Who Did Safety Nets Catch During the Great Recession and How? A Comparison of Eleven OECD Countries

Katherine Baird
Associate Professor of Economics
University of Washington Tacoma

Abstract

How adequately did governments protect their citizens over the Great Recession? The recent recession, the worst since the Great Depression, provides an opportune moment to investigate the adequacy and fairness of countries' responses to an economic crisis. Using household-level LIS data from eleven OECD nations, I calculate the recession's impact among the non-elderly population on earned income across the income distribution, and investigate the degree to which additional government transfers compensated for these losses. While the recession's impact on earned income varied significantly both across and within countries, in most countries additional government transfers to citizens offset the steep declines in household incomes that occurred along the income distribution, and reversed increases in inequality. A notable shortcoming across many countries was that the protection provided to income shocks was not progressively distributed; in a number of countries, the lowest income citizens experienced the sharpest drops in disposable income. Investigating patterns of responses across the different countries fails to verify "path dependency" claims about how welfare state regimes differ, and how their responses to income shocks might vary; instead I find support for predictions of a convergence in welfare state policy.

Key Words
Great Recession, Income Redistribution, Inequality, Comparative Social Policy, Luxembourg Income Study

One legacy of the devastation wrought by last century's Great Depression is the sizable resources countries now devote to social policies. In one form or another, these protect citizens from various personal risks, chief among them income shocks. While the recent Great Recession of 2008, the worst since the Great Depression, challenged nations' capacity to respond, emerging evidence suggests that for the most part, government policy successfully cushioned households from the steep declines in income (Jenkins et al 2013; OECD 2011d). We know less, though, about how countries compared in the protection they provided. Given wide differences in countries' social policies and in the additional measures they enacted over the Great Recession, we would expect to see significant variation among countries in how effective and fair their safety nets proved to be. While income shocks are not the only risk we should care about, it is a central purpose of social policy, and the protection provided the poor during such times should be a key criterion by which to assess countries' social protection policies.

This paper compares nations' safety net by investigating who they caught and how well they were supported over the recession by examining household-level data from eleven European and North American countries. Using Luxembourg Income Study (LIS) data, I investigate the recession's effect on earned income across the income distribution, and examine how effectively governments' used tax and social policy to insure citizens from income shocks. The eleven OECD countries in this study include ones representing a range of welfare-regimes types as well as enduring differing degrees of economic distress over the recession. The study thus includes a wide variety of country-specific contexts.

Background

Intense interest surrounds how governments' role in social protection will be shaped by the twenty-first century's evolving political and economic challenges. Many contend that internal and external pressure on nations are causing a "welfare retrenchment" (Streeck 2011), as might, too, be the growing presence of immigrants within many European nations (Eger 2010). Moreover, past trends are worrisome. Before the financial crisis, many scholars found that governments had scaled back on features of their safety net, especially those protecting low income citizens, for instance by reducing unemployment insurance and minimum income benefits (Immervoll and Pearson 2009; Marchal, Marx, and van Mechelen 2011; Nelson 2010; OECD 2011b). Some have warned that such trends may not bode well for the poor (Kenworthy 2011). Most troubling is that such reversals were occurring while inequality in most OECD countries rose; and in the decade leading up to the financial crisis, countries' redistributive efforts had waned (Immervoll and Richardson 2011; OECD 2011b; Bertola 2010).

Given this backdrop, it perhaps is surprising that evidence indicates nations significantly increased their income support expenditures over the recession (Jenkins 2013; OECD 2011d). A good deal of this additional effort reflects the "automatic stabilizers" built into existing policies, as when those losing jobs collect unemployment checks and owe less in income taxes. But most OECD countries also undertook additional measures, for example by increasing unemployment, public assistance and family benefits, and cutting taxes (OECD 2014; OECD 2011c; OECD 2011d; Bonnet, Sage and Weber 2012). Such measures ensured that large decreases in income at the national level did not translate into similar losses at the household level (Jenkins 2013). According to the OECD (2011d), social spending grew by almost two percentage points in member nations over the recession, with variation in growth corresponded with the degree of economic distress each experienced. Not only did countries spend more, but they also did so in ways that largely reversed the increases in earnings inequality that was a feature of the recession (OECD 2014).

Yet to date we know much less about exactly how much income protection citizens were provided, who received it, and how countries compare on this score. Given the increasing pressure on safety nets, it is essential to understand how the poor in particular fare, and to identify the policy mix that most effectively reaches them. The Great Recession presents an important opportunity to investigate countries' responses to the crisis. How much protection did they provide, how did they provide it, and how fairly was it distributed?

A prior, we should expect to see considerable variation in the size and distributional nature of nations' efforts. Not only does each differ in the personal risks they cover and the generosity of that coverage, so too do they vary in the extent to which they redistribute income (Wang et al 2012; OECD 2011a; OECD 2011d). Reasonably, then, the expansion in social insurance policies such as those around disability, unemployment, retirement, and the broadening of second tier public assistance programs should have had different distributional impacts across countries. Moreover, countries were far from similar in the additional measures they enacted in response to the recession (ILO and World Bank 2012; OECD 2011d; Chung and Thewissen 2011), which further should suggest variation in their outcomes.

