

*Inequality, labor market segmentation, and
preferences for redistribution*

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Abstract

We formalize and examine two overlapping models that show how rising inequality combined with ethnic and racial heterogeneity explains why some countries have experienced a drop in support for redistribution as inequality has risen. One focuses on the effect of increasing “social distance” between the poor and the middle class when minorities are increasingly overrepresented among the very poor. The other combines an insurance model of preferences for redistribution with increasingly segmented labor markets in which immigration of workers without recognized skills left most native workers better off but intensified competition for low-end jobs. We estimate parameters from the two models using data from multiple waves of ISSP surveys and find that controlling for measures of labor market risk reduces the effects of social distance and ethnic-linguistic heterogeneity.

1. Introduction

The rise in inequality over the past three decades has highlighted a major puzzle in political economy: while standard models predict demand for redistribution to rise, evidence suggests that it has fallen. By most accounts wage inequality, structural unemployment, and insider-outsider divisions have all grown more severe in the past three decades, yet there has been no off-setting expansion of redistribution and social protection (Korpi & Palme 2003, Huber and Stephens 2001, Rehm 2011). There is also evidence that public opinion has been shifting against redistribution. Georgiadis and Manning (2012) finds that support for redistribution has dropped in Britain during the period when inequality has been rising, and Cavaille and Trump (2012) show that while support for redistribution may have been flat negative attitudes toward the poor have risen.

One emerging explanation of this phenomenon is that rising inequality undermines the sense of social affinity between the middle classes and the poor (Kristov et al. 1992; Lupu and Pontusson 2011). As the “distance” between the poor and the middle class increases, support for redistribution among the latter falls. Others show how this effect may be reinforced by immigration and rising ethnic heterogeneity, if minorities are increasingly overrepresented among the very poor (Alesina and Glaeser 2004; Roemer et al. 2007). In this case, rising inequality, especially when combined with ethnic and racial heterogeneity, can explain why inegalitarian countries have less popular support for redistribution and why some countries have experienced a drop in support for redistribution as inequality has risen.

In this paper we present an alternative explanation based on material self-interest. It is consistent with, and has some identical empirical implications to, the evidence for the social affinity and heterogeneity theses outlined above.

However, because it has very different micro-foundations from the social distance model, it has very different implications for how to interpret the empirical evidence. The policy implications are also very different.

Our alternative combines an insurance model of preferences for redistribution (Moene and Wallerstein 2001; Iversen and Soskice 2001) with a theory of segmented labor markets (Goldthorpe 1984; Esping-Andersen 1990, ch. 8; Rueda 2005). Segmentation reflects in part the decline of “Fordist” mass production and shift towards skill-intensive production, which has severed complementarities in production between skilled and semi-skilled workers (Wallerstein 1990; Iversen 1999). In part it also reflects a process of deindustrialization, which has gradually segregated low-skilled workers into insecure, often part-time or temporary, jobs. Immigration of workers without recognized skills in the host-countries added an ethnic-linguistic dimension to segmentation, leaving most native workers better off but intensifying competition for low-end jobs.¹ Consequently, by most accounts segmentation has become more pronounced since the 1970s, producing a divergence in unemployment security and incomes between core and peripheral workers (Kalleberg 2003).

¹ Reinforcing, and in some measure reflecting, this bifurcation has been employment protection secured by strong skilled unions, sometimes with the tacit consent of employers (Rueda 2005; 2008), while skill-training programs in some countries have damped the effect of production changes.

Because segmentation “bifurcates” (Iversen 2000) or “polarizes” (Rehm 2010) the labor market into relatively well-paid and secure jobs and low-paid and insecure jobs, the support for social protection and redistribution in the relatively secure (and often politically pivotal) middle classes, we argue, has been falling.²

Below we first present a simple formalization of the social distance argument and then present our alternative model of insurance with segmented labor markets. We identify ways in which the models overlap, and show how they can have identical empirical implications for some measures that been used to test both. In devising a strategic test we show that macro-level indicators of labor market segmentation, which vary across time and countries, are expected to alter the relationship between standard economic variables (such as income and education) and support for redistribution.

We then estimate parameters from the two models using comparative public opinion data from multiple waves of ISSP surveys. We find that controlling for measures of labor market risk and segmentation eliminates the effects of social distance and ethnic-linguistic heterogeneity, showing that the results in Lupu and Pontusson (2011) are affected by omitted variable bias. We also show how the impact of personal risk of unemployment depends on macro-level variation in the distribution of risk across income groups, which offers an important extension of Rehm’s (2011) results. The causes of labor market segmentation are fairly well

² Nordic countries in particular, where would-be outsiders have been included in the governing coalition, resist this trend. In these countries, relatively low job protections and active labor market programs have spread rather than concentrated risks (Iversen and Soskice 2013). Arguably this has convinced many in the middle class to support the welfare state.

understood, but we link the segmentation to preferences for redistribution. Our results confirm the importance of insider-outsider divisions, as powerfully argued by Rueda (2005; 2008), but they also show that such divisions vary a great deal across countries and that they are correlated with ethnic divisions. While this correlation is a source of omitted variable bias, we do suggest that segmentation may be linked to growing prejudice among native outsiders.

2. Two models of inequality and redistribution

The two models described below share a common economic core. In both we will assume that there are only two politically salient: poor and non-poor. We normalize the income of the poor to 0, and we assume that they depend on transfer income (denoted “ b ”) from the state. The non-poor have a market income y , where $a \leq y \leq 1$. There is a tax t on market income, which is used to finance a transfer to (only) the poor. Throughout the size of the population is normalized to 1, and the share of the population that is non-poor, Θ , is greater than one half ($\Theta > .5$) so that the majority (and hence the median voter) is non-poor. What distinguishes the models is how we define “poor”. In the social distance model, the poor are defined as people who are at the low end of the income distribution because of lack of skills or other labor market competencies. In the insurance model we think of them as being in a “bad” state of the world because of bad luck, illness, labor market shocks, or other misfortune that could befall non-poor as well. We show how this difference in the conception of poverty fundamentally changes how we explain support for redistribution, and we show

that the competing explanations focus on explanatory variables that are likely to be highly co-linear.

2.1. Social distance model

The social distance model introduces non-economic motives to explain why people are more or less willing to redistribute to the poor. Whether the non-economic motive is religious, ethnic, or racial, the assumption is that people feel generous or altruistic toward the poor only if they have a sense of belonging or shared identity with them. Otherwise support for redistribution will be low, even among people who might themselves benefit to some extent from redistribution. This is most obvious in models of ethnic-racial heterogeneity (Gilens 2000; Alesina and Glaeser 2004), but the “anti-solidarity” motive -- as Roemer et al (2007) call it -- can also be directed against the poor or the long-term unemployed because these groups are seen as very different effect of inequality and class in terms of lifestyle and shared experiences (Kristov et al. 1992; Lupu and Pontusson 2011). This “distancing” may be exacerbated by deliberate attempts of people to set themselves apart from the poor, including support for policies that will reduce the relative standing of the poor (Shayo 2009; Luttmer 2001).

We can capture the notion that redistribution is undermined by a lack of solidarity with the poor in a simple model of prejudice. Assume the structure of groups, incomes, taxes, transfers, and population as above. Assume further that the poor are permanently poor and that all transfers are purely redistributive. With these

assumptions there are no selfish reasons for the non-poor to redistribute to the poor, but they may do so out of a sense of affinity with, or altruism towards, the poor. Suppose the parameter α is a measure of affinity/altruism and takes on values between 0 (no concern for the other group) and 1 (people care as much about the income of the poor as they do about their own), so that $0 \leq \alpha \leq 1$. The utility function of a representative non-poor voter is then:

$$(1) \quad V = U[(1-t) \cdot y] \cdot \Theta + \alpha \cdot U(b) \cdot (1-\Theta).$$

$U(\cdot)$ is a concave utility function with standard properties: $U(0) = 0$, $U' > 0$ and $U'' < 0$.³ The benefit, b , is equal to the average tax-take, $t \cdot \bar{y}$, where \bar{y} is average income (including the poor), divided by the share of poor people, $1 - \Theta$:

$$(2) \quad b = \frac{t \cdot \bar{y}}{1 - \Theta}$$

For concreteness, assume that utility is the log of the weighted income of the poor and non-poor, which is a convenient form (originally proposed by Bernoulli) that satisfies the standard properties. Inserting (2) into (1) we then have:

$$(3) \quad V = \ln[(1-t) \cdot y] \cdot \Theta + \alpha \cdot \ln\left(\frac{t \cdot \bar{y}}{(1-\Theta)}\right) \cdot (1-\Theta)$$

Setting the first derivative equal to zero, the tax rate that maximizes the median, non-poor, voter's welfare is

$$(4) \quad t^* = \frac{\alpha \cdot (1-\Theta)}{\Theta + \alpha \cdot (1-\Theta)}.$$

³ For now we ignore any efficiency costs of taxation, which do not affect our key results.

