RACISM, XENOPHOBIA, AND REDISTRIBUTION

Woojin Lee
University of Massachusetts, Amherst

John Roemer
Yale University

Karine Van der Straeten
CNRS and École Polytechnique, Paris

Abstract
We model political competition as a contest between parties that represent constituents, and which announce policies in a two-dimensional policy space; the first dimension concerns the degree of redistribution, and the second, the race or immigration issue. Given the distribution of voter preferences on this space, a political equilibrium is determined. We study the effect that racist or anti-immigrant preferences in the polity have on equilibrium values of the redistributive policy. For the United States, there is a substantial reduction in distribution below what it counterfactually would have been, absent racism. For the UK, France, and Denmark, there are effects of the same sign, but with different magnitudes. (JEL: D70, D72, D30)

1. Introduction

Although it is often assumed by political economists, for modeling purposes, that political competition takes place on a unidimensional policy space, reality does not conform to this specification. Politics are surely multi-dimensional, and in the twentieth century, it is arguable that issues of race, religion, and ethnicity were important "secondary" issues. Indeed, the issue of race has been of paramount important in the United States since its founding, and it has been important in democratic competition since the Civil War. Our interest in the study we report here is in the effect that the race issue in the United States and the immigration issue in European countries is having or can be expected to have on the degree of redistribution and the size of the public sector that is implemented through political competition.

To see the significance of the effect with which we are concerned, one need only note that, in the past twenty-five years—a period of sharply rising inequality in the United States—the effective marginal income tax rate has fallen. No standard unidimensional model of political competition would predict this. If median

E-mail addresses: Lee: woojin.lee@econs.umass.edu; Roemer: john.roemer@yale.edu; Van der Straeten: karine.van-der-straeten@shs.polytechnique.fr

income is less than mean income and inequality increases (in the sense of an increasing ratio of mean to median income), then, were politics focused upon only redistribution and the size of the public sector, tax rates should increase. The fact that quite the opposite has occurred indicates something else is at work: We propose that the most reasonable explanation is the effect of the race issue in American politics.

The study we report here (see Roemer, Lee, and Van der Straeten 2007) models political competition as taking place on a two-dimensional policy space, where the first issue is the tax rate, or the size of the public sector, and the second issue is the race or immigration issue. (The exact specification we choose varies with the country.) We employ a model of political competition that, given data on the distribution of voter preferences, produces an equilibrium, as we describe below, in which parties propose policies on the two issues. We then seek to understand how the equilibrium would change if voters were less racist or less xenophobic than they actually are, and in particular, how the equilibrium position of parties on the economic issue would change. We carry out the exercise for the United States, the United Kingdom, France, and Denmark. We model only general elections.

We conceptualize the effect of the race/immigration issue on the economic issue as the sum of two effects. The anti-solidarity effect (ASE) is the decrease in the size of the public sector that occurs because many voters believe that the poor minority is undeserving and is a main beneficiary of the welfare state, and so they vote to decrease the size of the public sector. Alesina, Glaeser, and Sacerdote (2001) and Alesina and Glaeser (2004) have shown, in a cross-sectional panel of countries, that the larger the size of the poor minority, the smaller is the public sector, and they allude to the effect we have mentioned. The ASE is a direct effect.

On the other hand, in the United States, the equilibrium for the period 1970–1990 can be roughly described as follows: The Republican Party proposed a small public sector, and a conservative position on the race issue, while the Democratic Party called for the opposite on both issues. Imagine the decision problem of a fairly poor, racist voter, who would benefit from a larger public sector but who abhors the Democratic position on race: She may vote for the Republican Party because of its position on the race issue. If there are a sufficient number of voters of this type, then the Republicans may be able to maintain their conservative position on the public sector without losing vote share. This is an indirect effect of racism on the equilibrium on the economic dimension; it is a portfolio effect, because no party existed which put forth the position the voter in question might have preferred—a large public sector, and conservative on the race issue.