The comparative social policy literature suggests two different theories for how we might anticipate countries' social policies to have responded to the Great Recession, both nicely summarized by Chung and Thewissen (2011). One is path dependence theory--put simply, the past is a good predictor of the future. There are a number of reasons to expect that existing practices and the outcomes they generate might influence countries response to a sharp recession.

Nations have particular sets of institutions and policies which already reflect their different politics, interest groups, and ideological beliefs; all of these also help to set citizens' expectations of how their government should respond. To use Francis Castles evocative phrase (which he borrows from Karl Hinrichs), welfare regimes are like "elephants on the move," and not easily diverted, turned or reversed (2010, 91). Central to this perspective, too, is that different welfare regimes have their own political tendencies, a position articulated by the sociologist Gøsta Esping-Andersen in 1990, with alterations to or elaborations made since (see Arts and Gelissen 2002; Ferragina and Seeleib-Kaiser 2011). While much of this welfare-regime literature analyzes each category's longer-term trajectory (Castles 2010), one might reasonably expect that their institutional and political tendencies will also influence their response to an economic crisis.

The general consensus in this literature is that welfare regimes cluster around four different "types." The "Liberal" model, with Canada, the US, Ireland, Australia, the UK, and sometimes Japan and Switzerland as members, typically provide minimum benefits based primarily on social assistance policies, and reflect a belief that social policies should foremost address poverty. The Corporatist (or Conservative) model includes countries such as Austria, Germany and Luxembourg, and relies heavily on social insurance policies with earnings-based benefits for occupationally-segmented groups. A third Social Democratic model usually provides the most generous benefits, many of which are from universal policies made available to all citizens, and these frequently make up a significant share of citizens' income. Finland, Norway, Sweden, and Denmark are typically grouped in this category. Scholars have recently placed Spain, Italy, Portugal and Greece into a fourth "Southern European" category. While similar to the Corporatist model, social insurance policies are closely tied with employment status and occupation, with a larger expected family role; for these two reasons, these countries tend to have safety nets that are both weak and porous (Moreno 2006; Matsaganis et al. 2003).

Korpi and Palme's (1998) contention that Liberal regimes, with their extensive reliance on social assistance policies, result in weak support for the welfare state compared with the more generous and widely-distributed benefits provided by Corporatist and Social Democratic regimes, has been a widely accepted one (although also increasingly contested, see Marx et al. 2013). Korpi and Palme famously coined the term "The Paradox of Redistribution:" Liberal regimes that target the poor through social assistance policies accomplish less for them than do regimes that target a broader income spectrum through social insurance and universal benefits. A singular focus on redistribution, in other words, fails in its objective: "The more we target benefits to the poor ….the less likely we are to reduce poverty and inequality" (661). Indeed, one concern voiced during the recession was the potentially limited ability of countries with low levels of unemployment insurance and meager social assistance policies--such as in the US and Greece--to respond effectively given the large increases in working-age individuals with neither income nor unemployment benefits (OECD 2011d, Figure 1.20).

As support for this path dependency perspective, Chung and Thewissen (2011) conclude that in the UK, Germany and Sweden, their distinct political and institutional legacies explain differences among them in the added measures they enacted over the recession, and that "the degree of policy innovation was limited" (p. 367). Their study, however, only compares certain measures each nation took, and does not compare their magnitude or distributional impact. On the other hand, Jenkins et al. (2013) undertook a quantitative analysis of how countries responded to the crisis; they conjecture that countries with strong social safety nets are probably the ones that responded most vigorously over the recession, a conclusion that if true, would fit with path dependency predictions.

A contrasting theory of how we might expect countries to have responded to the recession is “convergence theory,” which contends that since countries’ social policies are becoming more similar over time, and we might expect them to respond in similar fashions (Chung and Thewissen 2011). We see evidence of convergence, for instance, in a broad movement across countries toward greater use of labor activation policies, family-based policies, encouragement of mothers in the workforce, and growth in social spending within low spending countries and cutbacks in those with larger budgets (Chung and Thewissen 2011; Starke, Obinger and Castles 2008; Daly 2010). We also see it in the growth of countries prioritizing those within the labor force, as opposed to those out of it (Marchal, Marx and Van Mechelen 2014; Marx et al 2013; Immervoll and Pearson 2009). Such trends coupled with the fact that the recession presented countries with similar challenges and common constraints could lead to predictions of similarity in their responses.

Data Description

How well did countries cushion the blow of lost income over the Great Recession, and how do their responses compare? To investigate this I use micro-level data from the Luxembourg Income Study’s (LIS) most recent waves of data: the 2007 wave represents a baseline before the crisis, and the 2010 wave with information obtained during the recession’s wake. Each year and country dataset in LIS includes detailed income data, typically from tens of thousands of households. Among members of the Organization for Economic Cooperation and Development (OECD) that provide LIS with data, I selected all except for Estonia, Israel and

Poland that contained complete pre- and post-government income data. The eleven resulting countries represent the four different welfare regimes. Within the Liberal paradigm are Canada, the UK, the US, and Ireland; the Corporate regime features Germany, Luxembourg and the Netherlands; and Finland and Denmark represent the Social Democratic tradition, while Spain and Greece the Southern European model.