We can confirm that if the non-poor majority does not care about the poor, $\alpha = 0$, they will choose a tax rate of 0. At the other extreme, if non-poor value the income of the poor as much as their own ($\alpha = 1$), they would choose a tax rate that equalizes the (after tax) income of the poor and their own income. Since income varies among the non-poor, and with our assumption that transfers only go to the poor, it is sensible to think that the non-poor voter would limit the after tax and transfer income to the lowest income of the non-poor, so that $a > b$ (where, again, a is the lowest income among the non-poor).⁴

Note that in this formulation income does not affect the preference over the tax rate. This is because of the particular choice of using a log function. But note that because the tax rate is proportional, those with higher income pay more into the system than those with lower income. They are willing to do this because the marginal utility of money is lower the higher the income. The log function ensures that the utility loss of the greater dollar amount contributed by those with high income is exactly equal to the utility loss at the same tax rate for those (non-poor) with lower income (the utility gain from the poor being better off is exactly the same across the income scale). Below we consider what happens if we increase the concavity of the utility function. But whether it is sensible to do so is much

⁴ In a world where any tax-benefit system could be chosen, if altruism refer to the value placed on the welfare of those with income below yourself, if $\alpha = 1$ the median voter would choose to equalize income. This is the same tax rate that a welfare-maximizing social planner would choose if he assumed that everyone had the same concave utility function (Boadway and Keen 2000). The difference is that in the median voter is not making interpersonal comparisons whereas the social planner is.

better understood in the context of the insurance model, so we postpone this discussion.

We now introduce prejudice towards minorities into the model in order to explore the effect it has on majority preferences for spending. Prejudice is captured simply by assuming that people feel greater affinity towards members of their own group than towards members of other groups (Dahlberg et al. 2012). Low affinity is linked to traits that are seen as undesirable by the majority, and they may include race, ethnicity, language, and religion (Alesina and Glaeser 2004, Ch. 6), as well as a range of behavioral attributes such as appearance, consumption habits (e.g., smoking), accents, etc. that are often closely linked to class and “social distance”. In the present model, all of these are measures of social distance.

For simplicity imagine that there are two groups, “whites” and “nonwhites”, and that whites are a majority: $w > .5$, where w is the share of the population that is white, and \tilde{w} is the share that is nonwhite. As before we assume that the non-poor is a majority, and specifically that non-poor *whites* are a majority:

$$(5) \quad \Theta \cdot w > \frac{1}{2}.$$

For example if 10 percent of people are poor then this condition holds as long as more than 56 percent of the population is white. Assuming that all whites (and hence the median voter) are prejudiced against nonwhites ($\alpha_{\tilde{w}} < \alpha_w$), the median voter’s utility function is now:

$$V = \ln[(1-t) \cdot y \cdot \Theta + \alpha_w \cdot \ln\left(\frac{t \cdot \bar{y}}{(1-\Theta)}\right) \cdot (1-\Theta) \cdot w_p + \alpha_{\tilde{w}} \cdot \ln\left(\frac{t \cdot \bar{y}}{(1-\Theta)}\right) \cdot (1-\Theta) \cdot (1-w_p)],$$

where w_p is the share of the poor who are white. Without loss of generality we can set $\alpha_{\tilde{w}} = 0$ so that the utility function reduces to:

$$(6) \quad V = \ln[(1-t) \cdot y] \cdot \Theta + \alpha_w \cdot \ln\left(\frac{t \cdot \bar{y}}{(1-\Theta)}\right) \cdot (1-\Theta) \cdot w_p.$$

To simplify the notation we drop the subscript w in the following. From now on it can be interpreted as the differential or excess feeling of affinity towards one's own group. The optimal tax rate is then

$$(7) \quad t^* = \frac{\alpha \cdot (1-\Theta)}{\frac{1}{w_p} \cdot \Theta + \alpha \cdot (1-\Theta)}.$$

Since $w_p + \tilde{w}_p = 1$, we can also express (7) using the ratio of non-whites to whites among the poor in the denominator:

$$(6') \quad t^* = \frac{\alpha \cdot (1-\Theta)}{\Theta + \frac{\tilde{w}_p}{w_p} \cdot \Theta + \alpha \cdot (1-\Theta)} = \frac{\alpha \cdot (1-\Theta)}{\Theta + d \cdot \Theta + \alpha \cdot (1-\Theta)},$$

where $d = \tilde{w}_p / w_p$ is the extent to which non-whites dominate whites among the poor. It can be interpreted as a measure of social distance between the white majority and the poor. When $d=0$, the poor are just like you (here all white) and you choose a tax rate that reflects your level of altruism towards your own group.

When d is high (it approaches infinity when \tilde{w}_p approaches 1) the poor are different from you, and you set a lower tax rate, at the limit approaching 0.

The result has observable implications at both the individual and the macro levels. At the individual level the implication is that the majority group will favor less redistribution as the minority proportion of the poor increases, that is, as social distance rises. It is sometimes also implied that minorities will want more redistribution in average than the majority, but this is actually ambiguous in the model. Since all who are poor will want “full” redistribution, and since the share of minorities who are poor is higher, this pulls the average minority preference for redistribution up. Among the minorities who are *not* poor, however, this is only true if the share of poor who are non-whites is greater than one half ($\tilde{w}_p > 1/2$). If this is not the case then non-poor whites should favor *more* redistribution, assuming they are equally prejudiced. This (rarely noted) implication follows from equation (6) if we assume that non-whites have the same level of affinity for their own group as whites do towards theirs.

At the macro level the implication is that the higher d is, the lower the level of redistribution assuming the non-poor majority controls government. The majority will feel less altruistic towards the poor the more poor belong to a group for whom the median voter M feels little affinity. This is the logic Lupu and Pontusson use to explain cross-national variance in redistribution.

It is interesting to note that from the perspective of a utilitarian social planner treating everyone the same, M 's choice of t is inefficient because the preferences of poor and minorities are completely discounted.⁵ Yet, unless poor and minorities are granted say in public policies, the only way to realize this gain is by reducing prejudice through education or social integration (see Pande 2xxx on India, for example).

2.2. Insurance model with segmented labor markets

The social distance model assumes that taxation and spending serve the purpose of redistribution. Yet, we know that much social spending is for purposes of social insurance. Since such insurance is paid to those with no or little income (say, in the form of unemployment benefits) it is also redistributive. But while support for redistribution may not be observationally distinct from support for insurance, the underlying logic is very different.

To see why, recall that the previous model has only one period: no one becomes poor, no one becomes a minority. Now, assume the same structure of groups, incomes, taxes, transfers, and population as before, but add a second period, and assume that the poor are in a transitory “bad” state of the world. The probability of a non-poor becoming poor in some period of time is p . The probability of upward mobility, of becoming non-poor, is q in the same period. For simplicity we assume that employed workers only look one period into the future and maximize their welfare across the “good” and the “bad” states of world,

⁵ This conclusion may not hold if there are efficiency costs of taxation because the poor may want a tax rate that imposes greater total losses than the utility gain from a more equitable distribution.

weighted by the probability of being in each state. Their utility function can be then represented by:

$$(8) \quad V = U[(1-t) \cdot y] \cdot (1-p) + U\left(\frac{t \cdot \bar{y}}{(1-\Theta)}\right) \cdot p$$

Equation (8) is nearly identical to equation (3), except that the affinity parameter α has been replaced by the risk of poverty, p (and the share of poor and non-poor does not matter directly). This is consequential: in the insurance model, even when $\alpha = 0$ the benefits received by the poor matter because non-poor voters care about their *own* income in the event they themselves become poor (say, because of unemployment or disability). The median voter “cares” about the poor, but for purely selfish reasons. A little tongue in cheek we could say that people feel altruistic toward themselves.

We can use the same log utility function as before, which is also a very convenient way to model risk-aversion. Like all insurance models the results depend on people being risk-averse, and the log function gives neat results because it implicitly assumes a constant relative risk-aversion (RRA) of 1. With these assumptions in mind, the preferred tax rate of the median voter is simply

$$(9) \quad t^* = p$$

The preferred tax rate is proportional to the risk of falling into poverty. If people were infinitely lived and did not discount the future the share that is unemployed would be equal to the time spent in unemployment (assuming that p and q are the same for all individuals). In that case we could substitute $1 - \Theta$ for p , and the

tax rate would be the same as in the affinity model when $\alpha = 1$. This equivalence is not surprising because in the insurance model people care equally about themselves whether they are employed or not. Yet the micro-logic could not be more different. In one model redistribution occurs because people are selfish; in the other because they are non-selfish.