Using the race issue in this way is called, in U.S. politics, the "Southern Strategy." After the Civil Rights Movement, racist Southern senators, like Strom Thurmond, who had been Democrats, bolted to the Republican Party. Before these "Dixiecrats" decamped from the Democratic Party, it was possible, in the South, to vote both "redistributive" and "racist" simultaneously. Afterwards, it

was not—and the Southern white vote gradually moved from the Democratic to Republican parties. Thus, ironically, the Civil Rights Movement may have decreased the degree of redistribution in the United States, by increasing the size of the policy bundle effect.

Our methodology enables us to decompose the total effect of racist or xenophobic preferences on the equilibrium in political competition into these two effects.

2. The Model of Political Equilibrium

The workhorse model of political economy, the Hotelling–Downs model and its median-voter theorem, cannot be used in our environment, because it fails to possess equilibria when the policy space is multi-dimensional. We use instead the model of party-unanimity Nash equilibrium (PUNE) introduced in Roemer (1999, 2001).

This model specifies as data a policy space, T, a space of voter types, H, a utility function $v : T \times H \rightarrow \mathbb{R}$ which represents the preferences over policies of each type, h in H, a probability distribution, $\mathbf{F}$, of voter types, and the number of parties, n, that shall form. To simplify exposition, let us take $n = 2$. The model produces, as its output, a set of equilibria, where each equilibrium specifies a partition of the set of voter types into two coalitions, A and B, $A \cup B = H$, $A \cap B = \emptyset$, where one party represents A and the other B, and a platform for each party, $\tau^A \in T, \tau^B \in T$. Thus parties form endogenously, although the number of parties is not determined by the equilibrium concept. We will discuss how we deal with the multiplicity of equilibria below.

Parties are organized by political entrepreneurs, and it is postulated that the set of entrepreneurs who organize or manage a party consists of politicians with two career strategies—those who seek to maximize the parties vote share, and those who seek to defend the interests of the party's constituents. We call these the Opportunists and the Guardians, respectively. To define their behavior precisely, we proceed as follows. For any pair of policies $(\tau^1, \tau^2) \in T \times T$, define the set of types who prefer the first policy to the second as

$$\Omega(\tau^1, \tau^2) = \{h \in H | v(\tau^1, h) > v(\tau^2, h)\}. \tag{1}$$

The fraction of polity who should vote for τ^1 is thus $\mathbf{F}[\Omega(\tau^1, \tau^2)]$. Suppose the constituency of a party is the coalition $A \subset H$. Then we assume that its Guardians attempt to represent A in the sense of maximizing the average welfare of the constituency, defined as

$$V^A(\tau) = \int_{h \in A} v(\tau, h) d\mathbf{F}(h). \tag{2}$$

We then define the partition (A, B) and the policy pair (τ^A, τ^B) to be a PUNE if there exists a pair of numbers $(k^A, k^B) \in \mathbb{R}^2$ such that

1. τ^A solves the program $\max_{T} \mathbf{F}[\Omega(\tau, \tau^B)]$ subj. to $V^A(\tau) \geq k^A$;
2. τ^B solves the program $\max_{T} \mathbf{F}[\Omega(\tau, \tau^A)]$ subj. to $V^B(\tau) \geq k^B$;

   and
3. $h \in A \Rightarrow v(\tau^A, h) \geq v(\tau^B, h)$ $h \in B \Rightarrow v(\tau^B, h) \geq v(\tau^A, h)$.

Condition 1 states that, facing the proposal τ^B, the Opportunists and Guardians of party A have "bargained" to response τ^A, and that facing the proposal τ^A, the Opportunists and Guardians in party B have bargained to a response which happens to be τ^B. Condition 3 determines the partition of the polity into the two coalitions that the party represents; it says that every type is happy with the party to which it belongs.

   This equilibrium concept is a kind of Nash equilibrium—where each party plays a best response to the other party—but "best response" is not achieved by maximizing a single payoff function; rather, it is the outcome of bargaining between factions with the party players.

   One might expect that if there is one PUNE, there are many, and this is indeed the case. The number k^A can be thought of as modeling the relative bargaining power of the Guardians in party A vis-à-vis the Opportunists. The missing data of the problem, as it were, are these bargaining powers. In the applications that we report here, we always compute a two-dimensional manifold of PUNEs, parameterized by the a set of pairs (k^A, k^B) that lies in $\mathbb{R}^2$.