To separate out the effect of public pensions from other forms of social transfers, I limit this study to the non-elderly population, defined as those below the age of sixty. Social transfers to the elderly are fairly immune to economic downturns (Jenkins et al. 2013), and are also especially redistributive (Wang, Caminada, and Goudswaard 2012). While a comparative analysis of the effect of the recession on the elderly population is also important, this is best done separately so as not to conflate or hide tendencies among the two sub-populations.

To arrive at market income, I adjust household income data for household size by calculating an "equivalized income" for each person in the household based on LIS's recommended formula (see Appendix for detail). I divide everyone in a country and year into quintiles based on their (equivalized) market income to separate out individuals along the income distribution within countries. Market income (which I also refer to in this paper as "earnings") is defined as all income from capital and labor, plus any income from private pensions (see the Appendix for more detail). All figures are adjusted for inflation based on the OECD's consumer price index, and are expressed in 2010 dollars. "Income" in this paper always refers to equivalized income, whether disposable or market, and all data presented here are based on the weighted observations of each county's fifty-nine and under population.

To quantify the effect of government policy on income, I define a second variable "government transfers." This variable captures the combined contribution to individuals' income of both taxes paid and social benefits received; the latter includes the value of both cash and near-cash (such as housing and food vouchers) benefits. As with income, I report the value of "government transfers" in its equivalized form. Typically, government transfers will be high for low income households because they receive larger social benefits while also paying less in taxes. We similarly would expect government transfers to decline with income, and at some income range turning negative when a household pays more in taxes than it receives in government benefits. A final key variable, disposable income or "post-government" income, accounts for the effect of government redistribution on income, and is calculated as market income plus the value of government transfers.

Changes in Market Income and Government Transfers over the Great Recession

National-Level Indicators

The macroeconomic impact of the Great Recession varied widely among OECD countries. While the reason for this variation is not the focus of this paper,[1] the eleven countries in this study represent the range, as shown in table 1 column 1. Between 2007 and 2010, average market income remained essentially unchanged in Germany, fell by 5.9 percent in the United Kingdom, and dropped a sharp 15.3 percent in Ireland.

While average market income fell in eight of the eleven countries, government transfers to individuals also increased in eight of them, as shown in column 2 of table 1. For instance, in the UK, the equivalized value of government transfers increased an average of about £600 (not shown), which column 2 displays as equal to 2.6 percent of average national income in 2007. As shown, and consistent with other studies (OECD 2011d, p. 47), countries experiencing greater

[1]In this paper I treat income changes as exogenous, and thus ignore any potential endogeneity between it and income inequality or social policies.

economic distress tended to respond with larger increases in government transfers. Column 3, which shows the combined effect of changes in earned income and government transfers, demonstrates that in every country but the Netherlands and Ireland, average disposal income declined by less than did market income.

Table 1. Change in Average Income and Government Transfers, 2007 to 2010

	Market Income	Government Transfers	Disposable Income
Liberal			
US	-7.8%	3.2%	-5.5%
UK	-5.9%	2.6%	-3.8%
Canada	2.7%	1.1%	4.5%
Ireland	-15.5%	-0.7%	-16.6%
Corporatist			
Germany	0.2%	0.4%	0.7%
Luxembourg	-5.9%	3.2%	-3.0%
Netherlands	-3.0%	-0.4%	-4.7%
Social Democracy			
Denmark	-2.2%	4.0%	2.5%
Finland	2.0%	-0.2%	2.1%
S. European			
Spain	-14.6%	5.0%	-10.4%
Greece	-18.3%	9.6%	-10.7%

Source: Author calculation based on the non-elderly population and equivalized values. All percentages expressed as a share of their 2007 value, except changes in government transfers is expressed as a share of average 2007 market income.

How were *average* decreases in market income and *average* increases in government transfers distributed along the income distribution? Some indication of this can be gleaned from Gini coefficients, the most common indicator of income inequality. A Gini coefficient of one designates complete income inequality (one person has all the income), whereas a value of zero represents complete income equality (everyone has identical income). In practice Gini coefficients fall somewhere between these two extremes, with higher numbers signifying greater inequality.

Table 2. Change in Inequality and Countries' Redistributive Effort, 2007-2010

	Market Gini			Redistrib. Effort			Change
	2007	2010	Change	2007	2010	Change	Disp Gini
Liberal							
US	0.45	0.48	0.03	0.07	0.09	0.023	0.003
UK	0.46	0.48	0.02	0.09	0.11	0.014	0.006
Canada	0.41	0.42	0.00	0.09	0.10	0.006	-0.005
Ireland	0.46	0.53	0.06	0.17	0.23	0.064	0
Corporatist							
Germany	0.27	0.26	-0.01	0.08	0.08	-0.002	-0.011
Luxembourg	0.38	0.40	0.02	0.10	0.12	0.021	-0.006
Netherlands	0.38	0.36	-0.02	0.09	0.1	0.006	-0.022
Social Democracy							
Denmark	0.35	0.38	0.03	0.12	0.13	0.014	0.014
Finland	0.38	0.39	0.00	0.14	0.14	-0.001	0.005
S. European							
Spain	0.37	0.41	0.05	0.06	0.08	0.014	0.032
Greece	0.40	0.41	0.01	0.08	0.08	0	0.005

Source: Author calculation based on the non-elderly population and equivalized values. See text for definitions. May not add due to rounding.