As before income does not matter. This is always true when relative risk aversion is equal to one. But there is evidence that RRA is in fact higher than one, and then income does matter. We consider this possibility below.

In equation (8) the probability of becoming poor (and moving out of poverty) is assumed to be the same for all non-poor. In reality, some jobs are risky while others are safe. We capture this by distinguishing between two types of jobs: bad ones with a high risk of future loss of income or employment, and good ones with a low risk. For simplicity we assume that the variation is in p and that the probability of moving back into the good state, q , is the same across job types. We could assume that q is also lower for bad jobs, but our results would be qualitatively unaffected.

Suppose that there is uncertainty about how technological or other shocks to demand or supply affects industries and occupations. Consequently, workers do not know for sure whether they are in good or bad jobs. Moreover, employers have no incentive to reveal any private information they may have about which jobs are risky, just as bad workers have no reason to reveal such information. This creates a *double information asymmetry* problem: workers cannot identify

bad jobs and employers cannot identify bad workers. Good and bad jobs, and good and bad workers, are therefore mixed together, and this produces a pooling equilibrium where workers only know the probability of being in good and bad jobs, but not which is which. The risk of job loss is then simply a weighted average across the two types of jobs:

$$(10) \quad p_{pooled} = \delta \cdot p_{good} + (1 - \delta) \cdot p_{bad},$$

where δ is the share of good jobs. The equilibrium tax rate in equation (9) corresponds to a pooling equilibrium, and this is also the rate that a Rawlsian welfare-maximizing social planner would choose behind the “veil of ignorance” (i.e., before anyone knew whether they were in good or bad jobs).

But now assume workers receive some information about the identity of good and bad jobs, and that bad jobs are correlated with an observable trait such as race.⁶ Specifically, to continue the example from the previous section, assume that non-whites always end up in bad jobs. This implies that the risk of whites ending up in a bad job is lower, and this fact can be easily gauged from the composition of the poor. This moves us closer to a separating equilibrium, although it is not *completely* separating as long as the share of non-whites is smaller than the share of bad jobs – with our assumptions as long as $(1-w) < (1-\delta) \rightarrow w > \delta$ -- since then some whites are also in bad jobs. In effect, whites and

⁶ Segmentation includes any information that enables workers to identify whether they are in secure or insecure labor markets. This could be because observable traits like ethnicity are linked to being in a good or bad job, or because skills, sector of employment, or job protection provide information that enables workers to determine what type of job they are in.

non-whites are in different but partly overlapping labor markets with different probabilities of poverty.

Among the majority whites the share of bad jobs (i.e., the share of bad jobs not occupied by non-whites) is $(1 - \delta) - \tilde{w}$ (again, \tilde{w} is the share of the population that is nonwhite). If we assume (without loss of generality) that the probability of poverty is zero in low-risk occupations, the probability of whites falling into poverty is simply a constant function of the share of whites who are in bad jobs divided by the share who are white. From (9) this is equivalent to the preferred tax rate of the median voter:

$$t^* = p_W = p_{bad} \cdot \frac{1 - \delta - \tilde{w}}{w} = p_{bad} \cdot \left(\frac{1 - \delta}{w} - \frac{\tilde{w}}{w} \right).$$

We see that with labor market segmentation along racial lines, the composition of the labor force now matters. If there are no non-whites (and $w=1$), the preferred tax rate is equal to the share of bad jobs times the probability that bad jobs lead to unemployment. This is the pooling equilibrium. But if there are minorities who occupy a disproportionate share of bad jobs, the majority has less of an incentive to support redistribution.⁷

So far we have rather unrealistically assumed that non-whites are all in bad jobs, but the general point extends to a situation where there are two partially overlapping labor markets, one for each race. Each may exhibit a

⁷ Note that since a separating equilibrium is likely to be associated with a differentiation in wages, the lower incentive of the majority whites to demand insurance is likely reinforced by preferences for lower redistribution. We have not modeled this aspect of the labor market argument.

pooling equilibrium across good and bad jobs, but with a different distribution of these jobs, and with non-writes more likely to get bad jobs. To capture the role of segmentation in this general case, note that we can write:

$$(11) \quad t^* = p_w = p_{av} \cdot \frac{p_w}{p_{av}} = p_{av} \cdot \frac{1/w}{1 + \frac{\tilde{w} \cdot p_{\tilde{w}}}{w \cdot p_w}} = p_{av} \cdot \frac{1/w}{1 + s},$$

where p_{av} is the average poverty rate, and $s = p_{\tilde{w}}/p_w$ can be treated as a measure of segmentation between the white and non-white labor markets. Note specifically that if $p_{\tilde{w}} > p_w$ then the preferred tax rate by the majority would be lower than in a pooling equilibrium, *assuming that the average poverty rate is constant*. The latter assumption means that non-whites are disproportionately likely to take up bad jobs, so that if the share of non-whites increases, the risk of poverty among whites decreases (equivalent to a higher s). The risk-distribution, in other words, become more favorable for the majority, and with lower risk the preferred tax rate falls.

As before we assume that the median voter cannot observe his or her individual probability of falling into poverty, only the probability of poverty among the majority group. If poverty is a result of unemployment the informational requirement is simply for people to be able to observe the actual unemployment rate in their own group. In equilibrium this rate is reached when the number who moves into unemployment is equal to the number that moves out of unemployment, so that $p \cdot \Theta = q \cdot (1 - \Theta)$. This implies that the unemployment (or poverty) rate is $1 - \Theta = p / (p + q)$.

2.3. Comparison of the two models

The two models have predictions that are similar in the two variables, social distance (d) and labor market segmentation (s), that are subject to so much recent debate and research:

$$(12) \quad \frac{\partial t^*}{\partial d} < 0; \quad \frac{\partial t^*}{\partial s} < 0.$$

The problem is that d and s are likely to be correlated. This is easy to show in our example of race-based social distance or segmentation. In the insurance model, assume that workers care not only about the unemployment rate in the next period, but in the long run. The long-term risks of unemployment can be treated as equivalent to the equilibrium unemployment rate, which is $p_w / (p_w + q)$ among whites and $p_{\tilde{w}} / (p_{\tilde{w}} + q)$ among non-whites. By multiplying each of these by the shares of the population who are non-white (\tilde{w}) and white (w) we get the proportion of the population who are non-white poor (unemployed) and white poor (unemployed), respectively. Dividing these proportions gives us the racial composition of the poor, which is equal to our definition of social distance d :

$$(13) \quad d = \frac{\frac{p_{\tilde{w}}}{p_{\tilde{w}} + q} \cdot \tilde{w}}{\frac{p_w}{p_w + q} \cdot w} = k \cdot s.$$

From this it is apparent that social distance is equal to our definition of segmentation times a constant. *Surprisingly, perhaps, the key result for the model of segmented labor markets may be observationally identical to the key*

result for the social distance model. So what is social distance in one model can be interpreted as labor market segmentation in the other, and vice versa.

We do not believe any existing work has shown this equivalence, nor has attention been paid to the problem in interpreting the empirical results of existing research. A case in point is Alesina and Glaeser (2004) who interpret the negative effect on redistribution of ethnic-linguistic heterogeneity and race as a function prejudice, or lack of affinity towards minorities. Yet, it is perfectly feasible that segmented labor markets could be to blame. Another case in point is Rueda (2008) who attributes declining support for redistribution to growing insider-outsider divisions. The measure of insider-outsider division captures s , but this could also be a measure of d if labor market segmentation increases social distance. Rising social distance is key to Pontusson's argument, but they do not control for labor market segmentation. There are in other words two emerging literatures that, because they ignore each other, might be basing their conclusions on an omitted variable bias. While each is grounded in a plausible theory with distinct and reasonable micro-foundations, neither recognizes the possibility of such bias.

It should be noted that the result in (12) assumes that the process that generates poverty in the insurance model is labor market risk, or, more broadly, "bad luck". But poverty may of course also be a result of discrimination, family background, or low innate ability. In the affinity model the cause of poverty is in principle irrelevant. What matters is simply the composition of the poor and hence how

close or distant the majority feels towards the poor. Empirically, in the affinity model we would therefore measure the share of non-whites to whites among the poor, with no attention to how these people became poor, whereas in the insurance model we would measure the shares of whites and non-writes who are poor because of bad luck (the relative risks of poverty).

In section 2.5 we propose ways to devise a strategic test between the models, which we will subsequently apply to data, starting from this problem of drawing inferences from variables likely to be highly correlated. First, however, despite their points of contact and overlap, the two models also have some very different policy implications, which we develop in the next section.

