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d'Economie Théorique et Appliquée**U M R
Unité Mixte de Recherche**DOCUMENT de RECHERCHE****«Social Preferences on Public****Intervention: an empirical****investigation based on French Data.»**Romina BOARINI
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DR n°2007-02

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Social Preferences on Public Intervention: an empirical investigation based on French Data^δ.

by

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Keywords: Social Preferences, Self-interested Preferences, Demand for redistribution

Abstract.

In this paper we examine the support given by French households to public intervention for reducing inequalities and improving well-being of the low-income classes. We first discuss to what extent the model of self interest could be relied upon when one wants to take into account social norms to explain the individual demand for redistribution. We find that social beliefs matter for explaining the individual attitudes towards public intervention. We find also that the support given to redistribution can increase or decrease depending on the interaction between reciprocity norms and beliefs about causes of poverty.

JEL Code: A13, D63, D64, I38

^δ This study has benefited from a grant (Department of Research-Drees- French Ministry of social affairs).

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1. Introduction.

A standard assumption in the models of optimal taxation is that only those who expect to draw a net benefit from it adhere to public redistribution. Thus the individual demand for redistribution depends negatively on the contributions that agents actually pay and positively on benefits they expect to get from the public redistribution (Sinn, 1995; Barr, 1992).

Two kinds of theoretical framework produce such a result: the median voter model of income taxation and the social insurance model. Both approaches rely on the *homo economicus* assumption, i.e. on agents endowed with outcome oriented, self-regarding preferences. In the first kind of model, when the median voter's income is less than the mean income, she will agree with a redistributive policy which consists of lump-sum transfers financed by a linear tax on incomes (Meltzer and Richard, 1981). In the second kind of model, redistribution works as a social insurance device and thus can benefit all those individuals who are likely to suffer from negative idiosyncratic shocks (Moene and Wallerstein, 1996). As a consequence, the demand for redistribution is positively correlated to the degree of risk the individual feels to be exposed to.

The standard framework has been challenged by a number of theoretical and empirical works that have shown that, as far as social distributional outcomes are concerned, individual preferences would incorporate some not self-interest variables. Traditionally, two families of models have been proposed to formalize the idea that individual preferences are not only defined over levels of personal well-being: the models which focus on the norms of altruism and the models which put forward the social rivalry effect. In the first class of models (Hochman and Rodger, 1969; Luttmer, 2001), individuals do care about the others so that, under certain conditions, the redistribution from the high-income classes towards the low-

income classes is Pareto-improving, as it enhances the well-being of both beneficiaries and taxpayers. In the second class of models (Akerlof, 1997; Corneo and Grüner, 1996), individual compares himself both to the individuals belonging to the social classes that are better-off than his own reference group, and to the ones that are worst-off of his reference group. His well-being decreases when the redistribution makes his reference group closer to the worst-off group, all other things being equal. This may explain why individuals could oppose redistribution.

A new generation of models extends the set of rationales which may justify the demand for the redistribution. In particular, beliefs about the key-determinants of socio-economic achievements and views of social justice might explain why one could support redistribution even when this does not bring any material advantage (Picketty, 1995; Corneo and Grüner, 2002). New and old models have been tested in some empirical studies, which found contrasting evidence on the motivations behind the individuals' demand for redistribution. In particular, Fong (2001) pointed out that “ income is a surprisingly poor predictor of redistributive beliefs”. By contrast, moral judgments about personal responsibility and external circumstances as causal determinants of one's own socio-economic outcomes can explain the individual support to redistribution.

Though Corneo and Gruner (2002) also found that social values explain consistently the demand for redistribution, they did not conclude that the self-interest rationales were irrelevant and claimed that these two effects and the social rivalry one all play a role.

Our paper provides evidence on the French case and compares these findings with those of similar studies, especially such as Fong's one. In addition, we test another family of social preferences models, namely models which rely on the “Reciprocity” view (Bowles and Gintis, 2000; Bowles *et al.*,2004). Following this view, the generalised support to welfare system should be understood along the lines of conditional solidarity to needy individuals. A large

number of tax-payers would be ready to contribute to the system, even when this is costly for them, to the extent that the other side of the redistribution (those who draw a net benefit from it) displays a willingness to cooperate. Someone acting along reciprocity standards is someone who expect that redistribution works as a fair cooperation between individuals. The reciprocity view insists that when social welfare system is designed as a fair division of advantages and burdens, it is more likely to be sustained and defended by individuals, irrespective of their personal strict (i.e. material) interest.

To discuss the relevancy of social preferences models, we analyse the individual demand for redistribution by using the French survey “Opinions about Welfare State” conducted by DREES¹ on a sample of 4000 households. We selected a number of questions where respondents had to indicate which institutions are responsible for reducing inequalities and social exclusion, and to which extent.

The use of questions is twofold: first, we select a number of questions to build an indicator measuring the desired degree of public intervention for reducing poverty and providing social solidarity; then, we run an ordered probit model on this indicator, with some socio-demographic variables and some self-interest and not self-interest variables as regressors.

Second, we analyse social preferences through the support given to public intervention in terms of minimal income.

The paper is structured as follows: in the first part we broadly describe the main implications for redistribution of the different models of social preferences (with respect to standard homo economicus framework). In the second part, we introduce the data set and the estimation method we make use of. The third part is devoted to the presentation of the results and to a discussion of our main findings. The fourth part concludes.

¹ DREES (Direction de la Recherche, des Etudes, de l’Evaluation et des Statistiques, Ministère des Affaires Sociales, du Travail et de la Solidarité & Ministère de la Santé, de la Famille et des Personnes Handicapées).