   It is the idea of modeling the parties as consisting of factions that gives us equilibria on the multi-dimensional policy space. From the mathematical viewpoint, the game described is a Nash game played between players with incomplete preference orders on $T \times T$. For more discussion, see Roemer (2001, ch. 8).

3. The United States the United Kingdom

The data of our problem are $(n, T, H, \mathbf{F}, v)$. For these two countries, we define policies as a pair (t, r), where t is the tax rate and r is the party's position on the race issue. A *type* is an ordered pair (w, ρ) where w is the voter's wage rate, and ρ is his or her position on the race or immigration issue. The utility function is taken to be

$$v(t, r; w, \rho) = \log[(1 - t)wL + b(t)] + \beta \log(\lambda - L)$$
$$- \frac{\gamma}{2}(r - \rho)^2 + (\delta_0 - \delta_2\rho)E(t), \tag{3}$$

where L is labor supply, $b(t)$ is the value of the lumpsum transfer payment engendered by the linear tax rate, and $E(t)$ is a measure of the degree of equality in the post-fisc distribution of income, taken to be the ratio of the post-fisc incomes

TABLE 1. The U.S. results, ASE and PBE.

Year	$\bar{t}$	$\bar{t}_I$	$\bar{t}_{II}$	ASE	PBE
1976–80	.29	.37	.47	.10	.08
1980–84	.35	.40	.46	.05	.05
1984–88	.31	.37	.47	.06	.10
1988–92	.29	.32	.43	.10	.04

of the families at the 25th and 75th centiles of the wage distribution.[1] Thus the voter has a conventional Cobb–Douglas utility function over income and leisure, a Euclidean function on the race issue with an ideal policy of $r = \rho$, and a preference for equality, ceteris paribus. The parameters of the utility function, assumed to be invariant over the polity, are given by the vector $P = (\beta, \lambda, \gamma, \delta_0, \delta_2)$. We estimate these parameters by a variety of methods. Note that if $\delta > 0$, then a voter who is more racist (i.e., larger value of ρ) will care less about post-fisc equality. This is how we model the anti-solidarity effect.

Denote the equilibrium tax rate for a given year by $\bar{t}$. (For example, this could be the average of the tax rates proposed by the two parties, weighted by their vote shares.) We now perform two experiments:

Experiment 1. We conduct a counterfactual election where the only issue is tax policy. Thus we restrict the policy space to be $T^* = [0, 1]$. The space of voter types is, however, unchanged. We compute the average PUNE for this election. Denote it by $\bar{t}_I$. Note there will be no policy-bundle effect in this election—there is no reason for a racist voter to vote for the R party in the United States because he likes R's position on the race issue, because neither party puts forth a position on the race issue! However, the anti-solidarity effect will still exist: Voters who believe that blacks are living off the welfare state may still vote for a low tax rate on that account. Thus, we take the difference $\bar{t}_I - \bar{t}$ to estimate the policy-bundle effect.

Experiment 2. We again run a counterfactual election on the tax rate dimension alone, but this time we set $\delta_2 = 0$. The results of this election will be purged of both the PBEs and the ASEs. Denote the average PUNE by $\bar{t}_{II}$. We thus define the total effect of racism as $\bar{t}_{II} - \bar{t}$ and the ASE as the difference between this number and the PBE.

Table 1 presents a summary of the results for the United States. We pooled data from adjacent pairs of years. For the UK, we performed the computation only for 1997 (Table 2).

In the United States, we compute that, for the entire period, the marginal income tax rate would have been above 40%, absent racism. The U.S. fisc

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1. Readers may wonder why we model a progressive income-tax regime with an affine tax. Empirically, the graph of post-fisc income against pre-fisc income for these countries is virtually a straight line.

TABLE 2. The UK results, ASE and PBE.

Year	$\bar{t}$	$\bar{t}_I$	$\bar{t}_{II}$	ASE	PBE
1997	.33	.40	.51	.11	.07

would have looked like that of a northern European country. We also estimate a substantial effect of racism in the UK.

