the distribution of post-

government disposable personal income, as described above. To cite an example, the Gini index of the distribution of pre-government market income in Sweden in 1992 was .451.<sup>11</sup> After accounting for the redistributive effect of taxes and transfers, the Swedish Gini index had fallen to .229, for a fiscal redistribution value of 49.7%  $([.451-.229]/.451)$ .

*Measuring Income Inequality Over Time.* The household-level LIS-derived data employed in this paper are, then, far more comparable, precise and accurate than the summary distributions employed in most previous cross-national studies of income distribution and redistribution. Moreover, LIS data permit researchers to focus on several different income distributions and to measure direct redistribution by the public sector rather than assume that the size of public benefit expenditures is representative of their redistributive nature.

The one major drawback of LIS data is that surveys are available for only scattered years over a relatively brief period, making the analysis of trends difficult. Specifically, the LIS offers data for four "Waves," one centering on 1980, another on 1985, a third on 1990, and a fourth (which is currently underway) on 1995. Unfortunately, the small number of time points and the fact that the countries covered in each Wave vary make full-scale longitudinal analysis of figures computed from LIS micro-data impossible. In light of these limitations, the first analysis offered in this paper is an unbalanced pooled cross-sectional time-series analysis of 14 LIS countries for scattered years between the early 1980s and early 1990s. Specifically, the analysis will focus on 35 surveys covering Australia (1981, 1985, 1989); Austria (1987); Belgium (1985, 1988, 1992); Canada (1981, 1987, 1991); Denmark (1987, 1992); Finland (1987, 1991); France (1981, 1984, 1989); Germany (1981, 1983, 1984, 1989); Italy (1986, 1991); the Netherlands (1983, 1987, 1991); Norway (1986, 1991); Sweden (1981, 1987, 1992); the U.K. (1986, 1991) and the U.S. (1986, 1991).<sup>12</sup>

Clearly, a cross-sectionally dominant pooled analysis of this sort is likely to be more effective in capturing cross-sectional than over-time relationships. This in itself is not problematic, since income inequality and state redistribution have tended in recent decades to vary more across the developed countries than over time. Still, it is obviously desirable also to



focus on annual trends over longer periods than those covered by the LIS. Although the full richness of the LIS data set cannot be called upon, it is possible to offer a diachronic analysis of more limited and imprecise data on income inequality available from several other sources. As has been indicated, two analyses of time-series data from non-LIS sources are conducted. The first employs cross-sectional time-series data recently assembled by Galbraith (1998: 252) that compare trends in wage inequality in 12 countries between the early 1970s and early 1990s. Galbraith's starting point is data on industrial earnings from the OECD's Structural Analysis (STAN) database, which provides wage data for about forty industrial job categories. Although these figures represent wage dispersion across industries rather than households, they do, Galbraith says, correlate reasonably well with household-level figures in years for which LIS income surveys are available. In further improving the comparability of his figures, Galbraith (1998: 250-251) has used LIS data for various individual years to "benchmark" OECD figures by "sliding each measure of earnings inequality up or down until it matches the Luxembourg index for a known year." Obviously, the precision and accuracy of these data is seriously limited by the fact that they do not derive from household-level surveys. Still, they should offer at least some sense of broad trends in wage inequality over the last two decades.

A final diachronic analysis will examine international and domestic sources of trends in the distribution of post-government income in a single country, the United States, for which accurate and comparable figures are available for the even longer period from 1967 to 1996.

*Independent Variables: Economic Globalization.* The most traditional vehicle of economic openness is international trade. The first independent variable measures the value of imports plus exports as a proportion of GDP. This variable has been employed in nearly every study on in the distributive effects of globalization. The source is Huber et al. (1997).<sup>13</sup>

A second independent variable taps direct foreign investment, the defining characteristic of which is some element of managerial control on the part of investors. In accordance with both economic theory and popular perceptions, the focus is on outbound investment, which is said by critics to constitute an especially pernicious vehicle whereby domestic workers are displaced, as

local firms divert resources from domestic to foreign operations (Page, 1997). Outbound investment flows are expressed as a proportion of gross fixed capital formation. The source is United Nations Conference on Trade and Development (1995, 1996, 1997).<sup>14</sup>

Finally, as has been indicated, it is often argued that the economic effects of globalization are associated with global financial flows as a whole. The most common approach has been not to measure flows per se, which are extremely volatile, but rather to assess the degree of restrictiveness of government-imposed limitations on current and capital account payments and receipts, on the assumption that vulnerability to global financial flows can be experienced even if capital does not actually cross national boundaries. The measure employed is a widely used 14-point scale of financial openness developed by Quinn and Inclon (1997).