Table 2 displays the market-income Gini coefficients in 2007 (column 1) and 2010 (column 2). The difference in the two Gini coefficients (column 3) captures growth in inequality between 2007 and 2010. With the exception of the Netherlands and Germany, market income inequality grew in each country. Generally, the growth in inequality corresponded with the recession's depth, as there is a .66 correlation between declines in market income and increases in inequality between 2007 and 2010. This relationship underscores the recession's disproportionate impact on lower-income households.

Since government transfers grew more in countries that suffered harsher downturns, did these offset the rise in higher earnings inequality that occurred? Table 2 column 4 presents country's "redistributive effort" defined as the reduction in the Gini coefficient from government transfers—in other words, the difference between the *market* income Gini and the *disposable* income Gini. In 2007, the average redistributive effort in all countries was .10 and was largest in Ireland (.17). Countries' 2010 redistributive effort is shown in table 2 column 5, and column 6 presents the difference between countries' redistributive effort in 2010 and 2007. As shown in this column, on the whole government transfers in 2010 did more to redistribute income than they did in 2007, with only Germany and Finland showing a decreased redistributive effort.

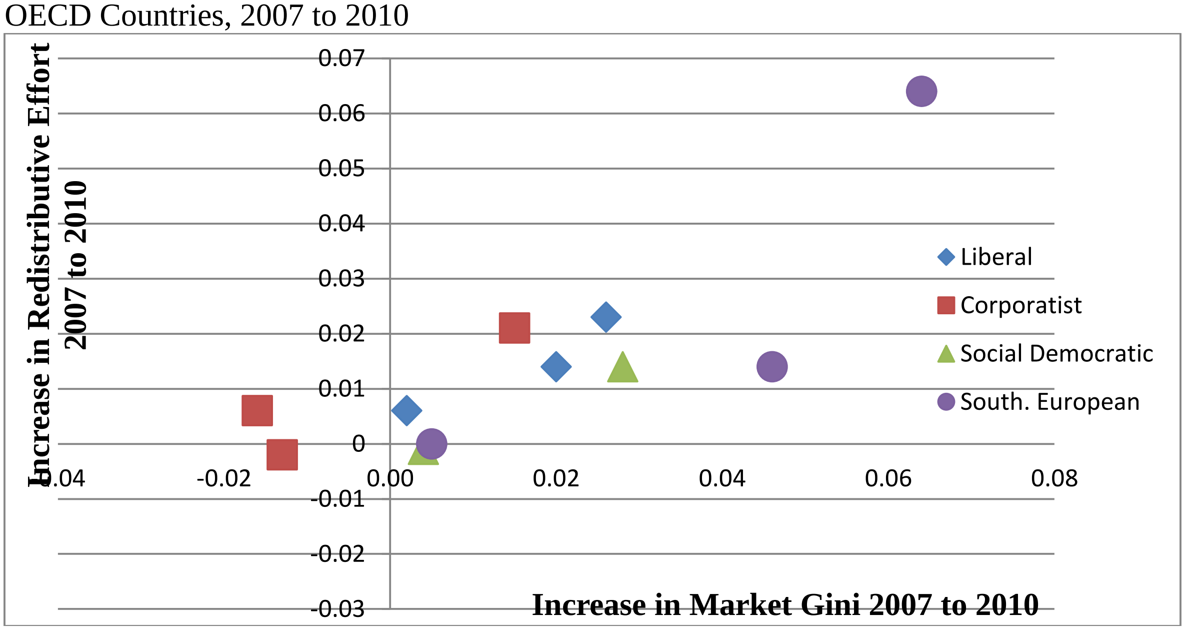
The net effect of greater market inequality and greater redistributive effort is summarized in table 2 column 7 by changes in the disposable income Gini between 2007 and 2010. As shown, government transfers nearly reversed the growth in market income inequality: In four nations, inequality in disposable income was *lower* in 2010 than it was in 2007, and among those countries where it grew, it did so by more than .01 points only in Denmark (.014) and Spain (.032).

The evidence in this sample of countries, then, confirms that during the recession income inequality grew in concert with income losses, but larger increases in government transfers succeeded in at least partly, and often completely, reversing the recession's disproportional impact on lower income individuals.

How do we explain variation in countries' redistributive efforts? Was this reflective of their past welfare state legacies, and/or the extent of their prior degree of income redistribution?

The answer is no, as there is no correlation between countries' 2007 redistributive effort and their additional redistributive effort over the recession (columns 4 and 6 in table 2). On the other hand, as figure 1 below shows, a very strong correlation (.86) exists between increases in market earnings inequality (the horizontal access) and countries' additional redistributive effort (the vertical axis) over the period 2007 to 2010. As evident, across all four "welfare regime" types, the additional redistributive effort countries engaged in closely corresponded with the increases in market inequality they experienced, indicating a striking similarity in the size and distributional impact of countries' responses to the recession. While nearly all countries experienced growth in earnings inequality, the responses to these increases reflected neither a pre-existing commitment to inequality nor a welfare-regime legacy; rather, absolute changes in the mal-distribution of resources within their borders better explains how vigorously a nation's policies countered growing inequality over the recession. The combination of automatic

Figure 1. Increase in Market Income Gini versus Increase in Redistributive Effort, Eleven OECD Countries, 2007 to 2010



Source: See Table 2.

stabilizer policies coupled with additional policy measures during the recession produced similar redistributive effects across the eleven countries. While Chung and Thewissen (2011) might have been right that countries' response to the recession were shaped by their past practices—I'll soon present evidence to support this—so far the evidence in this paper suggests a good deal of *convergence* in outcomes.

