



## Work values, endogenous sentiments redistribution

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### ABSTRACT

We examine the interactions between individual behavior, sentiments and the social contract in a model of rational voting over redistribution. Agents have moral “work values”. Individuals’ self-esteem and social consideration of others are endogenously determined comparing behaviors to moral standards. Attitudes toward redistribution depend on self-interest and social preferences. We characterize the politico-economic equilibria in which sentiments, labor supply and redistribution are determined simultaneously. The equilibria feature different degrees of “social cohesion” and redistribution depending on pre-tax income inequality. In clustered equilibria the poor are held partly responsible for their low income since they work less than the moral standard and hence redistribution is low. The paper proposes a novel explanation for the emergence of different sentiments and social contracts across countries. The predictions appear broadly in line with well-documented differences between the United States and Europe.

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### 1. Introduction

In this paper we explore the interplay between work ethics, sentiments and social policy. We present a model where agents have standards of behavior relative to which they judge the actions of others, increasing their regard for those who exceed the standard and decreasing it for those who fall short. Similarly, according to social psychologists, agents’ self-esteem is affected by their own deviations from moral standards in much the same way.<sup>1</sup> As agents’ *sentiments* change, so, too, will their behavior. Moreover, this is likely to affect their view of the benefits of social programs and the worthiness of participants. The converse is true as well: social policies or institutions – the *social contract* – generally affect behavior and this, in turn, affects

sentiments, as described above. Therefore, sentiments, behavior and social institutions must be determined jointly.

To study this interaction, we extend the model by Meltzer and Richard (1981) of rational voting over redistributive taxes to include endogenous sentiments. In their model, agents supply labor in return for competitive wages, and earnings are subject to a purely redistributive proportional tax. The tax structure is determined by majority rule and reflects the preferences of the median voter. Agents are assumed to be purely egoistic and the median income is below the mean. Under these circumstances, if labor supply were inelastic, the resulting tax policy would be fully confiscatory. However, since labor supply is endogenous and agents foresee the disincentive effects of taxation, they will temper their demands for redistribution and adopt a more moderate tax structure. An important implication of the model is that higher income inequality necessarily leads to greater equilibrium redistribution.

In contrast, we assume that agents are altruistic and that sentiments are determined endogenously. We assume agents evaluate their own performance and that of others relative to the work standard, increasing their regard for those who exceed the standard and decreasing it for

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<sup>1</sup> The impact on self-esteem and self-worth derives from the emotions of guilt and pride, which are referred to as *self-regulative emotions* by social psychologists because they induce reparative or self-correcting behavior. This is discussed below in Sections 2 and 3.

those who fall short.<sup>2</sup> As a benchmark we take the mean labor supply to be the moral standard. Formally, we consider a continuum of agents who differ in their productivities. For simplicity, we assume there are only two types of individuals, skilled and unskilled, with the latter comprising more than half of the population. Agents have private preferences over consumption and leisure and social preferences that take into consideration the welfare of others. In addition, private preferences depend on self-esteem which is subject to the moral calculus mentioned above, namely, the more one works relative to the social standard of behavior, the greater the perception of oneself as industrious and the greater the sense in which leisure is “well deserved.” The social component of the utility function consists of a weighted average of the (private) well-being of others, where the weights depend on their industriousness.

The endogenous variables in our model – labor supply, sentiments and taxes – are determined as follows. First, given their sentiments and the tax schedule, agents make labor supply decisions. Since there is a continuum of individuals, the labor supply decision has no impact on others and is therefore made on the basis of private preferences. Next, having determined their labor supplies, we assume agents evaluate such behavior relative to the moral standard and modify their sentiments accordingly. Finally, given their sentiments, individuals vote over redistribution, anticipating the labor supply effects of taxation. Since the tax policy has an economy-wide effect, such voting decisions are made on the basis of social preferences. The unskilled agents being in the majority, the median tax policy will be that preferred by an unskilled worker.

A *politico-economic equilibrium* consists of a vector of labor supplies, sentiments and tax policy such that each is optimal given the other components and all such variables are compatible. There are two types of politico-economic equilibria in our model. In a *cohesive equilibrium* all individuals conform to the moral standards. In these equilibria all agents receive equal social consideration. The chosen tax rate might be high relative to the second type of equilibrium. In contrast, in a *clustered equilibrium*, society is divided into two groups or clusters. One consists of the most productive individuals who work above the mean, while the other consists of the least productive individuals who work below the mean.<sup>3</sup> In a clustered equilibrium the chosen tax rate might be lower than in a cohesive society. Conditional on the strength of work values, whether an economy becomes cohesive or clustered crucially depends on the degree of inequality of pre-tax income or skill level. If inequality is below a critical level, then cohesion results, whereas higher inequality leads to social clustering.