*Independent Variables: Domestic Political Factors.* Finally, it is of interest to consider several domestic political variables that are said to offer a more powerful explanation than economic globalization for cross-national variance in income inequality and redistribution. As has been indicated, scholars examining political factors have looked to, among other variables, the partisan balance of national legislatures, the proportion of the electorate voting in national elections, the share of the labor force that is unionized, and the centralization of wage-setting institutions. In assessing the partisan orientation of national legislatures, data have been assembled that measure the difference between the share of seats held by left (generally social democratic) parties and those held by secular (i.e., non-Christian Democratic) parties of the right, each measured as a share of the total number of seats in the lower house of the national legislature (from Huber et al., 1997). The resulting variable is called “left party balance”; it increases as the share of left parties in the national legislature rises and/or the share of right parties decreases. Electoral turnout is measured as the proportion of the voting age population that voted in the most recent national election.<sup>15</sup> Union density is measured as the proportion of the labor force that is unionized (from Huber et al., 1997; original source Visser, 1996). Finally, the nature of wage-setting institutions is indicated by a country’s value on a summary variable developed by Wallerstein (available in Golden et al., 1998), that is coded 1 for local wage-

setting, 2 for industry-level wage-setting, 3 for centralized wage-setting without sanctions, and 4 for centralized wage-setting with sanctions.

*Control Variable.* It is well known that the relative importance of trade in a nation's economy is negatively associated with the absolute size of its economy. The same is true for outbound direct foreign investment, although to a lesser extent. Moreover, it is possible that large countries may manifest more inequality than small countries simply because there is more regional variation across their larger territory. In an effort to control for country size, analyses include a variable measuring the absolute size of a country's GDP in U.S. dollars adjusted for Purchasing Price Parities. Since the distribution of absolute GDP is sharply skewed to the right, it is transformed by a logarithmic function. Figures are from the *Penn World Tables* (1997).<sup>16</sup>

## **Findings**

*Methods.* As has been indicated, this paper offers three basic empirical analyses. The first is an unbalanced pooled cross-sectional time series analysis of the 35 cases listed earlier. In examining an  $n$  by  $t$  pool that includes all observations, there are a variety of available methods, including Random Effects models, Fixed Effects models and OLS with a lagged dependent variable and panel corrected standard errors. Each of these seeks to account for the complex pattern of heteroskedasticity and autocorrelation that is characteristic of pooled models, which can seriously compromise the regression assumption of independence of errors across observations. None of these standard methods is, however, appropriate for a data set with a small number of observations that, moreover, draws from surveys conducted at irregularly spaced points in time. In an unbalanced pool situation like this, following Bradley et al. (2001), we have employed an estimation approach that uses a Huber/White “sandwich” robust estimator that clusters observations by country. This method is especially useful when, as in this instance, the expectations of heteroskedasticity and autocorrelation associated with the classic  $n$  by  $t$  model are complicated by the fact that time points are unevenly spaced and the number of countries at any point in time differs. Specifically, the analyses were run using the Stata statistical program's OLS regression option with robust standard errors and a clustering

procedure that groups observations by country. This method results in estimates that are unaffected by deviations from the normal patterns of heteroskedasticity and autocorrelation that would cause other methods to give incorrect estimates (Stata Corporation, 2001).

Because the number of cases in this analysis is small, it is possible that results will be dominated by one or more influential cases. In an effort to explore this possibility, Cook's Distance, which assesses the impact of individual cases on regression statistics, has been calculated. In no case does a Cook's D exceed .30, which is far below the commonly employed criterion that identifies cases as influential if their Cook's value exceeds 1.0 (Weisberg, 1985: 118-124). Similarly, the independent variables clearly co-vary to some extent, raising the possibility of collinearity. In an effort to assess its seriousness, variance inflation factor values have been calculated. For none of the independent variables do these exceed 4.0, which is below both the conventional criterion of 10.0 and the more conservative value of 4.0 applied by Huber et al. (1993; see also Bradley et al., 2001) in their cross-national study of the developed countries.