2. Models of social preferences.

2.1 The *Homo Economicus* model and the Social Insurance approach in a static framework.

An immediate application of the *homo economicus* assumption in the topic of public redistribution of incomes is represented by the Social Insurance² models. There exists a large literature (Eaton and Rosen, 1980; Varian, 1980; Rochet, 1991; Sinn, 1995) insisting on the interaction of ex-ante risk-taking behaviour and redistributive taxation. In Sinn's model, individuals are supposed to be at risk of an uninsurable lifetime random income loss whose occurrence is controllable by personal effort, though not completely unavoidable. Redistribution is assumed to take the form of a linear tax on market income and lump-sum transfers to be independent of the state of nature as well as on the individual effort. With such assumptions, "lucky individuals are net tax-payers and unlucky individuals net recipients of public funds", so that by reducing the standard deviation of income distribution the government achieves its insurance intervention. To the extent that individual effort is partially unobservable and that self-insurance activities—as investment in human capital—are not fully tax deductible, there is room for moral hazard, that is overtaking of risk resulting in an enhancement of pre-tax inequality.

² The term "social insurance" refers to the standard micro-economic framework where agents turn to redistribution as to cover themselves from idiosyncratic shocks that are not completely avoidable nor insurable ex ante. In France, the term "social insurance" might sound ambiguous to the extent that the welfare state is a mixture of Bismarckien and Beveridgien systems, where the redistributive transfers towards poors are funded by both income taxes and social security contributions. So strictly speaking, the French redistributive system includes a part of insurance and a part of solidarity. However, in what follows, we always use the term "social insurance" to mean the fact that support to redistribution is only motivated by personal interest, and not to indicate the way how the redistribution is financed.

2.2 Beliefs and Dynastic mobility.

Piketty (1995) uses a model where the individuals' experience of dynastic income mobility affects their evaluation of the relative importance of effort and external factors for getting ahead in life, beyond the inborn beliefs of agents. The intergenerational learning with respect to the effectiveness of personal effort in attaining a certain level of well-being determines both the agents' work effort and the public redistribution they vote for. At each period, individuals earn a certain income, which depends partially on their social origins and partially on the level of effort they supply. The level of effort is chosen according to their different beliefs about the impact of effort and luck on their odds of becoming rich or poor, while the redistributive tax rate is decided so as to maximise the opportunities of the most unlucky individuals in the society³. The stronger the belief that individual effort is important for obtaining economic success, the higher the costs of redistributive taxation from the rich to the poor and the less the individuals are willing to accept redistribution. However, social beliefs endogenously evolve with individual's own experience and the (imperfect) observation of how success is achieved at society level. Indeed, several possibilities of learning exist. For instance, it can happen that individuals, supplying a high level of effort and obtaining a high income, reinforce the yet-existing belief that effort explains success; conversely, low-incomes agents providing low level of efforts as a consequence of their initial belief, keep on holding the opposite belief. More interesting is the case where dynasties adhere to different standpoints, as a result of an unexpected state of affairs: it may happen that individuals of high-incomes dynasties, though putting high efforts, end up with low income. In that case, it is quite likely that they revise their beliefs and enhance their support to redistribution.

³ This means that, before the direct or indirect learning, individuals may eventually agree with the social finalities of the redistribution—that is, aimed to offset the initial bad luck.

2.3 Are norms correlated to Income?

In her empirical paper devoted to the estimation of social preferences, Fong (2001) analysed the impact of the self-interest motive on the demand for redistribution, she also considered the importance of collective norms of social justice in shaping the distributive preferences of taxpayers. Following Kluegel and Smith (1986), she distinguishes between self-determination beliefs and exogenous-determination beliefs: the former corresponds to the idea that individuals are entirely responsible for getting ahead in life while the latter sustains the view that bad exogenous luck should be somehow compensated for.

Now, there exists a large empirical evidence from the American public opinion surveys, according to which the social schemes for the have-nots as well as the public programs for reducing inequalities are largely supported by individuals who are likely to not draw any benefit from them; however, it is not clear whether and how values and norms about distributive justice explain the ‘apparently disinterested’ demand for redistribution. It is possible, for instance, that the relation between income and norms is a joint one, say for instance that people who believe that the lack of effort is the only reason for indigence systematically coincide with high-income classes. In order to establish if moral judgments and beliefs in social norms operate through incomes or not, Fong firstly estimated a model on the whole sample of respondents where incomes as well as social beliefs appear as explaining variables of the support given to redistribution. Then, a similar model is estimated on separate sub-samples, according to the income of respondents. The main finding is that in the (high income) sub-samples estimation one cannot reject the null hypothesis that support to

redistribution is only explained by self-determination beliefs⁴ but one can reject the hypothesis that self-interest variables alone determine support to redistribution. She thus concluded that social beliefs matter for determining individuals' attitudes towards redistribution, and that is so independently of their income.

2.4 Norms and Reciprocity.

On the basis of the observed mismatch between theoretical predictions on the relationship between the degree of inequality and the strength of the welfare system, and the empirical evidence on such a correlation⁵, Gintis and Bowles (2000) maintain that a finer understanding of egalitarian policies requires a reconsideration of the motives that lead individuals to sustain such policies. Building on a robust and wide set of experimental and empirical findings, the authors argue that the reciprocity view accounts for distributional choices in a large number of cases. The ambition of reciprocity's view partisans is to explain the political success of the welfare state by the comprehensively observed fact that "people are not stingy, but their generosity is conditional", rather than by the unconditional altruism⁶. To justify their view, Gintis and Bowles report comprehensive empirical evidence. In American social surveys, for instance, it appears that people do not care that much about the cost of social schemes, but rather on the conditions setting which recipients should benefit from social security programs.

⁴ Self-determination beliefs are beliefs that identify the individual's socio-economic outcomes with the moral responsibility of the individual.