2.4. Segmentation and ethnic divisions

In the social distance model, for the majority to support significant transfers to the poor, attitudes towards minorities must be altered through education or integration. In the insurance model with segmented labor markets the solution is instead to spread risks more widely by improving the ability of minorities to compete for good jobs – i.e., by deliberate policies to reduce labor market segmentation. Tolerance is surely always desirable, but it will not solve the problem of rising inequality if the cause is not based on prejudice but rather reflects economic forces and self-interest. Which model carries more empirical weight is thus not a matter of merely academic curiosity.

Suppose, as is likely in many countries, that there is an ethnic or racial dimension to segmentation. In the insurance model the employed white majority benefit

from ethnically segmented labor markets because they face lower labor market risks and because they pay lower taxes. Being in a good labor market position should therefore be associated with more *favorable* attitudes toward immigrants. This will still be true if we relax the restrictive assumption that segmentation only occurs through ethnic differentiation. Even if some bad jobs and some low type workers are identified without the use of ethnic markers, if ethnicity increases segmentation, a majority of whites would benefit.

If there is also segmentation among whites, however, then whites in bad jobs will be hurt by immigration. The reason is that rising segmentation of the labor market makes the median voter prefer lower taxation, and this means lower benefits for those who are already highly exposed to labor market risks.⁸ Because groups who are more exposed to risks than the median voter want higher social spending, any increase in segmentation that reduces the median voter's support for spending hurts those groups. It is therefore reasonable to expect these workers to want to limit immigration and restrict eligibility for benefits among immigrants. This attitude resembles "prejudice", and may be correlated with real prejudice, but it has economic origins. For these workers the best policy mix combines high social spending on the poor with exclusion of immigrants.⁹

Indeed the segmented labor market model provides a mechanism for explaining prejudice, which is lacking in the prejudice model. But it is important to reiterate that prejudice in the insurance model is *not* the cause of low social spending

⁸ These workers may also be hurt by being displaced by immigrants, increasing their incidence of unemployment. But this is not part of our model and need not be true for whites in bad jobs to be disadvantaged.

⁹ Some new right parties represent precisely this policy mix, despite the common view that the new right is committed to free markets and a minimal welfare state (Kitschelt 1997).

because in it disadvantaged and prejudiced whites prefer *high* spending. The downward pressure on spending instead emanates from majority whites who are not prejudiced; it is a very different logic. We also note that insofar as labor market segmentation occurs without ethnic markers the insurance model predicts lower majority support for the welfare state. This is consistent with the observation in the recent literature on insider-outsider divisions that increased labor market stratification has not produced more redistribution towards the poor.

2.5. The role of income

As explained above, using a log utility function implies that income is unrelated to preferences for spending. Who in the majority sets policy does not matter in either model. But this is not true if we chose functions that display more pronounced concavity; which is equal to higher risk-aversion in the insurance model. Specifically, if $RRA > 1$, insurance turns into a normal good, and the preferred tax rate now rises in income (assuming that taxes are used for insurance purposes). There is much evidence that this condition on risk aversion holds, and this will help us expand the range of predictions. We are also particularly interested in the effect of income because it is so closely related to class and the traditional divides between left and right. The relationship between income and preferences is politically very salient.

In Appendix A we use a constant Arrow-Pratt relative risk aversion (*RRA*) utility function with $RRA > 1$ to show two additional results for income and its relationship to two key variables in the insurance model [*Appendix to be added*]:

$$(14) \quad \frac{\partial(\partial t^*/\partial y)}{\partial p} > 0 \quad \text{and} \quad \frac{\partial(\partial t^*/\partial y)}{\partial s} < 0$$

These cross-partial derivatives show that the positive effect of income is rising in risk and declining in labor market segmentation. The intuitions are straightforward. Higher income means that people have more to lose, and the insurance motive to protect against such losses is strengthened the more risky jobs are.¹⁰

Conversely, as labor market segmentation rises, it should make those with higher incomes in the majority more secure with the consequence that the income effect would be smaller or negative.

Analogous results hold for the social distance model if we assume the same utility function:

$$(15) \quad \frac{\partial(\partial t^*/\partial y)}{\partial \alpha} > 0 \quad \text{and} \quad \frac{\partial(\partial t^*/\partial y)}{\partial d} < 0.$$

The positive effect of income is rising in altruism but declining in social distance.

The logic now is that as altruism increases, wealthier individuals are particularly prone to support spending because the marginal utility of income is very low for

¹⁰ This holds even if the unemployment insurance scheme places a cap on the income eligibility of workers for benefits. This feature would nevertheless complicate the analysis and consequently we abstract away from it.

high-income people while it is very high for those with no or little income, and the latter will weight more the greater the level of altruism. Yet with increasing social distance distance the feeling of affinity with the poor rises less with income, or may decline.

A complication is that the relationship between income and preferences for spending depends on the exact design of the tax and transfer system. Moene and Wallerstein (2001) show that in an insurance model, if transfers are not targeted to those who are out of work but instead distributed evenly to everyone, spending becomes more redistributive and the insurance aspect of spending is reduced. So, by implication, is the support for spending among those with high incomes. Unless people are very risk-averse the relationship between income and preferences for spending will now be negative. A similar possibility exists for the social distance model because those with higher income may not want to pay the tax cost of spending if most of the transfers are not specifically targeted to the poor.

But while the relationship between income and preferences for spending is thus ambiguous, the effects of α , d , P and s on the slope of this relationship are not. If the relationship between income and preferences is negative higher altruism or risk will make the effect of income less negative (or positive), while greater social distance or segmentation will make the effect of income more negative. The reason is that we are conditioning on variables that specifically focus on the insurance or altruism aspect. If income is negatively related to support for

spending because there are distributive consequences that outweighs the insurance function, if α or d increases it should weaken the insurance motive, which always makes income less positively, or more negatively, related to spending support. In other words, the cross-partial in (14) and (15) hold regardless of the composition of spending.

3. A strategic test

3.1. Estimating equation and data

We can combine the predictions of the two models into a single encompassing empirical model:

$$(16) \quad t^* = k + \overset{?}{\frac{\partial t^*}{\partial y}} \cdot y + \overset{-}{\frac{\partial t^*}{\partial d}} \cdot d + \overset{-}{\frac{\partial t^*}{\partial s}} \cdot s + \overset{+}{\frac{\partial t^*}{\partial p}} \cdot p + \overset{-}{\frac{\partial(\partial t^*/y)}{\partial d}} \cdot d \cdot y + \overset{-}{\frac{\partial(\partial t^*/y)}{\partial s}} \cdot s \cdot y + \overset{+}{\frac{\partial(\partial t^*/y)}{\partial P}} \cdot P \cdot y$$

where the predicted signs of each variable and interaction are given by the first order conditions and are indicated above each. Following the discussion in the previous section we keep the prediction for y ambiguous (it depends on the composition of spending, which we do not know).

Note that this is a multi-level model because some variables, d and s , are at the macro-level while others, notably income, are at the micro-level. Two of the interaction terms are cross-level interactions. Correspondingly our analysis combines individual-level data with country-level data.

The individual level data are from consecutive waves of the International Social Science Program (ISSP). ISSP has consistently used a question about support for redistribution that we use as one of our dependent variables.¹¹ Another question gauges support for spending on the unemployed.¹² This latter variable offers fewer observations than the former, and in a majority of cases there is only one survey per country, creating multiple problems for the estimation strategy we employ. The surveys also have consistently asked a question about market income, y , which has been classified into 9 quantiles following Rehm (2011).

We use three different measures of risk (p): actual unemployment, average unemployment of each employed person's occupation at the 1-digit ISSP level (Rehm 2011), and skill specificity (as defined in Cusack et al. 2006). The latter variable picks up the logic that workers who have acquired skills that are specific to a firm or industry are at greater risk because if they lose their job it will be harder to find another at comparable wages (Iversen and Soskice 2001). If we had perfect measures of individual-level risk we would not need a separate macro-level measure of labor market stratification since that information would be reflected in the individual-level data. Stratification would of course still be important because it varies across countries and period, and we are interested in

¹¹ "Is it the responsibility of governments to reduce the differences in the income between people with high incomes and those with low incomes?" In some surveys the ISSP used five answer categories with one the middle one being neutral, while in others they used only four (without the neutral option).

¹² "Please show whether you would like to see more or less government spending [for unemployment benefits]. Remember that if you say 'much more,' it might require a tax increase to pay for it." The five answer categories are: 1 spend much less; 2 spend less; 3 spend the same as now; 4 spend more; 5 spend much more.

this variation, but we could measure it simply by the distribution of individual risk in different countries and periods. In reality, however, we do not have perfect individual-level measures of risk, and this makes it important to include macro—level indicators of stratification.