As has been indicated, a second analysis examines the international and domestic sources of intra-industry wage dispersion in 12 countries between 1970 and 1990. In contrast to the unbalanced pool described earlier, this is a classic  $n \times t$  pool, with full data for all countries and years. In analyzing this data set we employ the method recommended by Beck and Katz (1995, 1996), which utilizes OLS regression with panel corrected standard errors and includes a lagged value of the dependent variable on the right side of the equation.<sup>17</sup> By focusing on change, this analysis nicely complements the cross-sectionally dominant unbalanced pooled analysis: not only does it cover a period twice as long but also, by including a lagged dependent variable which attributes most cross-sectional variance to the lagged term, allows us to concentrate mainly on year-to-year change.

A final analysis examines longitudinal trends in a single country, the United States, over the period from 1967 to 1996. This analysis employs GLS estimation, the standard technique for single-case time series, in exploring the over-time relationship between international and

domestic sources of income inequality in the U.S.<sup>18</sup>

*Results: Unbalanced Pooled Analysis.* First, the results of the analysis exploring the sources of variance in the distribution of post-government disposable personal income are described. We begin with the three modes of economic globalization introduced earlier. As can be seen in **Table 1**, the strongest relationship, significant at the  $p < .001$  level, links the share of trade in a nation's economy with the 90/10 ratio of its distribution of disposable personal income. The relationship is negative, the opposite direction from that predicted by the critics of globalization: an increase in the trade ratio is associated with a more, not less, egalitarian distribution of income. Upon consideration, this is not surprising: it would appear to reinforce the well-established "democratic corporatism" hypothesis that trade-dependent countries are characterized by well-developed relationships between business and labor, overseen by the public sector, that aim to ameliorate adjustment costs associated with heavy reliance on trade. However this may be, this finding provides no support for the claim that trade invariably leads to a widening income gap between a nation's haves and have-nots. As to the other two indicators of economic globalization, neither is significantly related in either direction to the 90/10 ratio of disposable personal income across the 35 country-years examined—which would also call into question the assertion that these ties invariably lead to growing inequality.

What of the political variables? As can be seen, the strongest relationship ( $p = .002$ ) links our left party balance variable (i.e., the proportion of seats in the national legislature controlled by left parties less the proportion controlled by non-Christian Democratic conservative parties).<sup>19</sup> This variable, as can be seen, is significantly negatively related to the 90/10 ratio of post-government income inequality, indicating that partisan factors are indeed associated with income distribution. On the other hand, none of our other three political variables, electoral turnout, union density and the level of wage-setting institutions, is significantly related in either direction to post-government income inequality.

Finally, the control variable is, as expected, positively related to income inequality: other things being equal, large countries do demonstrate a less egalitarian distribution of income than

smaller countries.

The distribution of post-government disposable personal income is, of course, a very broad measure of income inequality. As has been indicated, both proponents and critics of the globalization hypothesis often focus specifically on earnings, which are arguably the form of income most directly responsive to global competitive pressures. The results of an empirical analysis of the sources of earnings inequality are reported in **Table 1**. As can be seen, the relationships between the 90/10 ratio of earnings inequality and our three modes of economic globalization are broadly similar to those reported for disposable personal income. For example, our trade variable continues to be significantly negatively related ( $p=.005$ ) to earnings inequality, although the relationship is slightly weaker than for disposable personal income. Again, our measures of outbound direct foreign investment and financial openness are unrelated in either direction to earnings inequality.

With respect to our political variables we find, once again, that our left partisan balance variable is negatively related at the  $p<.001$  level with income inequality. In addition, a second political variable, electoral turnout, is significantly negatively related at the  $p=.032$  level. As in the previous analysis, however, the level of wage bargaining is unrelated in either direction to earnings inequality.

There is one unexpected finding among the political variables in this analysis. As can be seen, the union density variable, which was not significantly related in either direction to the distribution of disposable personal income, is actually positively related to earnings inequality: the greater the share of the labor force that is unionized, the more the wage inequality. A possible explanation is that, contrary to expectations, union density may have little effect on the incomes of the lowest-earning workers, who are the least likely to be organized (Rueda, 2001). Interestingly, when a Gini index, which is less affected by the earnings of the lowest-income workers, is substituted for the 90/10 ratio in the above analysis, the other findings remain similar but the relationship for union membership falls below the threshold of statistical significance.<sup>20</sup>

Last, it is useful to examine fiscal redistribution by the state. As can be seen in **Table 1**,

all three of our indicators of economic globalization are significantly related to our fiscal redistribution variable, which measures the difference between pre- and post-tax and transfer household income. The strongest relationship is with our financial openness variable, which is positively related to fiscal redistribution at the  $p < .001$  level. A weaker, but still significant, positive relationship ( $p = .026$ ) is in evidence for our indicator of outbound direct foreign investment. Our trade variable, on the other hand, is negatively related to fiscal redistribution: the greater the share of trade in a country's economy (other things, including the size of its economy, being equal), the less the fiscal redistribution by its public sector.