⁵ According to the standard median voter's model and the social insurance model, countries characterized by more unequal distributions of income should display higher support for redistributive policies, and thus larger coverage of welfare system. The reasons for such predictions are respectively given by the position of the median income (the skewness of the income distribution) and by the fact that "if the welfare state insures against chance events that might relocate one's position in income distribution, and the impact of greater inequality is to enlarge the income distance one might be displaced as a result of these shocks, an individual with a given level of risk aversion will value insurance more in the more unequal economy" (Bowles and Gintis, 2000). Now, the empirical evidence about the actual correlation between the degree of inequality and the coverage of the welfare system is indeed of the opposite sign. For instance, more egalitarian countries display higher social security levels (e.g. Sweden) and more unequal countries are associated to lower levels of redistributions (e.g. United States).

⁶ An unconditional altruist is defined as "an equally one-dimensional actor unconditionally willing to make personally costly contributions to others".

According to Gilens (1999), the main question for taxpayers is not “who gets what” rather than “who deserves what”.

Gintis and Bowles distinguish between a strong and a weak form of reciprocity: the former corresponds to “a propensity to cooperate and share with others similarly disposed, even at personal cost, and a willingness to punish those who violate cooperative and other social norms, even when punishing is personally costly”. When confronted with the question “How much redistribution do you want” someone acting in accordance with strong reciprocity norms will be highly sensitive to the measures that benefits go along with (as, for instance, “looking intensively for a job” or “accepting job proposed by the work agency” or “contributing to tasks of social interest”). The weak reciprocity view is a milder version of the strong reciprocity view, for which both self-interested and altruistic concern matter. The weak reciprocity precisely states that the latter is conditional to the former. In other words, behaving altruistically is a mean to maximise individual’s interest. For instance, «the future repayment» a generous/cooperative action will produce for the agent explains the self-interested form of cooperation. As an example of weak reciprocity, Gintis and Bowles take the model of redistribution-as-social-insurance, where it is in have-nots individuals’ interest to accept a large social coverage, to the extent that they can reasonably expect to take a share of it. Reciprocity is somewhat seen as a voluntary contribution expected to be met by corresponding benefits⁷.

Finally, note that a loose interpretation of the reciprocity view is expressed by the belief that people should be deemed ‘deserving’ in order to obtain public assistance. Thus this simple version of reciprocity may conflate with the general view that effort must be rewarded. If so,

⁷ One problem with this interpretation of weak reciprocity is that it is clearly too close to the standard model of homo economicus in what concerns predictions about the individual demand for redistribution. Thus it is difficult to discriminate empirically between these two models.

the reciprocity view would be another way of reading the observed negative correlation between the willingness to support redistribution and the beliefs that effort is rewarding⁸.

2.5 Discriminating between social insurance, beliefs and views on justice.

Before entering into the empirical discussion, it is worthwhile to sum up the main assumptions of each model with respect to the key variables of demand for redistribution. The standard approach based on self-regarding preferences insists that the support to redistributive policies is only driven by considerations of private interest. The way personal interest is expressed vary if a static deterministic framework is used or if the demand for redistribution is formalised as a dynamic choice made under uncertainties. Moreover, beliefs about the determinants of achievements can also play the role of self-interest variables if they are correlated to the personal experience of individuals⁹. However, when such a correlation is not assumed, these beliefs can be interpreted more broadly as the individuals' views of social justice. The reciprocity approach is a specific variant of a social preferences model, for which tax-payers adhere to redistribution to the extent that they believe that the beneficiaries deserve to be helped and showed to be cooperative.

If these models make different assumptions about the underlying preferences for redistribution, none of them rules out the agents' anticipation of moral hazard behaviour with

⁸ In fact, if I strongly believe that all individuals have to provide an effort to deserve the State intervention, I will not support any social program that I know to be addressed to all those who, in my view, do not provide such an effort.

⁹ It is assumed that in a complex economic environment, the key factors of achievement and failure are not known with certainty. At the same time, agents do not need to share the same beliefs about these determinants. This informational uncertainty may imply moral hazard behaviours but also may induce suspicion about their occurrence, and indeed this is enough to undermine the support given to redistribution. Thus, as the following example illustrates, it is essential that individuals experience failure through no fault of their own. Let assume that someone suspects that success only depends upon effort (on the basis of personal experience) but wonders whether some people are worst-off because they do not have the same belief and/or experience or just because they were not lucky enough. There is room for expecting moral hazard behaviour from the others to the extent that he thinks that they have "false" beliefs about what determines success and failure. However, when someone experiences "failure", he might come to change his existing belief and thus his moral hazard suspicion could decrease as a consequence. Thus, when he updates his beliefs, he is led to recognize that social redistribution is needed as a result of more uncertainty on what explains individuals' outcomes. But this is another way of saying that social beliefs are, indeed, a proxy of social insurance (i.e. of self-interested demand for redistribution).

respect to the existing safety net represented by social protection. All models can predict that tax-payers might oppose the redistribution to protect themselves against moral hazard. This is the basic implication of standard self-interested models (like Sinn's one), but this is also what the social beliefs model (like Piketty's one) underlies¹⁰. Finally, the (strong) reciprocity view may also be interpreted along these lines, to the extent that counterparts are required for discouraging moral hazard by diminishing the disincentives of the safety net¹¹.

However, it must be noted that social preferences models typically assume that views of social justice and of norms of reciprocity affect redistribution beyond the moral hazard explanation as it might be the case, for instance, when people believing in self-determination oppose redistribution because they think that it is good for people to stand on their feet without the help of others, and not because they think that the safety net will induce moral hazard behavior.

More in general, beliefs about the determinants of achievement and failures do not have to coincide with norms about what one should do or should not do as welfare citizen – individuals can be deeply convinced of the fact that effort is not rewarding in real life (people do not succeed though they provide lots of efforts), but at the same time they might maintain that people have to behave according to a morality of responsibility.