We are particularly interested in risk stratification by income because of the importance of income for left-right politics. The most accurate measure of risk we have is at the occupational level where average unemployment rates are assigned to everyone in a particular occupation. Since those with lower income are more likely to be in occupations with a high number of bad (risky) jobs, the measure picks up some of the income-based differentiation in risk that we are interested in. And if greater labor market stratification shows up in form of more bad jobs being concentrated in particular occupations, and more low income people ending up in those occupations, then the occupational unemployment measure clearly picks up some of variance in income-based labor market stratification.

But it does not pick up all of this variance because we cannot observe the tendency of low-income workers to become more likely to take up bad jobs *within* an occupation since we do not have information on the distribution of good and bad jobs within occupations. However we can capture some of this unobserved heterogeneity if we assume that greater income stratification in risk *between* occupations also implies greater income stratification *within* occupations. We therefore include a macro-level measure in the regression, which is the risk of

unemployment in the bottom four out of nine quantiles divided by the risk of unemployment in the top four quantiles. We call this variable “segmentation”, below. If labor market stratification by income occurs both within and between occupations this variable will pick up variance not captured by the occupational unemployment measure itself.

For the affinity model the only individual measure we have is whether people belong to a minority. The measure is very imprecise because [short description here]. At the macro-level our indicators of social distance rely on two standard measures. One is the skew of the earnings distribution as in Lupu and Pontusson (2011); the second is an index of ethnic fractionalization (Alesina et al. 2003). The skew is intended to capture whether the distance between low and middle income earners is small compared to the distance between middle and high income earners. Like Lupu and Pontusson we use OECD’s database on gross earnings of full-time employees (OECD 2007). Ethnic fractionalization captures the extent to which electorates are divided by ethnicity, and it is defined as one minus the Herfindahl index of ethnic group shares (Alesina et al. 2003). It can be interpreted as the probability that an individual from one ethnic group will meet someone from a different ethnic group.

The estimating equation is then:

$$\begin{aligned}
(17) \quad R_{i,j,t} = & a + b \cdot income_{i,j,t} + \beta_1 \cdot skew_{j,t} + \beta_2 \cdot skew_{j,t} \cdot income_{i,j,t} + \\
& \beta_3 \cdot segmentation_{j,t} + \beta_2 \cdot segmentation_{j,t} \cdot income_{i,j,t} \\
& \beta_3 \cdot risk_ratio_{j,t} + \beta_4 \cdot risk_ratio_{j,t} \cdot income_{i,j,t} + \beta_5 \cdot occupational_risk_{i,j,t} \\
& + \beta_6 \cdot skill_specificity_{i,j,t} + year_t + country_j + controls + error,
\end{aligned}$$

where i indexes individuals, j countries, and k the year of the survey.¹³ We included the controls for age, gender, and whether a person is outside the labor market.

3.2. Results

Figure 1 shows the relationship between our measure of segmentation – the ratio of unemployment risk between those with low and high income – and Lupu and Pontusson’s measure of social affinity – the skew of the earnings distribution. Since the risk-ratio is based on the ISSP survey data it is likely to have considerable measurement error, and we intend to use much more accurate labor force survey data in future iterations of this paper. Still, the negative correlation between the risk ratio and the skew illustrates the point that segmentation and social affinity are likely to be related and to create problems of omitted variable bias.

¹³ The countries and years of field work (in parentheses) are: Australia (86, 87, 90, 93,96,98,99,05,07,09), Austria (86, 88, 89, 93, 99, 00, 01, 04, 10), Canada (92, 93, 96, 99, 01, 04, 06, 11), Denmark (97, 98, 01, 04, 08, 09, 10), East Germany (90, 91, 92, 93, 96, 97, 98, 00, 03, 06, 10), Finland (00, 04, 06, 09, 10), France (97, 98, 99, 06, 09), Ireland (89, 91, 93, 96, 98, 01, 03, 06), Italy (85, 87, 89, 90, 92, 93, 96, 97, 98), Netherlands (87, 89, 91, 93, 04, 06), New Zealand (91, 92, 93, 97, 98, 99, 00, 04, 06, 09, 10), Norway (89, 90, 91, 92, 93, 96, 97, 98, 99, 00, 04, 06, 09, 11), Portugal (97, 99, 00, 04, 06, 09), Spain (94, 96, 97, 98, 99, 00, 04, 07, 09, 10), Sweden (91, 96, 97, 98, 99, 01, 04, 06, 09, 10), Switzerland (87, 98, 99, 00, 05, 07, 09, 11), United Kingdom (85, 87, 89, 90, 91, 92, 93, 96, 97, 98, 99, 00, 04, 06, 09, 10), United States (85, 87, 89, 90, 91, 92, 93, 96,98, 00, 04, 06, 10), and West Germany (85, 87, 89, 90, 91, 92, 93, 96, 97, 98, 00, 03, 06, 10).

[Figure 1 about here]

Our results indeed suggest a large omitted variable bias. We first estimate equation (17) with the skew and the risk variables separately. This produces the results in the first two columns of Table 1. The dependent variable is redistribution preferences. The first column contains the risk variables. Most of the estimates are statistically significant: these include the direct effects of log income, personal occupational risk, and being unemployed, as well as skill specificity, while the interactions of personal risk and segmentation with log income are also significant. (The interaction of skill specificity and income is more or less never significantly different from zero.) The second column is based on Lupu and Pontusson (2011). Their measure of income skew and its interaction with log income are both highly significant, as is the interaction of the Alesina et al. measure of ethnic fragmentation with log income.

[Table 1 about here]

These results are then illustrated in Figure 2, which simulates the probability of supporting redistribution for different levels of income. With these results we find support for both the affinity and insurance models. In either case support for redistribution is declining in income, but the effect depends on the risk-ratio and the skew. In the insurance model a higher risk ratio (more segmentation) is expected to be associated with a more negative slope, and this is what appears. For most incomes support for redistribution is lower when our measure for labor

market segmentation is high (Figure 2a), but at the lowest income it crosses the low segmentation curve. This makes sense since most of the risk is concentrated at the low end of the income distribution when segmentation is high. Personal occupational risk (Figure 2b) also exhibit the expected pattern for most income groups: more risk predicts more support for redistribution. At the lowest income level this is not true, and the reason is not obvious. . In the affinity model, support for redistribution is higher when the Lupu-Pontusson measure of social affinity between the poor and the middle class is likewise higher (Figure 2c). It is also consistent with expectations that the slope is steeper when the affinity is high, although this effect largely disappears at higher incomes.

[Figure 2 about here]

We then estimate a combined empirical model,¹⁴ with the results shown in Table 1, column 3. At a glance we can see that the labor market variables remain significant. Some of the direct effects of variables in the interactions are not, but the terms of the interaction are always jointly significant. The results for segmentation and personal risk (Figures 3a and 3b) are similar to those summarized in Figure 2, though magnitudes and slopes are a little different. The evidence still suggests that with little segmentation of risks people are more likely to think of redistribution as insurance. The redistributive motive still seems to slightly dominate on average, but the support for redistribution is now much

¹⁴ In this model, countries: US, CA, UK, Ireland, Switzerland, Spain, Portugal, Germany, Finland, Sweden, Norway, Denmark, Australia, NZ; years: 1987, 90, 91-3, 96-9, 2000-1, 06-10.

higher in the middle classes. However, none of the affinity variables achieve statistical significance in this encompassing model. Worse, a low skew is now associated with *higher* support for redistribution, though insignificantly. Figure 3d makes this clear. This reversal of the results with no controls for the level and distribution of occupational risk strongly suggests that the Lupu-Pontusson result for affinity reflects omitted variable bias.

[Figure 3 about here]

Put another way, Figure 3d represents the average effect of income on preferences: downward sloping and convex downward, with the steepest descent at low incomes, and really no effect of skew once the structure of the labor market is taken into account. That shows more or less conclusively how Lupu and Pontusson's (2011) affinity result reflects omitted variable bias.