Indicators by Quintile Analysis

Government transfers in the eleven countries significantly reduced the impact of the recession on individuals' income, reversed increases in income inequality, and different countries with different sets of welfare policies responded with similar results. To investigate the effectiveness of social policy over the recession more closely, I turn now to examine the effect of countries' policies for those at different points in the income distribution.

Table 3 presents average changes in earned income between 2007 and 2010, first overall (column 1), and then by income quintiles (columns 2-6). In Spain, for instance, average market income fell by 14.6 percent, but for those in the bottom quintile it dropped by an average of 63 percent (column 2). As shown, average income losses shrink as one climbs the income ladder. Without exception in the eleven countries, losses were heaviest among the poor, and most countries show a pattern of losses similar to Spain's.

How well did government transfers target households with larger income losses? Table 4 presents changes in disposable income by quintile. In six of the eleven countries, government transfers buffered the recession's impact on *all* income groups. In every country, though, the bottom quintile experienced the largest relative increases in disposable income compared with market income. As an extreme example, the poorest quintile in Ireland saw their average earned

Table 3. Percent Change in Average Market Income By Quintile, 2007-2010

	All	First Quintile	Second Quintile	Third Quintile	Fourth Quintile	Fifth Quintile
Liberal						
US	-7.8%	-33.9%	-16.5%	-10.1%	-5.8%	-4.7%
UK	-5.9%	-31.2%	-14.4%	-7.9%	-6.5%	-2.6%
Canada	2.7%	-8.5%	-0.9%	1.7%	1.3%	0.0%
Ireland	-15.6%	-93.3%	-45.0%	-22.5%	-9.0%	-8.0%
Corporatist						
Germany	0.2%	-9.8%	-1.7%	0.3%	1.4%	0.4%
Luxembourg	-5.9%	-20.4%	-10.6%	-6.5%	-2.9%	-4.5%
Netherlands	-3.0%	-4.5%	-0.8%	0.1%	0.9%	-6.9%
Social Democratic						
Denmark	-2.2%	-28.3%	-7.9%	-3.2%	-0.9%	2.0%
Finland	2.0%	-9.1%	0.9%	3.5%	3.5%	1.7%
Southern European						
Spain	-14.6%	-63.0%	-26.1%	-15.6%	-10.7%	-8.1%
Greece	-18.3%	-44.3%	-19.4%	-19.0%	-17.1%	-16.0%

Source: Author calculation based on the non-elderly population and equivalized values. All percentages expressed as a share of their 2007 value.

income decline by an enormous 93 percent (table 3), while disposal income among this group fell by an average of only 15 percent (table 4).

Two distinct features of government policy explain how well citizens were protected from income losses over the recession. One is the size of government transfers in 2007. If these were positive, as they typically are for the poor, this income source buffers individuals from declines in market income; if they are negative, as is generally the case for richer households, the opposite holds true as decreases in market income (holding government transfers constant) result in larger declines in disposable income. A second feature of government policy is what I term "insurance:" the amount of additional government transfers above and beyond the amount received in 2007, as a share of income lost over this same period. Some of this insurance reflects automatic policy responses (those who lose their jobs become eligible for unemployment

Table 4. Percent Change in Average Disposal Income by Quintile, 2007 -2010

	First Quintile	Second Quintile	Third Quintile	Fourth Quintile	Fifth Quintile
Liberal					
US	-11.2%	-7.0%	-5.4%	-2.9%	-5.8%
UK	-3.2%	-6.3%	-5.3%	-4.6%	-2.1%
Canada	4.7%	2.7%	4.2%	3.1%	1.6%
Ireland	-15.0%	-17.7%	-15.9%	-14.9%	-17.1%
Corporatist					
Germany	-1.3%	0.1%	1.1%	2.0%	0.4%
Luxembourg	3.1%	-7.1%	-2.8%	0.5%	-5.3%
Netherlands	-0.3%	-2.4%	-2.3%	-1.6%	-9.7%
Soc Democracy					
Denmark	-2.0%	-1.4%	1.0%	2.9%	6.1%
Finland	-1.9%	0.1%	2.7%	3.5%	3.2%
S. European					
Spain	-24.1%	-16.8%	-11.6%	-8.0%	-5.9%
Greece	-12.6%	-13.3%	-10.9%	-9.8%	-9.9%

Source: Author calculation based on the non-elderly population and equivalized values. All percentages expressed as a share of their 2007 value.

benefits), and some originates from the additional policy measures countries enacted over the recession.