There is a similar argument about a possible dissonance between self-determination beliefs, reciprocity standards and moral hazard suspicions. It could be that these three things are not related at all; for instance, when one is convinced that success is not only a question of personal determination and still thinks that counterparts are needed as (a) it increases the chances of social inclusion ; (b) it is just that people cooperate in a fair way¹². The exchange idea could be seen of course as underpinning a wide array of different rationales: it could be

¹⁰ See the previous footnote.

¹¹ We owe this remark to Claudia Senik.

¹²There is of course something linked to my personal interest in asking for people to play “fairly”, but this personal interest should not be understood as “money”, that is as a personal material advantage. This is about the fact of satisfying an ideal of justice.

seen as a form of paternalism (“I know what is good for them”), or as a way of promoting productive behaviours and fostering social inclusion mentality. This means conceiving redistribution as a way to provide incentives to join the well-off classes, to adopt preventive attitudes towards the future (so as to avoid self-stigmatisation or self-destructive and self-defeating behaviours). However, it is true that, a fortiori, counterparts can also be asked for discouraging moral hazard (i.e. diminishing the disincentives implied by the safety net).

Reciprocity can indeed endorse several reasons. In the original concept, there is only the idea that you behave as your peer behaves, even if this is personally costly for you. So, in fact everything depends on whether people perceive their peer as cooperative or not : if you are deemed cooperative, people will respond cooperatively. But if you are suspected to be non-cooperative, people will behave non-cooperatively with you. Indeed, reciprocity is a double-edged mechanism.

3. The Estimation of the demand for redistribution.

3.1 The data set and the method of estimation.

We use the 2000 DREES¹³ Social Survey, “Opinions about the Welfare State”, run on 4000 French households. Standard criteria of stratification with respect to the main socio-economic variables have been applied to make the sample representative of the whole population. Though the survey does not deal explicitly with the matter of redistribution from the rich to the poor, the data set contains a number of saliently related questions. Very often in social surveys the support to public redistribution is a latent variable, and thus it has to be approximated by an appropriate measure. Following Fong (2002), we build an indicator measuring the individual attitudes towards public intervention on the basis of some questions

¹³ DREES (Direction de la Recherche, des Etudes, de l’Evaluation et des Statistiques, Ministère des Affaires Sociales, du Travail et de la Solidarité & Ministère de la Santé, de la Famille et des Personnes Handicapées).

capturing the adherence of individual opinions to whether and how the State have to cope with reducing inequalities and implementing social policies for low-incomes classes¹⁴.

Moreover, we repeated our estimations by taking as the dependant variable a precisely stated issue of government intervention (i.e. without having recourse to a proxy), in order to corroborate the results of the previous approach and be able to conclude on the goodness of the proxy-indicator. Of course, even this last procedure does not allow to draw a definite conclusion on the reliability of opinion surveys as a tool for inferring individual demand for redistribution. But it can nonetheless shed a light on the consistency of such approach with respect to the inner structure of the survey.

For the first kind of estimation, we make use of a probit ordered model. The probit ordered model is a qualitative ordered-response model, which estimates the probability that an individual i falls in the category k :

$$P(Y_i=n) = P(s_{n-1} < Y^*_i < s_n) = 1 - F(s_{n-1} - \beta X_i)$$

.....

$$P(Y_i=2) = P(s_1 < Y^*_i < s_2) = F(s_2 - \beta X_i) - F(s_1 - \beta X_i)$$

$$P(Y_i=1) = P(Y^*_i < s_1) = F(s_1 - \beta X_i)$$

¹⁴ For that, we consider the three following questions:

- 1) Among the following institutions, which one do you think should stand by have-nots individuals?
 - Public Institutions (Central State or Local Authorities)
 - Individuals or Private Foundations/Associations
- 2) Among the following institutions, which one do you think should mostly battle with poverty?
 - Public Institutions (Central State or Local Authorities)
 - Individuals or Private Foundations/Associations
- 3) Among the following institutions, which one do you think should be made responsible for not self-dependent people?
 - Public Institutions (Central State or Local Authorities)
 - Individuals or Private Foundations/Associations

We also run separate probit ordered models for each question that we don't present here because we find similar results.

Where the underlying response model is $Y_i^* = \beta X_i + u_i$, with X the vector of explanatory variables, $u_i \sim N(0,1)$ the residuals and F the distribution function.

In building the aggregate measure for redistribution we retain 3 questions, thus the dependent variable in the probit model has 4 (3+1) modalities. The support of redistribution increases with the agreement expressed by respondents towards the different items of government intervention¹⁵. So for instance, a level of redistribution equal to 3 means that the respondents hold the State responsible for providing assistance to have-nots individuals, for reducing poverty and exclusion, as well as for supporting dependant people.

For the estimation of specific measures of redistribution – such as the provision of minimum income (RMI) -- we also use the probit ordered model; the difference is that we only use one question as the dependent variable and that in this case the cutpoints are naturally identified with the three possible answers to these questions¹⁶. The natural order of answers already coincided with an increasing favorable attitude toward redistribution.

3.2 Three models of demand for redistribution.

We organise the empirical analysis of preferences for redistribution along the lines of existing literature. By doing so, we pursue the twofold objective of discussing our results with respect to those of previous studies, and of providing a new test of reciprocity norms within the same framework of analysis. We test three specifications of preferences for redistribution. The first

¹⁵ See note 16 for a complete description of the three items.

¹⁶ The question on the RMI provision was asked in these terms: “Do you think that the RMI should 1) decrease; 2) remain stable; 3) increase. The question about the funding of the Welfare State read: “The current amount of resources invested in the Welfare System is equivalent to _ of the Yearly French GDP. Do you think that this amount should: 1) decrease; 2) remain stable; 3) increase.”

model puts forward the self-interest rationales, while the two others rely on social norms explanations.