What is one to make of these mixed findings? With respect to financial openness and outbound investments, it does appear that governments have pursued policies that, intentionally or not, have been associated with a measure of state-directed redistribution from high-income to lower-income households—in clear opposition to the “race to the bottom” hypothesis of the critics of globalization. With respect to trade, on the other hand, the opposite relationship is in evidence. One possible explanation is that the “democratic corporatist” mechanisms that seem to be in evidence in our earlier analyses operate primarily through cooperative agreements between business and labor rather than state-directed income transfers per se.<sup>21</sup> However that may be, this represents the single finding in the analysis so far that would appear to support a claim of globalization critics: in all other cases, global ties are either unrelated to income distribution and redistribution or related in such a way that more extensive ties are associated with a more egalitarian distribution of income or more redistribution by the state.

As to our political variables, our left party balance variable is strongly positively related in the expected direction to the relative extent of fiscal redistribution across the countries examined ( $p = .005$ ), confirming for the third time the importance of domestic partisan politics. With respect to union membership, the anomalous finding in the previous analysis is not repeated here: union density is also positively related ( $p = .002$ ) to fiscal redistribution. Last, there is no evidence of a statistically significant relationship in either direction between fiscal redistribution and either our wage-setting institutions or our electoral turnout variables.

To summarize, the analysis reported above offers no evidence that any of our three modes of economic globalization is associated with an inequalitarian distribution of either post-government disposable personal income or pre-government earnings. The only significant relationships in evidence are in the opposite direction, linking the extent of a country's participation in international trade with a more, not less, egalitarian distribution, along the lines of the well-established democratic corporatist view.

The findings concerning fiscal redistribution are somewhat more mixed. On the one hand, statistically significant relationships between fiscal redistribution and our outbound direct foreign investment and financial openness variables support the democratic corporatist hypothesis, as applied to these modes of international integration. On the other hand, the share of trade in a nation's GDP is negatively related to the extent of fiscal redistribution, suggesting that the common association of trade with public sector redistribution (which is based almost entirely on analyses of the size of social benefit expenditures rather than their internal progressiveness) may have to be reconsidered in favor of a process whereby redistribution occurs more as a product of business-labor relations than of direct taxes or income transfers.

With respect to our political variables, this analysis offers consistent, if not overwhelming, confirmation for the increasingly voiced claim that partisan political factors continue to matter in an era of economic globalization. Our partisan balance variable is, for example, significantly related in the predicted direction to the distribution of disposable personal income, the distribution of earnings and the relative extent of fiscal redistribution. With respect to union density, the picture is more mixed, with union membership related in the expected positive direction to post-government disposable income and fiscal redistribution, but in an unexpected negative direction to earnings inequality. Electoral turnout, our third political variable, is related in the expected direction to earnings inequality but not to our other political variables, offering some evidence of an independent effect distinct from that of partisan balance. Finally, our wage-setting institutions variable, which measures the degree to which wage negotiations are centralized, is unrelated in either direction to any of our indicators of income



distribution and redistribution, calling into question the importance of this variable, at least for these countries and years.<sup>22</sup>

*Results: Full-Scale Cross-Sectional Time-Series Analysis of Wage Inequality.* As has been suggested, it is possible to further explore the dynamics of income inequality by employing a variable developed by Galbraith (1998: 248-235) that provides annual data on inter-industry wage inequality. Although Galbraith's data are not nearly as precise, complete or cross-nationally comparable as data derived from household-level LIS surveys, it is nevertheless useful to compare findings based on his figures with those reported earlier, particularly those for our earnings variable. If the results are broadly similar, our confidence in the earlier analysis will be reinforced.

**Table 2** offers the results of a pooled cross-sectional time-series equation that includes our three main indicators of economic globalization, trade, outbound direct foreign investment, and financial openness.<sup>23</sup> The equation also includes our left party balance and electoral turnout variables, as well as our wage-setting institutions and our union membership variables. Finally, each equation includes the t-1 lagged value of Galbraith's Gini index of wage inequality as well as our control for the log of absolute GDP.