Moving to Figure 3c, we see that the shape of the income-preferences curve is considerably affected by labor market variables. In the case where personal risk is high and the distribution of risks is relatively egalitarian, support for redistribution is relatively high, even at highest incomes. Indeed, the curve is convex upward and still rises above median income, consistent with an insurance motive behind the responses (where demand for insurance is a normal good, rising in income). This contrasts sharply with the case where personal risk is low and the distribution of risks is more unequal: here support declines as incomes increase, in ways qualitatively similar to the description of the "average" effect of incomes in Figure 3d (above). Knowing that they are relatively secure and

unlikely to fall into poverty the middle and upper middle classes turn against redistribution. The other two cases lie in the middle and are not clearly distinguished in our estimates. It seems anomalous that the red-dashed curve (high personal risk in a system where risks are unequal) does not rise more to cross the solid blue (low personal risk; equal distribution) since the personal risk of unemployment is probably higher in this group at some, maybe most incomes.¹⁵

The insurance model also receives support from results that are not shown in Figure 2 and 3, but are included in Table 1. Thus, unemployment is consistently associated with more support for redistribution, as is greater skill specificity. Neither of these variables interacts significantly with income in our models, nor does their inclusion or exclusion qualitatively affect the results, so we omit them from the figures merely for simplicity in presentation. Other control variables are significant in ways that are consistent with finding from earlier studies. But most important for our purposes, the estimated effect of the interaction between occupational unemployment and income is positive, so that at a given level of unemployment risk higher income increases support for redistribution. Segmentation captures the distribution of risk, and the effect it has on preferences implies that not all relevant information about unemployment risk is contained in our various individual-level risk measures. This in turn represents an important qualification on and extension of the results in Rehm (2011), and it very

¹⁵ Another potentially anomalous result in Figure 3b is that the low risk curve crosses the high risk curve at very low incomes. We are unsure whether that group-based result is actually statistically significant.

clearly links labor market stratification to support for the welfare state. If the effect of the end of Fordism and deindustrialization has been to increasingly segment the labor force into secure and insecure workers, we can begin to understand why support for redistribution has declined even though needs are rising. The reason is not waning social affinity towards the poor, but rather less middle class concern with becoming poor.

3.3. Robustness

Our confidence in these results reflects a great deal of statistical work not reflected in the presentation of results in this paper. Table 1 reveals discrepancies between columns 1 and 3: a cost of including the income-based affinity measures is that we lack data for some 30 per cent of the cases in column 1. Including the labor market data removes 40 per cent of the observations in column 2. Imputation might help, but we have not yet pursued this. We have employed alternative estimators (ordinal logit, for instance) using the multi-category version of the dependent variable: our results are qualitatively similar, though harder to interpret.

So far, we have only examined the income-based version of affinity. We include but do not analyze interactions involving ethnic fragmentation. This interaction was significant and negative in Table 1, column 2 (less support for redistribution where fragmentation was greater, as income grows; the direct effect is absorbed in the country fixed effects). But with control for our risk measures the effect vanishes. It is possible to create an individual-level “ethnic minority” variable in

our ISSP studies, but it has an odd definition, reflecting self-designation into the “ethnic minority” status. We therefore coded individuals who reported non-native status or non-Anglo status as ethnic minorities, essentially imputing non-minority status to all individuals who did not flag themselves as minorities.¹⁶ This had the advantage of producing country samples that closely resembled the actual population, but also implies that we may be assigning non-minority status to individuals who may in fact be minorities. Only three percent of our sample identify themselves as minorities. In any case, ethnic minority status is associated with a substantial (7-8 percentage points) increase in support for redistribution. The results are strongly driven by the observations in the US and Germany; ethnic minority status has the weakest effect in Finland and Canada. Unfortunately, this could also reflect the possibility that minorities are more likely to end up in poverty or unemployment, as opposed to something more directly associated with being a minority. We simply do not have complete individual-level controls for the relevant risks. We have obtained access to the EU Labor Force Surveys, which will allow us to generate occupation-specific minority concentration codes for our individuals: not as good as individual-level data but an improvement on the macro-fragmentation variable we include in Table 1. We also have some indirect evidence. If we assume that ethnic minorities are more exposed to risk in more segmented labor markets, then minority status should be a better predictor of preferences when segmentation is high. This is confirmed

¹⁶ Unfortunately different questions are asked in different countries. For example, in Germany, the question asked about being a citizen or non-citizen, so all non-citizens (e.g. Belgian living in Germany) are coded as an ethnic minority. That is probably not a good operationalization of affinity, at least not in all countries.

when we interact minority status with the segmentation variable: there is no effect of minority status when segmentation is low. This again point to the critical importance of segmentation.

Our results are consistent with a concern for insurance against risk playing a role in the formation of preferences about redistribution. It would be good if we could show you that the same forces operate when people respond to questions about whether they would like more or less government spending for unemployment benefits, the question Rehm (2011) analyzed. Unfortunately, that question is asked less often, and so while an equivalent of the model in Table 1, column 3 still has over 20,000 observations, for a majority of the 14 countries there is only one year's survey in that country (the US is the exception, with several), and models with anything resembling complete sets of fixed effects are unstable. So far, the results seem to confirm the interpretation we present of redistribution in this paper, but more work is needed. Of course, unemployment benefits are used explicitly for insurance purposes, so it would be less surprising if we find more support for the insurance model in this case. Support for redistribution is a more interesting variable because the affinity models are designed to explain such support.

4. Summary

In terms of our model, when risks are high and broadly shared across income groups the results suggest a pooling equilibrium where those with higher income want to buy more insurance. In all specifications the findings support the notion

that support for redistribution increases in the middle classes when labor markets are less segmented. By contrast, preferences seem to be little affected by social or economic affinity between groups once labor market segmentation is taken into account. The implication of our findings is that the decline in support for redistribution over the past three decades has less to do with growing ethnic heterogeneity and social distance between the middle classes and the poor, and more to do with increased segmentation of labor markets. Why such segmentation has progressed further in some countries than in others is an intriguing puzzle for future research. It part differences may reflect deliberate policies to spread or concentrate risks that are themselves shaped by the structure of the political system.

Bibliography

- Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat, and Romain Wacziarg. 2003. "Fractionalization". *Journal of Economic Growth* 8 (June): 155-194.
- Alesina, Alberto and Edward Glaeser (2004), *Fighting Poverty in the US and Europe: A World of Difference*. Oxford: Oxford University Press
- *?Anderson, Christopher and Jonas Pontusson (2007). "Workers, worries and welfare states: Social protection and job insecurity in 15 OECD countries", *European Journal of Political Research*, 46, 211-35.
- *?Barseghyan, L., Prince, J., and Teitelbaum, J. C. (2011). "Are Risk Preferences Stable across Contexts? Evidence from Insurance Data", *American Economic Review* 101(2): 591–631.
- *?Blanchard, Olivier and Jean Tirole (2008). "The Joint Design of Unemployment Insurance and Employment Protection: A First Pass", *Journal of the European Economic Association*, 6(1):
- Boadway, Robin and Michael Keen (2000), "Redistribution", Ch. 12 in Atkinson, Anthony and Francois Bourguignon (eds.), *Handbook of Income Distribution* - Vol. 1 Elsevier: 679-703
- Cavaille , Charlotte and Kris-Stella Trump (2012), Redistributive Attitudes In Hard Times, Working paper.
- *Chetty, Raj and Amy Finkelstein (2012), Social Insurance: Connecting Theory to Data, NBER Working Paper 18433, October.
- Cusack, Thomas, Torben Iversen, and Philipp Rehm (2006), "Risks at Work: The Demand and Supply Sides of Government Redistribution." *Oxford Review of Economic Policy* 22(3): 365–389.
- *Dahlberg, M., Edmark, K. and Lundqvist, H. (2011) Ethnic Diversity and Preferences for Redistribution, *CESifo Working Paper no. 3325*, January. (Should be more recent version)
- *?Emmenegger, Patrick, Silja Häusermann, Bruno Palier, and Martin Seeleib-Kaiser, eds. (2012). *The Age of Dualization*. Oxford: Oxford University Press.
- Esping-Andersen, Gösta (1990), *The Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.
- *Finseraas, Henning (2009) "Income Inequality and Demand for Redistribution: A Multilevel Analysis of European Public Opinion", *Scandinavian Political*

Studies 32(1): 92–119.