Particularly for the poor, it is important to separate out these two features of governments' safety net, as it is the initial size *and* the growth in government transfers that together explain how well they weathered the recession. To my knowledge, this decomposition has not been done.[2] Some comparison of how countries might respond to a recession can be inferred by comparing their income-stabilization policies, a task Dolls et al. (2012) undertook. Before the recession, they calculated that insurance levels within countries varied significantly,

[2] A recent OECD report does calculate the average percentage of income lost in the US between 2007 and 2009 by quintile that was offset by reduced taxes and increased benefits ("insurance") (OECD 2011d, 61. But it does not compare this across countries nor provide information on baseline amounts).

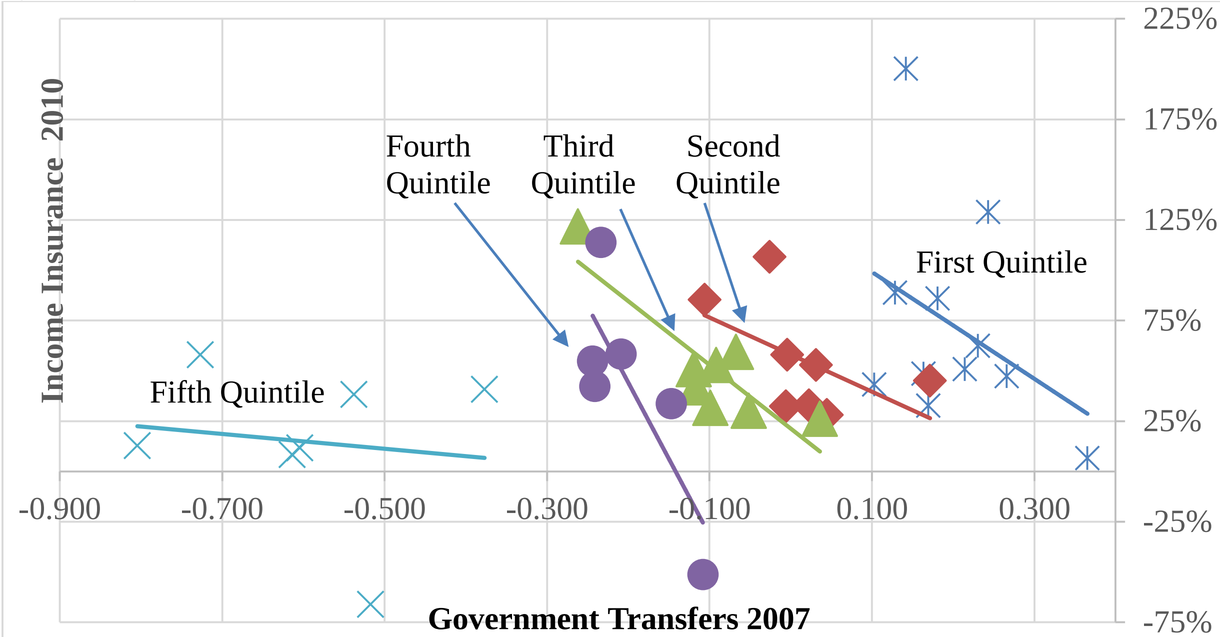
and most fell within the 30-40 percent range. They do not, however, disaggregate their analysis to examine differences in insurance rates along the income distribution. In a study of the distributional effect of the recession and governments' response to it among 21 OECD countries, Jenkins et al. (2013, 23) tentatively conclude: "The degree of distributional stabilization [that countries provided over the recession] may be associated with already having a relatively strong welfare state in general and social safety net in particular." They predict, in other words, that nations with stronger welfare states provided their citizens with stronger insurance for income losses.

Was indeed the amount of insurance countries provided over the recession positively correlated with the prior size of countries' safety nets? Borrowing Nelson's (2008, 113) descriptive terminology, did welfare laggards continue to lag over the recession by providing low levels of insurance, while frontrunners' generosity continued to outpace the others? Comparing similar quintile groups across countries reveals that citizens with larger government transfers in 2007 (the horizontal axis of figure 2) in fact received *less* insurance over the recession (the vertical axis); this general finding holds up across all five quintiles, although with correlations between -.5 and -.85, the pattern is especially robust for those in the middle three.[3]

Here again the evidence fails to support contentions that the magnitude of countries' responses to the recession were influenced by the prior size of their social policies. Instead, I find that where government transfers were larger, nations tended to provide less additional support. This is consistent with Dolls et al.'s (2012) finding that countries with less generous social policies generally spent more on fiscal stimulus measures over the recession.

[3] The relationship is slightly more robust at the tails of the distribution if the value of government transfers is defined relative to quintile income rather than to average national income.

Figure 2. Average Government Transfers in 2007 and Average Income Insurance 2010, by Country and Quintile



Source: Author calculation based on non-elderly population and equivalized income, for quintiles with average income losses. See Table 5 for bottom quintile figures. Government Transfers is average amount within each quintile as a share of average national income. Income Insurance is average increase in government transfers from 2007 to 2010 divided by average income losses over that period, by quintile and country.

Unfortunately, LIS data does not distinguish between government transfers originating from automatic stabilizers versus additional measures, but decomposing countries responses into these two components would shed additional light on the effectiveness of their different responses.