As would be expected, Galbraith's indicator of wage inequality is very strongly related to its own value at time t-1, with a t-ratio above 25.00. In addition, wage inequality is positively and significantly related to our control variable, the absolute size of a country's GDP: this too is expected, since at least part of the wage inequality reflected in Galbraith's index likely reflects variance across a country's regions, which one would expect to be related to its absolute size.

With respect to our variables of substantive interest, none of our three indicators of economic globalization is related in either direction to wage inequality in this model, echoing the general paucity of relationships confirming globalization critics' claims in our cross-sectionally dominated unbalanced-pooled analysis. More specifically, since national starting points have been factored out by the inclusion of a lagged dependent variable, the indication is that year-to-year changes in international ties are, on average, unrelated to year-to-year changes in wage

inequality. There is, on the other hand, a fairly strong positive relationship between one of our four political variables, electoral turnout, and Galbraith's measure of wage inequality ( $p=.04$ )—but no relationships in either direction with the other three political variables. The issue of electoral participation (or, more to the point, non-participation) has been much debated in the United States, whose turnout rates in national elections are the lowest in the developed world, but a link between declines in electoral turnout and increases in wage inequality appears to extend to a wider range of countries.

In sum, findings for 12 countries over the two-decade period from 1970 to 1990 are consistent with our more detailed unbalanced-pooled findings in indicating a general lack of significant relationships between economic globalization and wage inequality. They are also consistent with respect to at least one of our political variables, electoral turnout, which was also negatively related to earnings inequality in the previous analysis.

*Single-Country Time Series.* For most countries, fully comparable annual time series of post-government income inequality over an extended period are simply unavailable.<sup>24</sup> A major exception is the case of the United States, for which a series of annual data on the Gini index of post-government household income is available extending back three decades (Ryscavage, 1999: 196-197).<sup>25</sup> To our knowledge, consistent data series over this long a period are available for no other country.

In examining this single-country time series, a GLS regression has been constructed that relates our three indicators of international integration, together with our four political variables, to income inequality in the United States. As can be seen in **Table 3**, our trade variable is significantly negatively related to income inequality in the U.S. over this 30-year period. This confirms a similar finding in our unbalanced pooled analysis of 14 countries, suggesting that at least some redistributive trade adjustment has taken place even in the U.S., whose “democratic corporatist” tendencies are probably least developed among the industrial countries. On the other hand, our indicator of outbound investment as a share of GDP is, in the case of the U.S., significantly positively related to income inequality. This finding stands in contrast to those of

our other analyses, in which investment was not a strong predictor, in either direction, of inequality.

As to our political variables, three of four are significantly related in a negative direction to the Gini index of post-government disposable income. (Recall that a higher Gini index indicates a more inegalitarian distribution.) The single exception is our wage-setting institution variable—which, recall, was unrelated to income inequality or state redistribution in any of our previous analyses. Specifically, the strongest relationship links our union density variable to a more egalitarian distribution of income, a relationship that is significant at the  $p < .001$  level. Our partisan balance variable is also significantly related to income inequality, this time at the  $p = .006$  level. Finally, a significant, if slightly weaker, negative relationship ( $p = .047$ ) is in evidence between our indicator of electoral turnout and the Gini index of income inequality.

In sum, we find that the relative extent of outbound direct foreign investment is positively related to income inequality over the last thirty years in the United States, while trade is negatively related and financial openness is unrelated in either direction. With respect to our political variables, we find that three of four—the partisan balance, electoral turnout and union density—are negatively related over time to income inequality, again confirming the importance of political factors—this time for a country, the U.S., which tends to be at the low end of all of these political variables in comparison with other OECD countries.

## **Conclusion**

In summarizing the results of this paper, a first observation is that there is little evidence of a systematic relationship between any of the three main modes of economic globalization and either the distribution of disposable personal income or the distribution of earnings of households headed by persons between the ages of 25 and 55. Across three complementary analyses, only a single significant relationship (the over-time relationship between outbound direct foreign investment and inequality in the U.S.) was in the direction predicted by the critics of globalization. The overall conclusion is that integration into the world economy does not systematically lead to an inegalitarian distribution of income or earnings across entire

economies. While this does not accord with a substantial body of popular opinion, it is, in fact, consistent with most (if not all) of the empirical work by economists, including recent studies by Burtless et al. (1998), Davis et al. (1996), and Lawrence (1996).