1/ The first model of redistribution, henceforth “Social Insurance model” is the following:

$$Y = \beta_1 X_1 + \beta_2 X_2 \quad [1]$$

X_1 is the vector of socio-economic characteristics including: age, sex, educational attainment, living area (both as region and size of urban agglomeration); X_2 is the vector of self-interest variables including: income and exposure to risk (both as an objective fact and as self-perception- variables are described extensively later on).¹⁷

In what concerns the self-interest explanation, income is the traditionally used variable (Fong, 2001; Corneo and Grüner, 2002) as a proxy of personal individual’s well-being. Unlike these previous studies, however, our data set only contains overall household’s incomes and thus we need to derive from the aggregate measure an individual one. To this aim, we use the equivalence scale transformation that worked as reference for introducing the minimum income schemes in France.¹⁸

We also specify three more variables to capture the social insurance effect: they are about the subjective perception of being among individuals who are mostly exposed to socio-economic risks, and the objective proximity to precariousness. Practically, for measuring the perceived fact of being exposed to risk and the actual proximity to precariousness we built three variables on the basis of available questions in the survey.

¹⁷ We check the absence of collinearity between income and exposure to risk.

¹⁸ As usual, the equivalence scale transformation takes into account the size and the economies of scale within the household production. We use such an equivalence scale because it is the one which is used for the provision of income support in France (see for example guaranteed minimum income, “RMI”), after being tested to reflect purchasing power of families with different size. The coefficients are 1 for the first adult person, 1.5 for two adult people, 0.3 for the third and fourth additional household member and 0.4 for the fifth onwards. So, for instance, a household composed by two adults and two children has a coefficient of 2.1 while a family of three children is weighted 2.4.

We define the subjective self-perception of exposure to risk as the belief held by an individual who thinks that certain categories of people are more likely to be the victim of poverty and exclusion. Since in the survey there is no direct measure for the subjective exposure to risk (such as “do you feel concerned by a risk specifically related to your age/ gender”), we create a crossed-dummy variable indicating if individuals who think that some categories of people are especially subject to a given risk belong at the same time to these categories. For instance, one of the risks we look at is the age related one. In the survey there is a question asking, “Do you think that x-years old people are mostly exposed to the risk of poverty and of exclusion?» At the same time since we control for the age of respondent, we can see if individuals answering “yes” are x-years old or not. If they are so, then they are considered as individuals who feel exposed-to-age risk. We apply this procedure to individuals whose job security is at risk and to those who declare to be concerned by the gender risk. We use a similar approach for the perception of poverty, matching the opinions about what poverty is and the objective fact of corresponding to such a description.¹⁹

The proximity to precariousness is measured as how much one is acquainted²⁰ with individuals living under risky conditions (such as being a long-term unemployed, having a precarious job or meeting other criteria of serious social assistance.)

¹⁹ For exposure to risk due to age, we consider the following question: “Would you say that risk of poverty and of exclusion mostly concerns: - people between 18 and 24 years old; -people between 25 and 34 years old; people between 35 and 49 years old; - people between 50 and 64 years old; - people over 60; - nobody in particular.” We crossed the answer to this question with the actual age of the respondent. We thus define individuals who feel being exposed to the age-risk as individuals believing that people of their own age are a category at risk. A similar definition is given for risk related to poverty and risk related to gender. The questions we used for creating such variables were respectively: “Would you say that risk of poverty mainly concerns: - women; -men; none of them in particular” and “Would you say that today being poor or marginalized means: - Being a long-term unemployed; - Being homeless – Mean-Tested minimum income recipients; - Being worry about bills; - Cannot afford medical treatments; - Growing up children as single-parent; - Getting an invalidity pension; - Having a precarious professional status; - Working part-time with a low salary”.

²⁰ Practically we measure the proximity to precariousness by the mean of this multi-level question: “Do you know in your family circle – or around you- some people belonging to any of the following categories: - Unemployed without any insurance benefit; - Homeless; -Single-parent family with children and earning a low salary; - Seriously handicapped person”. Respondents could answer this question by indicating if they knew someone either in their family, outside the family or if they were themselves in one of these situations. We thus considered as people close to precariousness those respondents who answered yes to at least one of the

It goes without saying that for all variables measuring the exposure to risk, the expected sign of the coefficient is to be positive, that is if the social-insurance motive is relevant, individuals belonging to classes that are (objectively or subjectively) more exposed to risk should demand more redistribution.

Finally, we control for other subjective feelings about past and future evolutions of inequalities in the French society²¹. We consider this variable as a sort of personal apprehension towards the conditions of the most needy individuals in the society. According to this interpretation, we expect to find a positive correlation between this variable and the demand for redistribution. However a positive correlation would be consistent as well with a social insurance effect to the extent that views about trends of inequality and poverty express a personal concern for one's own situation. We postpone the extensive discussion of this variable to later sections, when its interpretation will naturally arise from the results of estimations.

2/ The second model of redistribution focuses on the opinions about the causes of poverty:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

where X_3 is a vector of beliefs and social norms including: belief that the main cause of the poverty is the lack of effort (henceforth called self-determination beliefs), belief that poverty is mainly caused by bad exogenous circumstances²² (called exogenous determination beliefs).

questions. Even if in principle it would have been better to differentiate between several degrees of proximity, in practice no such distinction would turn out to be relevant. The reason is that, contrary to what one might expect, most of respondents stated to have a very limited experience of precariousness.

²¹ The questions used were the following: "Do you think that, in the last five years, inequalities in France have: a) increased, b) decreased, c) remained stable" and "Do you think that, in the future, inequalities in France will a) increase, b) decrease, c) remain stable".

²² The questions reads: "Among the following reasons, you may find some that explain why some people are poor or suffer from social exclusion: -They do not want to work; -They have not been lucky; - They have not benefited of any help from their family (...)" Respondents had to express their agreement on these statements.

3/ The second model of social preferences is based on the reciprocity norms. For that, we specified a model where the vector of social beliefs (X^*_3) contains an additional variable: the variable expressing the requirement of a counterpart to recipients of public help.