Greater detail on the size and type of social policies nations relied on in 2007, as well as similar information on their response to the recession, is presented in table 5. Here I focus specifically on the bottom quintile in each country. The first column presents the average value of government transfers to this quintile as a share of national income. As shown, they were highest in Ireland (37 percent of average national income), and lowest in the US (10 percent of national income). The fourth column presents the insurance rate provided this group, meaning the value of additional government transfers expressed as a share of average quintile income losses between 2007 and 2010. While in 2007 Ireland furnished its low income citizens with the largest government transfers, it also provided them with the least income insurance over the 2007 -2010 period (7 percent). Compare this with Greece, where government transfers to the bottom quintile in 2007 equaled a low 15 percent of national income, while 49 percent of income losses over the recession were replaced by additional government transfers. The general pattern of an inverse relationship between transfers in 2007 and insurance rates over the recession bring to mind Castle's (2010) conjecture that minimalist welfare states will change the most during an economic crisis, speculating that "Here, I think, are the origins of …add-on schemes" (p. 99)--by which he means that during such times, the shortcomings of weak welfare states are revealed, and stronger responses required of them.

Table 5, which decomposes the generosity of countries' safety net for the bottom quintile into their pre-crisis and insurance (column 1 and 4) components, also lists the policy type that most contributed to the lowest quintile's income (columns 3 and 6), with the four policy options being social assistance, social insurance, universal benefits, and taxes. As evident, no distinct pattern emerges. Except in Denmark (universal), in 2007 the poor gained the most either from social insurance or social assistance policies, and the size of transfers received is not associated with one particular policy measure. What we do see in column 6 is that the additional transfers over the crisis commonly match the measure identified in column 3, but again absent a particular pattern in terms of magnitude. While not reported here, there is in fact a strong correlation between the contribution each of the four policy measures made to the bottom quintile's income in 2007, and the extent to which each measure also propped up their income over the 2007-2010 period.

The evidence, then, is that the “elephants on the move” metaphor fits in terms of policy mechanisms used over the recession, but not in terms of the size and distributional impact of these policies. Indeed, we might conclude that while taking different paths, the elephants all seemed to be headed in the same direction.

Four observations stand out from both the summary information in Table 5 as well as greater detail on the policy measures countries relied on but not revealed here. With the exception of the US, UK, Ireland and Germany, taxes considerably reduced the net size of government transfers to the bottom quintile; and over the recession, tax increases in the Netherlands completely reversed the increases in both social insurance and social assistance provided those in the bottom quintile. This points to the non-progressive nature of tax policy in many countries that also could be indicative of the poor coordination between social and tax policies. Second, universal benefits account for a relatively small amount of transfers to the bottom 20 percent; only in Denmark is this the largest source of social transfers. Third, the importance of earned income to disposable income varies significantly, ranging from the equivalent of 6 percent of average national income in the UK, to 26 percent in Luxembourg. As a share of their disposable income, earned income among the bottom quintile ranged from a low of around 20 percent in Ireland and the UK, to 60 percent in the US and Netherlands. Finally, as noted above, there is no correlation between the amount of transfers provided in 2007 to the poor (column 1) and the amount of additional support provided over the recession (column 4).

In addition to cross-national comparisons, a key concern of this paper is to investigate the treatment of income groups within countries. Comparing responses across the income distribution suggests that overall countries provided lower income citizens with only slightly more insurance than they did wealthier citizens; we see this in the slight upward trend in insurance rates in figure 2 from the top of the income distribution to the bottom (moving from the left side of figure 2 to the right side), although any relationship is weak: the average insurance provided for most quintiles across the income spectrum clusters around the 50 percent level. Thus within countries, insurance against income losses was not as progressive as one might hope, especially considering the much larger income losses suffered by the poor. In fact, only two of the eleven countries (Luxembourg and Netherlands) furnished the bottom quintile with the highest rate of insurance against income losses. Moreover, in the US, Germany, Denmark, Spain and Finland (and nearly so in Greece), the poorest 20 percent suffered the largest percentage losses in disposable income of all five quintiles. Only in Canada, Luxembourg and the Netherlands did the poorest quintile fare better relative to their 2007 income than did the other four quintiles.

Table 5. Size of Safety Net to Bottom Quintile 2007 and Changes to it, 2007-2010

	2007 Safety Net			**Changes to Safety Net 2007-2010**		
	Average Gov Transfer			**Protection From Income Losses**		
	Amount	Rank	Source	Amount	Rank	Source
Ireland	.38	1	SA	.07	11	SA
Finland	.27	2	SI	.47	8	U
Germany	.23	3	SA	.62	5	U/SA
Luxembourg	.22	4	SI	1.29	2	SI
UK	.21	5	SA	.51	6	SA
Denmark	.18	6	U	.86	4	U
Spain	.17	7	SI	.33	10	SI
Greece	.16	8	SI	.49	7	SI
Canada	.14	9	N/A	2.00	1	N/A
Netherlands	.13	10	SI	.89	3	Taxes (neg.)
US	.10	11	SA	.43	9	SI

Source: Author calculation for non-elderly population based on equivalized income. Government transfers in 2007 calculated as the average value to bottom quintile as a share of average national income that year. "Protection from income losses" calculated as average increase in government transfers for bottom quintile as a share of average income losses 2007 – 2010.

SA=Social Assistance; SI=Social Insurance; U=Universal; neg=negative; N/A=not available.