4. France and Denmark

We chose to study France because of Le Pen's National Front, one of the most highly developed anti-immigrant movements in Europe, and Denmark, because it is the first of the Nordic social democracies in which a right-wing government won power (in 2001), apparently because of the immigration issue.

For these two countries, we did not possess the highly articulated data needed to calibrate the utility function we used for the United States and UK, and so we used a simpler utility function,

$$v(t, r; \theta, \rho) = -(t - \theta)^2 - \frac{\gamma}{2}(r - \rho)^2. \tag{4}$$

Here, r and ρ are as above, but θ is now the voter's view on the optimal size of the public sector (rather than his wage), and t is the party's position on that size.

France has many active political parties; we believe they can be adequately represented by a Left (the Socialists, Communists, etc.), a Right (the Conservative party of Chirac), and an Extreme Right (the National Front). For France, we chose $n = 3$, because the National Front Party is idiosyncratic, in the sense that, while it proposes a position on r to the right of the other two parties, its position on t is in the center. On the other hand, in Denmark there are 11 active parties; however, their positions on the public-sector and immigration issue are perfectly rank-correlated, so we felt that little would be lost by postulating two parties, a generic Left and generic Right.

For the utility function (4), we have only one parameter, the salience γ. We cannot expect this model to perform as well as the more highly articulated one associated with utility function (3). Because of the simpler utility function, we are now able to compute hundreds of PUNEs, and we choose among them by targeting the vote shares predicted in equilibrium to observed vote shares. We calibrate γ for each year by a variety of methods.

We indeed observe that in both countries, there is a strong negative correlation between θ and ρ in the polity. We estimate the distribution of voter types as a bivariate normal.

The separation of the total effect of xenophobia into the ASE and the PBE is less straightforward here than in the model of Section 3. By econometric methods, and using the voter survey data, we estimate a racism-free distribution of views

TABLE 3. The ASE and PBE for France and Denmark.

Country/Year	ASE	PBE	Total/S.D.
France/2002	.31	−.04	27%
Denmark/2001	.32	−.06	29%

on pubic-sector size, G: That is, what the distribution of those views would be if voters were less xenophobic. To compute the PBE, we run Experiment 1, just as above. But to compute the total effect, we run a unidimensional election using the distribution of voter types G. There is an inherent identification problem in estimating G, so we run the experiment for several estimates of what that distribution might be.

We conducted the analysis for several years for each country. We report, in Table 3, the results for one year for each.

Recall that the equilibrium economic policies are not tax rates, but positions on the distribution of voter views on the optimal size of the public sector, which are coded in a qualitative way in the questionnaires. We therefore report in Table 3 the total deviation in the equilibrium size of the public sector as a fraction of the standard deviation of the actual distribution of those views. For both countries,
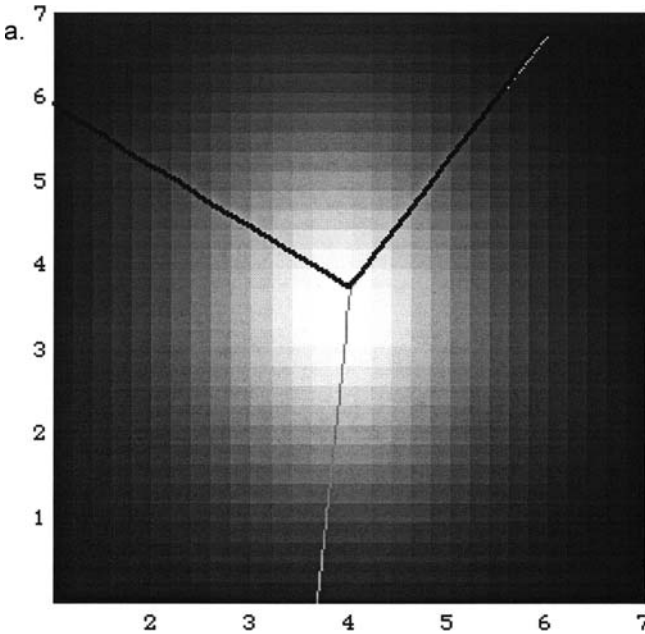