- *Finseraas, Henning (2012). "Poverty, ethnic minorities among the poor, and preferences for redistribution in European regions" *Journal of European Social Policy* 22: 164-80
- *Franzese, Robert, and Jude Hays (2008). "Inequality and Unemployment, Redistribution and Social Insurance, and Participation: A Theoretical Model and an Empirical System of Endogenous Equations." In Beramendi, Pablo and Christopher Anderson (eds.), *Democracy, Inequality and Representation*. London: Routledge, 2008: 232-276
- Georgiadis, Andreas, and Alan Manning (2012), "Spend It Like Beckham? Inequality and Redistribution in the UK, 1983–2004." *Public Choice* 151(3–4): 537–563.
- Gilens, Martin 2000. *Why Americans Hate Welfare: Race, Media, and the Politics of Antipoverty Policy*. Chicago: University of Chicago Press.
- *?Gingrich, Jane and Ben Ansell (2012). "Preferences in Context: Micro Preferences, Macro Contexts, and the Demand for Social Policy", *Comparative Political Studies* 45(12): 1624–54.
- Goldthorpe, John H. (1984). "The End of Convergence: Corporatist and Dualist Tendencies in Modern Western Societies." Pp 315-43 in John Goldthorpe (ed.), *Order and Conflict in Contemporary Capitalism*.
- Huber, Evelyn, and John D. Stephens (2001). *Development and Crisis of the Welfare State: Parties and Policies in Global Markets*. Chicago: University of Chicago Press.
- Iversen, Torben. (1999). *Contested Economic Institutions: The Politics of Macroeconomics and Wage Bargaining in Advanced Democracies*. Cambridge: Cambridge University Press.
- Iversen, Torben. (2001). "The dynamics of welfare state expansion: trade openness, deindustrialization, and partisan politics". In Paul Pierson, *The New Politics of the Welfare State*. Oxford University Press.
- Iversen, Torben, and David Soskice (2001). "An Asset Theory of Social Policy Preferences." *American Political Science Review* 95(4): 875–95.
- Iversen, Torben, and David Soskice (2013).
- Kalleberg, Arne L. (2003). Flexible Firms and Labor Market Segmentation Effects of Workplace Restructuring on Jobs and Workers. *Work and Occupations*, 30(2), 154-175.

- Kitschelt, Herbert. (1997). *The Radical Right in Western Europe: A Comparative Analysis*. University of Michigan Press.
- Korpi, W., & Palme, J. (2003). New Politics and Class Politics in the Context of Austerity and Globalization: Welfare State Regress in 18 Countries, 1975-95. *American Political Science Review*, 97(3), 425-446.
- Kristov, L., Lindert, P. and McClelland, R. (1992) "Pressure Groups and Redistribution", *Journal of Public Economics* 48(1): 135-63
- *Lindvall, Johannes and David Rueda (2013), "The Insider-Outsider Dilemma", *British Journal of Political Science*, forthcoming.
- Lupu, Noam and Jonas Pontusson (2011), "The Structure of Inequality and the Politics of Redistribution", *American Political Science Review* 105(2): 316-36.
- *Margalit, Yotam (2013). "Explaining Social Policy Preferences: Evidence from the Great Recession". *American Political Science Review* 107(1): xxx-xx.
- *Meltzer, Allan and Scott Richard (1981). "A Rational Theory of the Size of Government", *Journal of Political Economy* 89(5): 914-27.
- Moene, Karl and Michael Wallerstein. "Inequality, Social Insurance, and Redistribution." *American Political Science Review* 95, no. 4 (2001): 859-874.
- *Rehm, Philipp, Jacob S. Hacker Mark Schlesinger (2012). "Insecure Alliances: Risk, Inequality, and Support for the Welfare State", *American Political Science Review* 106(2) pp. xxx-xx.
- *Rehm, Philipp (2009). "Risks and Redistribution: An Individual-Level Analysis." *Comparative Political Studies* 42(7): 855-81.
- Rehm, Philipp (2010). "Risk Inequality and the Polarized American Electorate." *British Journal of Political Science* 41(2): 363-387.
- Rehm, Philipp (2011). "Social Policy by Popular Demand." *World Politics* 63(2): 271- 99.
- Roemer, John E., Woojin Lee and Karine Van der Straeten. (2007). *Racism, Xenophobia, and Distribution: Multi-Issue Politics in Advanced Democracies*. Harvard University Press.
- Rueda, David (2005). "Insider-Outsider Politics in Industrialized Democracies: The Challenge to Social Democratic Parties." *American Political Science Review* 99(1): 61-74.

Rueda, David. 2008. *Social Democracy Inside Out: Partisanship and Labor Market Policy in Advanced Industrialized Democracies*. Oxford University Press

*Rueda, David (2012), *Explaining the Political Consequences of Inequality: Relative Income Effects, Altruism, and Group Heterogeneity in Western Europe*. Oxford, Working paper 2012

Wallerstein, Michael. (1990). "Centralized Bargaining and Wage Restraint." *American Journal of Political Science* 34, no. 4 (November): 982–1004.

Table 1. Individual preferences for redistribution spending.

Explanatory variables	Dependent variable: redistribution preferences		
	(1)	(2)	(3)
Log(income)	0.600*** (0.171)	0.331*** (0.114)	0.638** (0.308)
Pers. occup. risk	-0.0128*** (0.00283)		-0.00882 (0.00581)
Unemployed	0.209*** (0.0435)		0.293*** (0.0545)
Log(inc)*Pers.occ.risk	0.0194*** (0.00186)		0.0253*** (0.00371)
Skill specificity	0.0721*** (0.0100)		0.0609*** (0.0118)
Segmentation	0.420* (0.250)		-0.258 (0.358)
Log(income)*Segment'n	-0.885*** (0.136)		-0.794*** (0.195)
Age	-0.00173*** (0.000551)	-0.00216*** (0.000469)	-0.00191*** (0.000641)
Education	-0.148*** (0.0129)	-0.179*** (0.0108)	-0.111*** (0.0154)
Female	0.205*** (0.0168)	0.165*** (0.0144)	0.221*** (0.0194)
Nonemployee	-0.0800*** (0.0264)	-0.0627*** (0.0214)	-0.0916*** (0.0308)
Student	-0.134** (0.0551)	-0.139*** (0.0400)	-0.139** (0.0636)
Affinity (d9/d5/d5/d1)		1.564*** (0.241)	0.0299 (0.460)
Log(income)*Affinity		-0.673*** (0.106)	-0.191 (0.161)
Log(inc)*Ethnic fragm.		-0.181*** (0.0591)	0.0136 (0.0807)
Constant	-0.448 (0.359)	-1.602*** (0.257)	0.407 (0.665)
Country effects	yes	yes	yes
Year effects	yes	yes	yes
Observations	84,901	104,607	60,224

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 1. The relationship between the segmentation and the skew

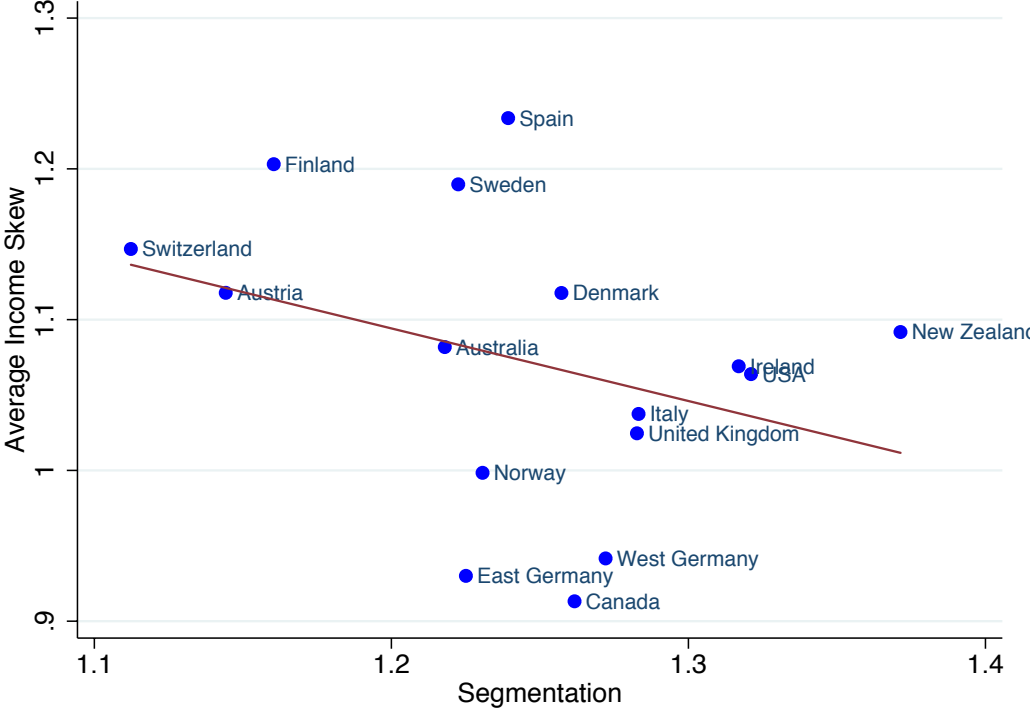
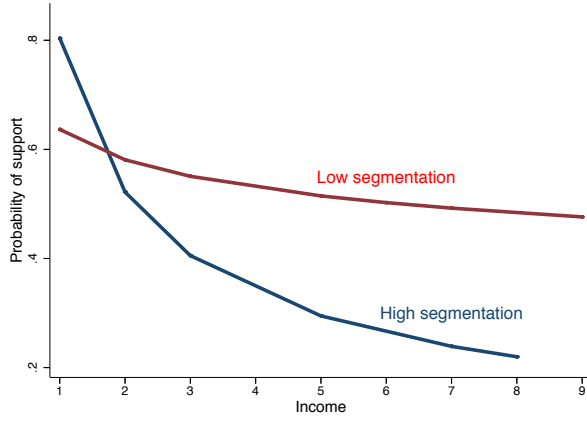
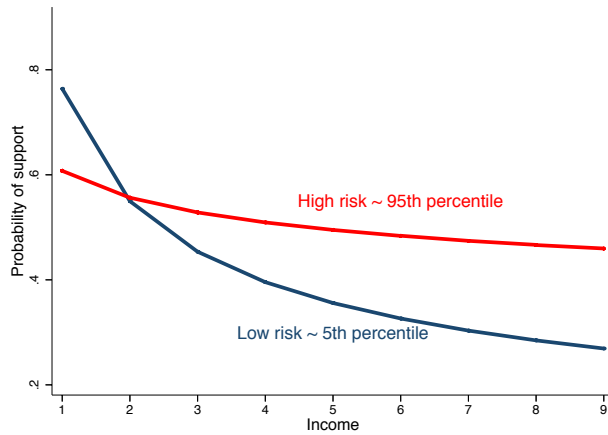