Discussion and Conclusions

In many respects, the paper confirms the findings of others: Income declines were most significant among the poorest households, and in almost all countries, market income was more unevenly distributed in 2010 than it was in 2007. Moreover, government transfers to citizens offset much of the steep declines in earned incomes that occurred across most of the eleven countries and along the income spectrum within them, effectively reversing the recession's adverse trends in market-based inequalities.

Yet by investigating the impact of the recession across the distribution, and comparing this across countries, the paper covers new ground. I find that inequality was reversed in most countries through broadly dispersed government transfers that for the most part collectively did not prioritize protecting the poor from income shocks. In many countries, the poor suffered the largest losses in disposable income over the recession. While welfare states' responses to the Great Recession were stronger than many would have predicted, the paper has highlighted a shortfall in the protection provided the lowest-income citizens. How to achieve this during a time of economic distress remains an ongoing and urgent challenge.

While this paper focuses on the size of government transfers, by adding earned income into the picture, one finds that in only two of the eleven countries (Finland at 51 percent; Luxembourg at 60 percent) was average disposable income among the bottom quintile in 2010 above 50 percent of median 2007 income. As a point of comparison, the European Parliament has set the poverty level of its member states at 60 percent of median income (Marchal, Marx, and Van Mechelen 2011, 14). Luxembourg was the only nation to meet this threshold in the average income of its bottom quintile; and it is noteworthy that it did so by being above average in all three components: the poor had relatively good labor market outcomes, received comparatively high levels of government transfers, and were furnished with strong insurance rates over the recession for income losses (table 5). No other country in this sample of eleven can make a similar claim.

Unquestionably, the full implications of the financial crisis on the shape welfare states are taking is still to be determined; and how they responded over the crisis may or may not tell us anything about their future trajectory. However, this snapshot of who received what degree of protection and how does tell us something about how effectively countries' safety nets responded to the economic crisis, and allows some conjecture over how and why they were similar and different.

Investigating reigning debates over the political legacy created by countries' welfare state regimes, one perhaps surprisingly conclusion was that in countries where citizens gained less from government transfers before the recession, they benefited more over the recession from higher levels of income protection. This finding counters conjectures that generous welfare regimes responded more generously (Jenkins et al. 2013) or that Liberal regimes will be less responsive to the poor than will Corporate or Social Democratic regimes (Korpi and Palme 1998). In general the paper's results indicate that the traditional "welfare regime" categories are not useful in explaining either the magnitude of countries' responses to the recession, or their distributional impact. Nor does it support the premise that countries relying more heavily on universal policies (Social Democratic regimes) as opposed to targeted social assistance policies (Liberal regimes) will do a better job supporting the poor, a finding also consistent with Marx et al.'s (2013) exhaustive study on the topic. At least in terms of responses to an economic crisis, different welfare regimes had more in common than distinguished them. The precise policy mechanism by which countries dispersed additional resources to the poor over the recession – whether through additional need-based dollars, tax cuts, increased universal benefits, or payments from social insurance programs—corresponded with past practices; in this sense we can detect a 'welfare regime" legacy. However, this legacy does not extend to either the size of countries' responses nor to its distributional features. Whether or not welfare states are converging remains to be seen, but there is basis for seeing such a trend in their responses to the recession.

The necessarily circumscribed nature of this investigation leaves unaddressed a host of issues, two of which I'll mention as important limitations to it. First, I have not taken up the variation across countries in earnings, and changes in them over the recession. Yet for the poor, the very low levels of market income in 2010 in the Liberal welfare regimes, particularly in the UK and Ireland, raise issues around the role of governments in creating and sustaining employment for its lowest-income citizens; from a broader vantage point, these should not be separated from an analysis of the government's influence on disposable income since government policy does and can play an important role in labor market outcomes. Given the wide variation among countries, there are likely lessons to be learned here both in how to improve labor markets outcomes as well as make them more resilient for low income workers during sharp economic downturns. Second, by focusing on income shocks over the recession, the paper has examined only one aspect of social welfare and its distribution within nations as related to the recession. Especially given its disproportion impact on youth and the poor, an important concern is the recession's longer term legacy on life outcomes and social mobility.

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Appendix: Definitions of Variables and Sources

Note: All data, except the CPI deflator, come from LIS, and are available at http://www.lisdatacenter.org. All figures presented in this paper are based on their weighted values and use the population in each data set below the age of sixty.

Market income: Income earned from labor and capital markets, plus private pensions **(**factor + hitsilo). All negative income values were bottom coded to zero.

Social Transfers: The value of government transfers (cash and near cash) minus taxes (hitsi-hitsilo+hitsu+hitsa-hxit). Near-cash in-kind transfers include such things as food stamps and housing subsidies, the value of which are easy to capture. It does not capture the value of health care benefits, however.

Disposable Income: Market Income + Social Transfers. All negative values of disposable income were bottom coded to zero.

Equivalized Income: LIS provides household level data. To assign income values to individuals, I calculate equivalized values for individuals; all income in this paper are expressed in equivalized values. As recommended by LIS, I calculate equivalized income for an individual as the dollar amount for the household divided by the square root of the number of people in the household.

CPI Adjustment: Based on OECD CPI index for all items, with 2005 as the reference year. Available from OECD.stat (http://stats.oecd.org)