As has been shown, the empirical evidence is somewhat more mixed for our fiscal redistribution variable. Even here, however, two of our three modes of economic globalization are positively related to the extent of fiscal redistribution in the countries examined. While these findings clearly do not mean that globalization never places downward pressure on state redistribution, neither does it suggest the wholesale “race to the bottom” depicted in the more dramatic anti-globalization literature.

With respect to our political variables, the evidence is clearer, if not entirely unambiguous: of twenty possible relationships across three analyses, nine show relationships in the expected direction and only one in an unexpected direction. One conclusion that can be drawn is that politics continues to play a critical role in determining distributive outcomes in the developed world. This is consistent with the conclusion of a growing number of studies in the political science literature that emphasize the resilience of domestic politics in the face of economic globalization (see, e.g., Garrett, 1998b). As these studies illustrate, the empirical evidence would seem to lead one simultaneously to reject the claim of anti-globalization left that economic liberalism must be sharply curtailed if domestic inequality is to be ameliorated, and the claim of the pro-globalization right that the exigencies of international competition call into question any and all state efforts to address distributive concerns. Between these positions, there would appear to be a middle ground that combines a broad commitment to global liberalism with a recognition that economic globalization is compatible with a wide variety of political interactions that can in turn lead to a wide range of distributive outcomes.

## **Endnotes**

<sup>1</sup>The Luxembourg Income Study is a cooperative research project among national

statistical agencies of over 20 countries. For detailed descriptions of the LIS project, see Atkinson et al. (1995), Gottschalk and Smeeding (1997) and the LIS website, <http://www.lis.ceps.lu>.

<sup>2</sup>Although the Stolper Samuelson/Factor Price Equalization and Ricardo-Viner approaches are generally portrayed as incompatible, Cline (1998: 44) argues that this is not necessarily the case, particularly if capital is sector-specific and labor is mobile across sectors.

<sup>3</sup>Households are defined as economic units whose members live together and pool their income. They can consist of a single member. In a few cases, the LIS unit is the "family," whose members are related by blood, marriage or adoption.

<sup>4</sup>Another, less serious, issue has to do with different national practices in "bottom coding" of income that is very low, zero or negative.

<sup>5</sup>Data for the distribution of disposable personal income are from the "key figures" reported on the LIS website. Distributions of pre-government income and earnings were calculated by adapting the Stata program used by the LIS to produce its "key figures." I am extremely grateful to David K. Jesuit, LIS Project Manager and Senior Research Associate, for a great deal of advice and assistance in accessing the LIS surveys.

<sup>6</sup>Data for Austria do not include income from self-employment.

<sup>7</sup>Data for earnings are missing for Austria and for the 1983 German survey.

<sup>8</sup>This measure does not capture the entire distributive effect of the public sector. It does not, for example, include most in-kind benefits. Moreover, regulatory policies, even if not explicitly intended to redistribute income, may nonetheless have a redistributive effect that would be reflected in "pre-government" income. Finally, it is possible that direct income transfers will discourage recipients' participation in the private sector, thus affecting their market income. Although these indirect effects are not captured in the fiscal redistribution variable, they are reflected in the disposable personal income variable that is introduced earlier. For a discussion of indirect distributive effects, see Pedersen (1994).

<sup>9</sup> Data for market income are unavailable for Austria, so fiscal redistribution cannot be calculated for that country.

<sup>10</sup> “Near-cash” benefits are in-kind benefits whose market value is easy to determine, such as those offered by the U.S. Food Stamp program.

<sup>11</sup> Unfortunately, 90/10 ratios cannot be the basis of calculating fiscal redistribution, since in some countries more than 10% of the population received no market income (i.e., all of their income was supplied by the public sector). Instead, fiscal redistribution is based on Gini indexes, employing common standards for top and bottom coding devised by the LIS.

<sup>12</sup> Two alternative surveys are available for France for 1984. This study employs the survey designated France 1984b because it employs a larger and more representative sample and is more consistent methodologically with surveys that follow. LIS offers a few “historical” surveys from the 1960s and 1970s, but they are not examined because they were conducted prior to the “great U-turn” that is said to have reversed the earlier momentum toward greater equality in about 1980. It also offers Wave IV (mid-1990s) surveys for a number of the countries examined here, as well as surveys for several other countries that are not examined. These are not included because they lack data on one or both of two important independent variables, Quinn and Incl’n’s (1997) index of financial openness and Golden et al.’s (1998) index of the level of wage bargaining, whose data series end in the early 1990s.