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta^*_3 X^*_3$$

To provide a test of reciprocity, we should control for the respondents' expectation on the recipients' intentions of reciprocating public help. As the social survey does not include any question about expectations on recipients' intentions, we focused on the agreement expressed over the existence of workfare measures. For instance we consider questions like: "Do you think that RMI- Minimum Income for Social Integration- recipients should actively look for a job?²³". For testing whether reciprocity norms explain the attitudes towards redistribution, we proceeded as follows. As a measure of the reciprocity norm we used a crossed variable between the opinions on the deemed causes of poverty and the demand for counterparts to redistribution. We test two different specifications of the reciprocity model: one where reciprocity is given by the interaction between the self-determination variable and the counterparts to benefits, and another where reciprocity is obtained as the joint variation of exogenous determination and counterparts²⁴.

3.3 Results.

²³ The questions we used were: (1) Do you think that unemployed people should be entitled to benefits conditional to some counterparts –as actively looking for a job or a training-? (2) Do you think that unemployment benefits should have a limited duration, irrespective of finding a new job? (3) When RMI recipients are able to work, do you think that in return of allowances they should be asked – To accept the jobs that the employment agency finds for them; - To accept to go through a training period; - To participate at social utility activities; - To make efforts for succeeding social integration; - To look for a job.

²⁴ We check the absence of collinearity between "social beliefs" variables and "reciprocity" variables

We present the results of estimations by first looking at each model separately and then by considering the most general specification, which includes all the variables that might be relevant for understanding the support to the redistribution. Thus we start by the discussion of the model of social insurance (Table 1) and the model of social beliefs (Table 2) and we then continue with the saturated model, which contains both self-interest and social beliefs variables (Table 3). We end by presenting the model of reciprocity, for which we test two different specifications (Tables 4 and 5). This section presents the results of regressions ran on the full sample. The next section turns to the estimations made on sub-samples of income classes. As explained above, it might be that self-interest variables are correlated to social beliefs; before proceeding to the second section, we will present some tests of goodness of fit that can also be interpreted as tests of conditional independence of sub-groups of coefficients and aims to assess whether social beliefs affect the support for redistribution, irrespective of individuals' personal interest.

Note that the probit procedure estimates the probability that the dependant variable has the lowest value, this means that all the signs reported in the regression tables have to be read as expressing the impact of the variables on the willingness to 'oppose' redistribution or, stated differently, to agree the least with redistribution.

A general finding (i.e. irrespective of the model tested) is that the following categories of people are less supportive of redistribution: women, inhabitants of all small and medium size towns and people living in the Mediterranean area. Respondents less than 35 years old are less supportive of redistribution. The latter fact can be explained by the fact that the current public redistribution of wealth among generations is highly in favour of older generations (the ratio of expenditures for young and elderly is about one to three). However, this was not obvious from the dynamic point of view of intergenerational redistribution and considering the fact that younger generations expect to be more exposed to negative shocks than older generations

do. Had individual attitudes toward redistribution been forward-looking and self-interested, younger generations should have demanded more redistribution as they feel more exposed to the socio-economic risks.

In what more specifically concerns the social insurance model²⁵, the most important result is that the coefficients of income classes never significantly differ from zero. Note also, that for the lowest income classes, the attitude towards redistribution is not of the expected sign. Individuals of the highest incomes classes (that is people with an income greater than 1905 €) are, as predicted by the social insurance motive, less supportive of redistribution. In particular, the coefficient of the class between 1950 € and 2439 € is significantly different from zero. The other variables measuring the self-interest motive, such as the subjective feeling of being exposed to the risk of economic precariousness as well as the gender and the age risk, do not significantly explain the demand for redistribution. Moreover, they do not have the expected sign: individuals who do not feel to be exposed to risk are, indeed, more favourable to the redistribution. By contrast, proximity to precariousness is associated to more redistribution, though the corresponding coefficient is not significantly different from zero. Finally, the variable measuring the perception of past and future evolutions of inequalities explains the support to redistribution in the expected direction. In fact, those who reckon that inequalities have decreased and will continue to decrease are less in favour of public intervention than those who have the opposite view²⁶.

²⁵ In this specification of the Social Insurance Model we dropped the subjective perception of being exposed at risk of poverty and we only considered the objective fact of belonging to a category at risk. When we used the broader specification, we substantially had the same results.

²⁶ As explained above, the positive correlation between anticipating a degradation of worst-off individuals' conditions and the demand for redistribution might hide both a social insurance effect and an altruistic concern towards others. To discriminate between the two explanations, opinions about the trends of inequalities are to be observed jointly with one's own objective situation. We created a crossed-dummy variable between the perception of inequalities and the personal situation of the respondent (i.e. objectively among worst-off individuals), but we could not find any relevant evidence from it. Though from the inspection of tables 1-3, the sign of the coefficient (of the variable deterioration of have-nots individuals' conditions) seems to indicate that

As concerns the impact of norms and social beliefs on the adhesion given to the redistributive politics (see table 2), both coefficients of norms have the expected sign. Thus, those who believe that poverty is mainly caused by the lack of individual effort are less supportive of redistribution; on the other hand, those who consider that poverty is caused by bad luck are more in favour of redistribution²⁷. However the result is statistically significant only for the belief that poverty is caused by lack of effort.

With respect to the previous simple social beliefs model, the reciprocity view provides additional insights into the rationales underlying the support given to the redistribution.

We considered four categories of respondents with respect to the reciprocity norm: those who believe in self-determination and do not want counterparts (group 1); those who believe in self-determination and want some counterparts to redistribution (group 2). Those who do not believe in self-determination and want counterparts to redistribution (group 3). Finally those who do not believe in self-determination and do not want counterparts (group 4).