FIGURE 1a. France 1988: Partition of voter types into Right, Extreme Right, and Left (reading clockwise).
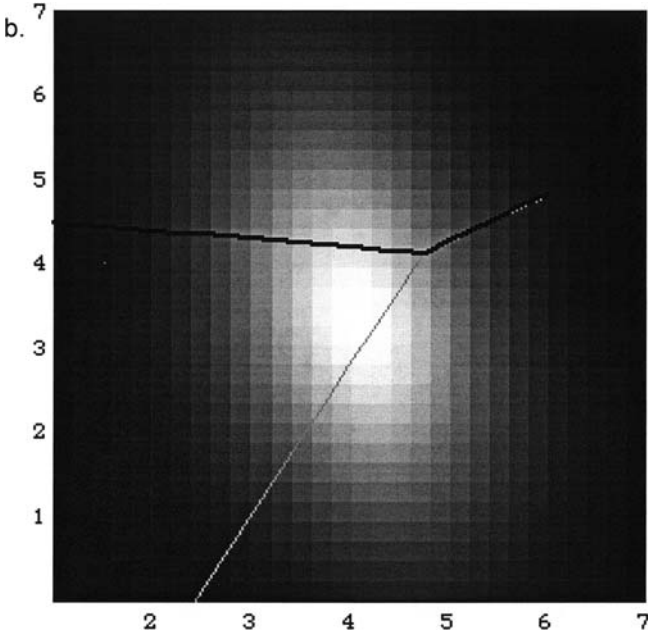
FIGURE 1b. France 2002: Partition of voter types into Left, Extreme Right, and Right.

we estimate that anti-immigrant feeling reduces the size of the public sector by approximately one-fourth of one standard deviation from what it would otherwise be. The PBE appears to be almost insignificant, but the ASE is substantial. For France, this result is not surprising, for an anti-immigrant voter who votes for the National Front does not vote for a small public sector—we noted above that the National Front proposes a centrist view on public-sector size. For Denmark, it is somewhat more surprising that the PBE is so small. As we said, we are less confident of the results with this model, because of the very simple utility function.

Finally, we note how our model can describe interesting changes in political behavior over time. In Figures 1a and 1b, we present the partition of the space of voter types in France into the three party constituencies, as predicted by the model, in 1988 and 2002. The space is (θ, ρ): Larger θ means a larger public sector, larger ρ means more anti-immigrant. Notice that in 1988, to predict whether a voter chooses to vote Extreme Right, one needs to her position on both issues. However, by 2002, it suffices to know her position on the immigration issue: In that year, the model predicts that the Extreme Right is supported by those and only those voters whose immigrant position is greater than 4.5. Thus, French politics appear to have become polarized around the immigration issue during this period.

5. Conclusion

There are many caveats to our analysis. It would be desirable to classify voters as having different values of the salience parameter, but that would require a three-dimensional type space. It would also be desirable to be able to distinguish between public sector policies in general, and policies towards immigrants in particular, but that would require a three-dimensional policy space. In other words, there are limitations to the $(\dim H, \dim T) = (2, 2)$ model we have estimated. A (3,3) model would be better—but using it would require better data sets and much longer computation time. (Paving out the manifold of PUNEs is a computation-intensive process, which becomes more so as dimensionality of either H or T grows.) Nevertheless, as we indicated in the Introduction, we believe the (2,2) model is a major improvement over the standard (1,1) model used in political economy.

Our substantive conclusion is that the conservative economic agenda has been given new life because of racist and xenophobic views of polities. It need not be the case that "secondary issues" always have this effect. One can easily imagine that, for example, the environmental issue would move equilibrium economic values in a leftward direction. A citizen who is concerned about the environment might vote for a larger public sector because one is needed to regulate environmental degradation (the analog to the ASE); and a Green voter who is relatively conservative on economic policy might vote for a Left party because she prefers its position on the environment (the analog to the PBE). Thus, the Left might attempt to exploit global warming the way the Right has exploited racism.

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