<sup>13</sup> It is sometimes argued that inegalitarian effects are associated not with trade as a whole but rather with imports of manufactured goods from less developed countries (see, e.g., Wood, 1994). Others have responded that such imports constitute too small a share of the developed countries’ economies to have had much impact on inequality across entire societies and that, moreover, they seldom undercut the prices of comparable products produced in the developed countries (Galbraith, 1998: 273-277). In a supplementary analysis covering 16 Wave IV LIS countries, this variable was related to the distribution of disposable personal income, earnings and fiscal redistribution. No significant relationships were in evidence.

<sup>14</sup>Because of limitations in the data source, the 1985-90 average is used for years between 1985 and 1990, and the 1981-85 average is used for years between 1981 and 1984.

<sup>15</sup>Jackman (1987: 419-421) observes that figures expressing turnout as a proportion of the registered electorate, which are commonly employed, overestimate turnout in countries in which a substantial share of the population is unregistered, and he recommends expressing turnout as a percent of the voting age population. The source of electoral data is International Institute for Democracy and Electoral Assistance (2001). Turnout figures are for the most recent election to the lower house of a country's legislature, except for the U.S., where they reflect the most recent presidential election.

<sup>16</sup>In the words of Garrett (2001: 18), "globalization-inequality regressions that do not control for country size are likely to generate spurious results." Garrett focuses on population, but for present purposes the more relevant variable is the absolute size of a country's economy.

<sup>17</sup>This analysis was conducted with the Shazam econometric statistical program.

<sup>18</sup>This analysis was conducted with SPSS Trends, using the Prais-Winsten method.

<sup>19</sup>In a supplementary analysis, our left party balance variable was replaced with a comparable variable that focused on the party balance of cabinet representation of left and free-market-right parties, on the assumption that in parliamentary systems only parties in the government participate in policy-making. Findings were very similar to those reported here.

<sup>20</sup>The control variable is again positively related to income inequality: other things being equal, the larger a country's economy the more inegalitarian its distribution of earnings.

<sup>21</sup>Our findings regarding trade are largely a result of two countries, Belgium and the Netherlands, whose trade scores are very high but whose fiscal redistribution values are below average. When the analyses reported above are re-run without the six surveys for these countries, the negative relationship for trade disappears.

<sup>22</sup>Our control variable is, as expected, negatively related to fiscal redistribution.

<sup>23</sup>Galbraith's countries include those in the unbalanced pooled analysis less Australia and

Sweden. Our earlier source of investment data does not extend as far back as 1970, so a different source, expressing outbound investment relative to GDP, was used in this analysis. Figures for investment are from IMF (annual) and for GDP from OECD (annual). Golden et al.'s (1998) wage-bargaining variable and Quinn and Inclán's (1997) financial openness variable are not available beyond the early 1990s, but in the case of the U.S. it seemed reasonable to code the mid-1990s at the value of the last available year since U.S. values had clearly stabilized by that point at the highest value on the financial openness variable and the lowest value on the wage-setting institutions variable.

<sup>24</sup>Extensive reviews of national sources in Atkinson et al. (1995) and Gottschalk et al. (1997) found only a handful of annual time series, none of them more than a dozen or so years in length.

<sup>25</sup>For the U.S., whose time series is much longer than for any other case, a different source is used for our trade and investment variables: U.S. Bureau of the Census (various years). Data for the partisan balance variable is from Christianson (1996) and Delury and Kaple (1999).

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## Table 1: Unbalanced Pooled Analysis

### 1. Dependent Variable: 90/10 Ratio of Disposable Personal Income

| <i>Independent Variables</i> | <i>Coeff.</i> | <i>Robust SE</i> | <i>t</i> | <i>P&gt;*t*</i> | <i>Beta Wt.</i> |
|------------------------------|---------------|------------------|----------|-----------------|-----------------|
| Trade                        | -.998         | .245             | -4.079   | .001            | -.403           |
| Outbound Investment          | .011          | .011             | 1.031    | .321            | .121            |
| Financial Openness           | -.044         | .025             | -1.718   | .109            | -.095           |
| Left Party Balance           | -.015         | .004             | -3.933   | .002            | -.562           |
| Electoral Turnout            | .011          | .010             | 1.072    | .303            | .151            |
| Union Density                | -.686         | .423             | -1.621   | .129            | -.192           |
| Wage-Setting Institutions    | .146          | .087             | 1.681    | .117            | .199            |
| Log(Absolute GDP)            | .842          | .259             | 3.254    | .006            | .529            |