Table 4 shows that the most supportive group is the latter (group 4) while the least supportive is group 1. The second most supportive is group 3 and the second least supportive is group 2. This means two things : first that the self-determination has a non ambiguous effect on the demand for redistribution (as we previously observed, those who hold worst-off responsible for their condition, want less redistribution); secondly, the counterpart has an ambiguous impact on the support given to redistributive policies.

These findings show that the support for redistribution can be explained through the respondents' views of justice, and that different norms of justice correspond to different levels

respondents care about needy individuals, the definite interpretation will be done after the estimations made by incomes classes (see section 3.5).

²⁷ We also tested a more extensive definition of exogenous determination variables, using the belief that poverty is caused by the lack of family support. However, the coefficient of this variable was not significantly different from zero. Moreover, the coefficient had the inverted sign: people believing either in bad luck or in lack of family support as causes of poverty were found to be less supportive of redistribution.

of demand for redistribution. The population of respondents turns out to be divided in three typologies of respondents (see Graph. 1) : the ‘individualists’, the *homo reciprocans* (those who are ready to cooperate with similarly disposed individuals but that are ready to not cooperate if they detect the peer’s not cooperative action) and the unconditional altruists. The unconditional altruists are the most in favour of redistribution. To the other side of the social spectrum, there are those individuals who are unconditionally against redistribution (and thus, for the very same reason, do not expect or ask for any counterpart). In the middle, we find a large share of population represented by *homo reciprocans*, which, by definition, expect or ask for something. By giving a moderate support to redistribution, *Homo reciprocans* reveals himself as thinking that redistribution has to be a question of fair division of advantages or burdens, in other words that its costs should not be incurred by a minority of people only.

Moreover, consistently with the reciprocity view, two kinds of *homo reciprocans* emerge in the population, depending on how they perceive beneficiaries’ behaviour and, more in particular, on whether they think that recipients are personally responsible for being worst-off. It has to be reminded that the reciprocity model predicts that individuals act non-cooperatively when they think that the other’s behaviour is not cooperative enough, while it predicts a cooperative action whenever the peer’s action is taken as cooperative.

A *homo reciprocans* belonging to group 2 is performing a “negative form” of reciprocity : he thinks that the poors are responsible for their bad condition, in other words he suspects the others of not providing all the efforts they could provide (suspicion of “non-cooperative” behaviour). By contrast, a *homo reciprocans* belonging to group 3, holds the opposite belief : he does not hold the poors responsible. *Homo reciprocans* from group 3 thinks that the worst-off have done their best to not find themselves in such a position. The different view about recipients’ responsibility explain why *homo reciprocans* from group 3 wants more

redistribution than *homo reciprocans* from group 2 : the former is playing positive reciprocity, the latter is acting according to negative reciprocity.

This fact also allows to explain how the counterparts are actually perceived by the three groups of individuals. The unconditional altruist consider that asking for counterparts will mean penalising further unlucky individuals (more precisely, individuals who are not responsible for being worst-off). The *homo reciprocans* from group 3 are likely to intend the counterpart as a form of inclusive measure, increasing chances of joining the group of well-off individuals (giving them a chance of being like all the others). This probably also reflect the idea that, even if public help is required, welfare recipients have more chances of escaping poverty and social exclusion through employment or by performing social utility activities. The *homo reciprocans* from group 2 are more likely to see in the counterpart a form of self-insurance against moral hazard behaviours from beneficiaries. This fact is in fact in line with the stigmatisation view (Besley and Coate, 1992), which suggests that taxpayers –citizens more generally- do not sustain public welfare system, as beneficiaries are deemed undeserving. However, when counterparts are required, and the welfare system is thus replaced by a workfare system, the stigmatisation decreases as counterparts allow discriminating between those who deserve public help and those who do not deserve it. This explains for instance why group 2 is more supportive than group 1.

At the same time, the social stigma explanation is consistent with the fact that counterparts enhance support for redistribution only among those who think that people are poor as they do not provide sufficient effort. The other group does not stigmatise welfare recipients and thus the counterparts do not affect significantly their willingness to redistribute.

In the second specification of reciprocity (table 5), the relation between an exogenous determination norm and reciprocity is explored. Here those who believe in the exogenous

determination and do not expect any counterpart from public measures represent the most supportive category of respondents. As in the previous model, *homo reciprocans* want less redistribution than unconditional altruists. However, the demand for counterparts is always associated to lower redistribution (though the result is not statistically significant). Even if more evidence is needed on this point, we think that it could be due to the fuzziness of the exogenous belief variable, which may be underlying different and contradictory views. The formulation of the questions might be simply too generic for tracking groups of individuals according to their view of justice²⁸.

3.4 Test of Goodness of fit and conditional dependence issues.

In order to conclude on which model fits better the data, we ran the standard Likelihood-Ratio test²⁹ (LR-Test) on the significance of sub-samples of coefficients. Whatever the saturated model retained (i.e. the largest specification), the social insurance group of coefficients does not work as well as the social beliefs and the reciprocity norms. The weak explanatory power of self-interest variables is in fact proved by the no-rejection of null hypothesis. By contrast, for social beliefs and social beliefs plus counterparts to redistribution variables, the tests allow to conclude that these norms matter for explaining support to public intervention.

²⁸ It is very likely that people understand this question in different ways, depending on how “bad luck” is taken for. For some the bad luck as the cause of poverty might be intended as the fact of living in a modest family back-ground, or being of a given race or being born females instead of males, and due to one or more of these facts, being “condemned” to indigent conditions for the rest of your life. For others, bad luck might stand for a negative choc (as the death of the spouse or unexpected unemployment). Again, if it is intended so, then it might be taken as a key-determinant of poverty. But if respondents see in the word “bad luck” a minor episode, it is likely that they answer ‘no’ to this question just because they have not figured out the potentially catastrophic contours of bad luck, but not because that they do not think that family circumstances, or other heavy initial contingencies may affect the probability of being poor.