Figure 2. The estimated probability of agreeing with redistribution as a function of income (separate regressions for risk variables and affinity).

a) By labor market segmentation



b) By personal occupation risk



c) By social affinity (income skew)

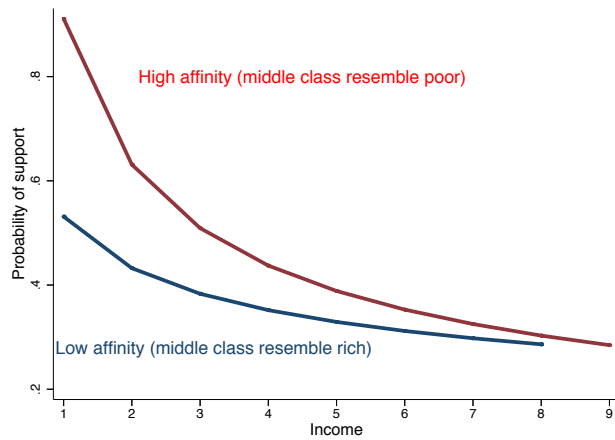
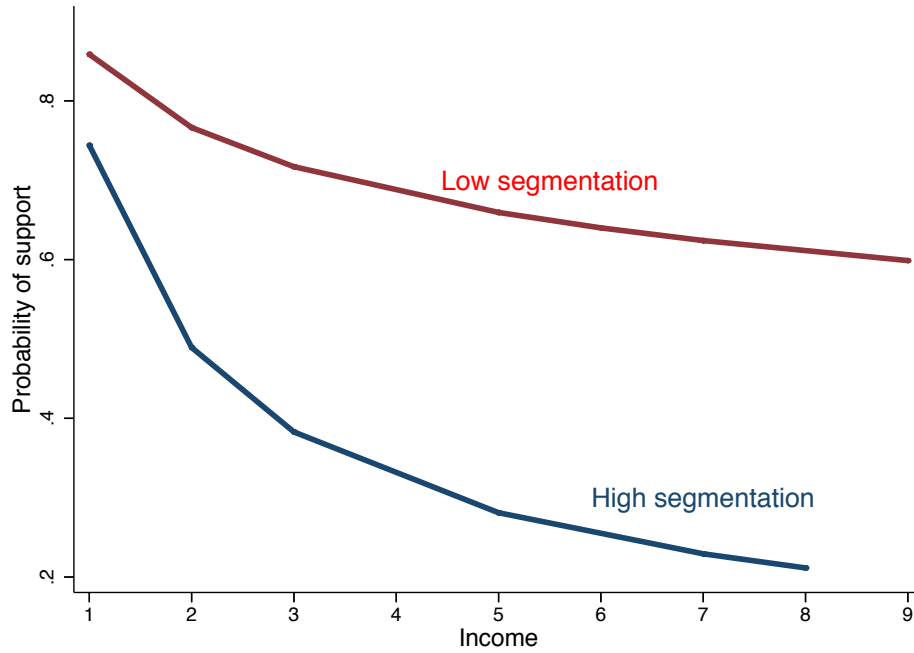


Figure 3. The estimated probability of agreeing with redistribution as a function of income (regressions combine risk variables and affinity).

a) By labor market segmentation



b) By personal occupational risk

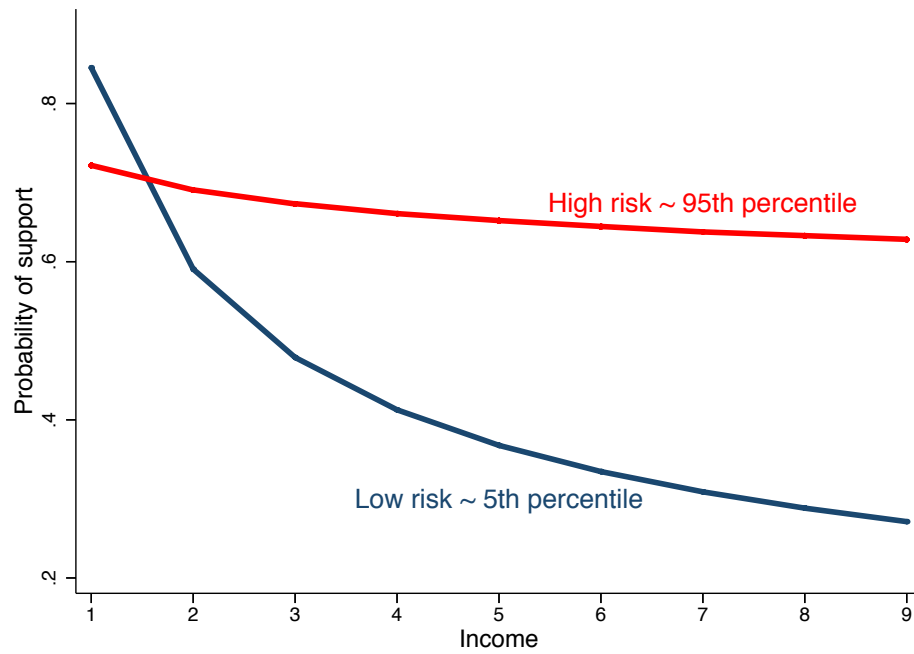
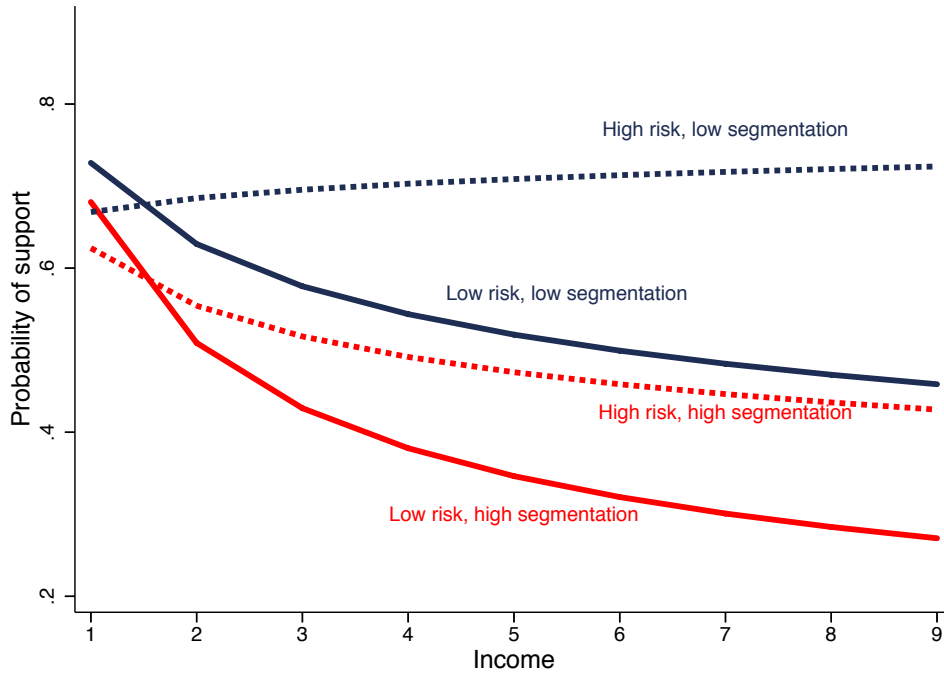


Figure 3(continued)

c) By risk and segmentation combined



d) By social affinity