N=35;  $F_{8,13}=57.96$  ( $p<.001$ );  $R^2=.86$

### 2. Dependent Variable: 90/10 Ratio of Earnings Inequality

| <i>Independent Variables</i> | <i>Coeff.</i> | <i>Robust SE</i> | <i>t</i> | <i>P&gt;*t*</i> | <i>Beta Wt.</i> |
|------------------------------|---------------|------------------|----------|-----------------|-----------------|
| Trade                        | -1.411        | .413             | -3.418   | .005            | -.411           |
| Outbound Investment          | .013          | .016             | .830     | .423            | .102            |
| Financial Openness           | .055          | .045             | 1.226    | .244            | .085            |
| Left Party Balance           | -.023         | .003             | -6.322   | <.001           | -.553           |
| Electoral Turnout            | -.034         | .014             | -2.425   | .032            | -.324           |
| Union Density                | 1.913         | .692             | 2.764    | .017            | .386            |
| Wage-Setting Institutions    | .096          | .116             | .831     | .422            | .094            |
| Log(Absolute GDP)            | .711          | .277             | 2.565    | .025            | .315            |

N=33;  $F_{8,12}=258.89$  ( $p<.001$ );  $R^2=.87$

### 3. Dependent Variable: Fiscal Redistribution

| <i>Independent Variables</i> | <i>Coeff.</i> | <i>Robust SE</i> | <i>t</i> | <i>P&gt;*t*</i> | <i>Beta Wt.</i> |
|------------------------------|---------------|------------------|----------|-----------------|-----------------|
| Trade                        | -.142         | .036             | -3.995   | .002            | -.433           |
| Outbound Investment          | .002          | .001             | 2.545    | .026            | .192            |
| Financial Openness           | .025          | .004             | 6.594    | <.001           | .428            |
| Left Party Balance           | .001          | .000             | 3.382    | .005            | .342            |
| Electoral Turnout            | -.002         | .001             | -1.578   | .141            | -.227           |
| Union Density                | .358          | .089             | 4.014    | .002            | .775            |
| Wage-Setting Institutions    | -.011         | .009             | -1.218   | .247            | -.110           |
| Log(Absolute GDP)            | -.072         | .034             | -2.115   | .056            | -.343           |

N=34;  $F_{8,12}=31.92$  ( $p<.001$ );  $R^2=.80$

## Table 2: Pooled Cross-Sectional/Time Series Analysis

### Dependent Variable: Galbraith's Gini Index of Wage Inequality

| <i>Independent Variables</i> | <i>Coeff.</i> | <i>Robust SE</i> | <i>t</i> | <i>P&gt;*t*</i> |
|------------------------------|---------------|------------------|----------|-----------------|
| Trade                        | -.001         | .000             | -.200    | .841            |
| Outbound Investment          | .002          | .002             | 1.390    | .166            |
| Financial Openness           | .002          | .001             | .322     | .748            |
| Left Party Balance           | .000          | .000             | .504     | .615            |
| Electoral Turnout            | -.001         | .000             | -2.064   | .040            |
| Union Density                | .006          | .006             | 1.059    | .291            |
| Wage-Setting Institutions    | .001          | .001             | .714     | .476            |
| Log (Absolute GDP)           | .004          | .002             | 2.334    | .020            |
| Lagged Wage Inequality       | .878          | .034             | 25.510   | <.001           |

N=240;  $F_{9, 230}=162.57$  ( $P<.001$ );  $R^2=.86$ ; Log Likelihood=624.16;

## Table 3: Single-Country Time Series: United States, 1967-1996

### Dependent Variable: Gini Index of Post-Tax and Transfer Household Income

| <i>Independent Variables</i> | <i>Coeff.</i> | <i>SE</i> | <i>t</i> | <i>P&gt;*t*</i> |
|------------------------------|---------------|-----------|----------|-----------------|
| Trade                        | -.147         | .061      | -2.401   | .026            |
| Outbound Investment          | .492          | .172      | 2.867    | .009            |
| Financial Openness           | .002          | .005      | .412     | .684            |
| Left Party Balance           | -.036         | .012      | -3.080   | .006            |
| Electoral Turnout            | -.002         | .001      | -2.112   | .047            |
| Union Density                | -.375         | .064      | -5.815   | <.001           |
| Wage-Setting Institutions    | -.001         | .002      | -.795    | .435            |

N=30;  $R^2=.961$ ; Durbin Watson=1.773; Prais-Winsten method