The theory provides several implications concerning the relationship between labor supply, inequality, redistribution and individual attitudes. First, the distinguishing feature of cohesive equilibria is that all agents adhere to the moral norm. Hence, for low levels of inequality (associated with cohesive equilibria) we observe little or no dispersion in labor supply, while for high levels of inequality there is a widening gap between the labor hours of skilled and unskilled workers. Second, the model offers a plausible explanation of how inequality and redistribution might be inversely related in spite of the fact that the poor constitute a majority. In a cohesive equilibrium, all agents contribute the same level of effort and hence differences in income are solely attributable to the exogenous inequality in productivities. As such, those with low skill are seen to be poor *through no fault of their own*. In this case higher income inequality leads to support for greater redistribution. Such a positive relationship holds for moderately higher levels of inequality as well. But when productivities are sufficiently different that clustering occurs, this may lead to large differences in labor supply. In this case the poor are seen to be at least partly

responsible for their low income and support for redistribution declines. It follows that we might observe one (cohesive) society with low pre-tax earnings inequality choosing to redistribute more than another (clustered) society with greater inequality. Moreover, such divergent attitudes toward the poor are endogenously determined.

The model proposed here affords a novel explanation for the emergence of different sentiments and social contracts. In particular, it yields predictions which are in line with the following four well-documented differences between the United States and Europe.<sup>4</sup> First, in the US there is considerably greater inequality (in both pre-tax income and the distribution of skills) than in continental Europe.<sup>5</sup>

Second, despite having less inequality, European countries engage in significantly more fiscal redistribution.<sup>6</sup> Third, the distribution of work hours is substantially more dispersed in the US.<sup>7</sup>

Finally, compared to Europeans, a much larger proportion of Americans tend to view poverty as resulting from laziness.<sup>8</sup> These stylized facts, which either conflict with or lie beyond the scope of existing theories, are reconciled and rationalized by the predictions of our model.

The paper is organized as follows. Section 2 discusses the related literature. Section 3 describes the basic set up, characterizes optimal labor supply and discusses the determination of sentiments. In Section 4 we examine *socioeconomic equilibria*, where the tax structure is taken as given. Section 5 studies preferences over redistribution and characterizes *politico-economic equilibria* in which taxes, sentiments and labor supply are determined jointly. In Section 6 we specify functional forms which allow us to analytically characterize the different equilibria and to study explicitly the relationship between inequality, social cohesion and redistribution. All analytical derivations and proofs are relegated to Appendix A.

## 2. Related literature

This paper is related to several literatures. First, it contributes to the literature on endogenous preferences, both private and social. The latter has been the subject of a number of recent papers attempting to explain reciprocal behavior. Generally, such papers, including Rabin (1993), Levine (1998), Fehr and Schmidt (1999), Bolton and Ockenfels (2000), and Falk and Fischbacher (2006), have focused on the interaction among pairs of players where each player attempts to infer the motive of its

<sup>4</sup> See Alesina and Glaeser (2004) and Alesina, Glaeser, and Sacerdote (2002) for an extensive discussion of the differences between the US and continental Europe.

<sup>5</sup> For instance, in the early nineties the average before-tax Gini coefficient for European countries was 29.1 versus 38.5 for the United States (Deininger and Squire, 1996). By 2000 the gap was 36.0 versus 43.6, respectively and the earning ratio of the nineteenth and tenth percentile was 2.45 in EU and 4.58 in US (Kenworthy and Pontusson, 2005). High school graduates in the US enjoy a skill premium that is about 50% larger than in Europe (see Acemoglu, 2003).

<sup>6</sup> Using OECD data, the share of welfare transfers over GDP in 2007 was 12.7 in the US and 19.6% in Europe, and the share of total government spending for the same year (excluding interest payments) was 36% and 45%, respectively.

<sup>7</sup> ILO data for 2000 document that average hours of work are 43.3 for the USA, 40.8 for Germany, 36.9 for France, and 37.6 for The Netherlands. These longer hours in the USA are also differently distributed over the working population. On average, 65% of European workers work the mode number of hours versus 30% of US workers. Kuhn and Lozano (2008) show that, unlike Europe, the highest paid 20% of US workers in 2002 were twice as likely to work long hours than the bottom 20%. Also, they find that this phenomenon cannot be attributed to unionization. This is consistent with the data for the USA from the Current Population Survey for 2008. The weekly work time of workers with at most a high school degree is 42 h, while workers with more education work 43.3, and the sample average is 42.8 h. Note that even the low skilled US workers work much longer hours than the average of the European continental countries. These shorter hours in Europe do not seem to result from market regulations or unionization. Bell and Freeman (2001) find that European workers would prefer to work less rather than more while the opposite is true for Americans.

<sup>8</sup> For instance, about 60% of Americans versus an average of 20% of Europeans believe that laziness is the main source of poverty (question E131 of World Values Survey, 2004). These figures are unchanged if we restrict attention to the attitude of low skilled workers toward the poor. This is noteworthy since the unskilled constitute the majority of the voting population in our model.

<sup>2</sup> The importance of work values is demonstrated by the fact that within the OECD approximately 60% of respondents to the World Values Survey (2004) either “strongly agree” or “agree” with the statement, “work is a duty towards society,” (question C039) with little variation across countries.

<sup>3</sup> If there were more than two skill levels, then there could be a third cluster in equilibrium, where those in the middle group would conform to the standard.

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