²⁹ The test is based on the statistic $-2(L_0-L_1)$ where L_0 is the likelihood for the fitted simpler model M_0 and L_1 is the likelihood for the saturated model M_1 . The saturated model contains the group of parameters whose explanatory power is tested. When H_0 is true, the statistic follows a Chi-squared distribution with degrees of freedom equal to the number of parameters in L_1 minus the number of parameters in L_0 .

The goodness of fit test indicates also that the model that explains better the demand for redistribution is the one incorporating the demand for counterparts.³⁰

The LR-test can be used to explore further conditional independence and homogenous associations issues. As we said, the LR-test indicates that, when we control for social beliefs (or social beliefs and reciprocity), the demand for redistribution can be said to be conditionally independent of the self-interest variables. By contrast, the opposite is not true : holding constant self-interest variables, social beliefs exert an influence on the willingness to redistribute.

3.5 Results: sub-samples estimations.

Only three income classes provide interesting insights on the links between self-interest and social norms variables (respectively the second and third lower income classes and the second higher income class). In the second lower income class (between 533 € and 762 €), we can reject the null hypothesis for both sub-groups of coefficients. This means that norms matter but self-interest variables other than income do too. In the contiguous income class (between 762 € and 990 €), self-interest coefficients are significantly different from zero as well, while social norms do not pass the statistical test. An almost identical result is found for the second higher income class (between 1905 € and 2439 €), since for people belonging to this richer class it is also true that self-interest variables affect their attitudes towards redistribution much more than beliefs about causes of poverty and reciprocity expectations do. However, it is worth stressing that the signs of coefficients are the same for poor and rich individuals, and that they do not confirm the social insurance model. It is in fact true that those who are less (directly and indirectly) concerned by risks of precariousness are more in favour of redistribution than those who are directly concerned by such risks. At the same time, people

³⁰ The outcome of the test for the two models of reciprocity was the following: for the model where demands for counterparts are crossed with self-determination beliefs the null hypothesis ($H_0: \beta_{SD^*C} = \beta_{SD}$) is rejected at 1%, while in the second specification the null hypothesis ($H_0: \beta_{ED^*C} = \beta_{ED}$) is rejected at 10%.

who reckon that inequalities have increased and will keep increasing in the future are more supportive of public intervention than individuals who have the opposite view and this holds true whatever their income is.

Some interesting exceptions to the homogeneity of views among poor and rich are the following. The subjective feeling of being exposed to risk due to their age is associated with a different attitude toward redistribution for low-income classes and high-income classes. Consistently with the self-interest explanation, low-income individuals who feel exposed to poverty risk due to their age are more in favour of redistribution than individuals belonging to the same class who does not have such a perception. By contrast, for rich people we observed the opposite: individuals subjectively concerned by the risk are also those who are less supportive of redistribution. A possible explanation for this difference is the fact that only low-income individuals are likely to be directly concerned by the risk of poverty. Rich individuals who think that their age-group is the most exposed to precariousness express instead a general view about a society trend.

It is more difficult to interpret the fact that among low-income individuals people who feel exposed to risk due to their gender are less in favour of redistribution (even though this would be in line with the fact that women are found to be less supportive of public intervention – and that most respondents feeling concerned by the poverty risk due to their gender are indeed women)³¹. Finally, note that high-income people who do not have any proximity with precariousness want more redistribution³².

³¹ Another possible explanation to the coefficient's sign comes from the nature of the explained variable. The dependent variable is given by the agreement to the state intervention for helping worst-off people. However, the original question asked to indicate whether it was on public or on private responsibility to stand-by have-nots individuals. If one reads the estimated variable in terms of private solidarity, women turn out to support private solidarity more than men do – which is a finding consistent with previous studies on this subject.

³² This is in line with an altruistic or aversion to inequality model of redistribution. In what concerns the low-income classes, coefficients are not significantly different from zero.

We also want to assess whether the social beliefs are correlated to income or if their impact on redistribution was independent. Interestingly, in the lowest classes of income as well as in the highest we observed no correlation³³. This was confirmed by the fact that the coefficients of social beliefs variables were still significantly different from zero and affected the demand for redistribution in the same direction than for the whole sample. In general, no matter what is the income classes individuals belong to, self-determination and exogenous determination are still associated respectively to less and more demand for redistribution. (The only remarkable exception is given by the class of income between 1905 € and 2439 €, for which the coefficients of social beliefs have opposed signs to other classes. However, these coefficients are not significantly different from zero, and thus the main conclusion about the lack of correlation between norms and incomes holds true).

To conclude, the differences between the explanatory power of variables in full sample and sub-samples do not point out that extreme income classes have motivations for redistribution that go along their interest. The social insurance model does not fit better for categories of people who have a lot to earn or a lot to loose from public redistribution. At the same time, beliefs about causes of poverty and expectations about counterparts to redistribution are quite homogenous in all classes of income.

3.6 Estimation of specific items of public intervention.

With a similar econometric procedure, we estimated the support given to redistribution by considering as dependant variable the individual attitude toward a specific measure of social policy, as the level of minimal income. Table 10 reports the main results.

³³ This finding is corroborated by some additional tests that we ran between models which contain the income variable and models which do not. When estimating the demand for redistribution without considering the income class of respondents, we could explain as much as when we used the larger specification including incomes.

First note that income coefficients explain more than in previous estimations, as they are significantly different from zero for the highest classes of income³⁴. Thus, individuals with an income greater than 1143 € are in favour of a decrease of the minimal income. However, as the subjective and objective exposure to risk variables are again insignificant, the validity of the social insurance model is still questionable. Social beliefs about the causes of poverty affect the desiderata toward the minimal income in the same way they influenced the demand for redistribution, thus those who believe that poverty is mainly caused by the lack of effort are in favour of decreasing the minimal income, while those who believe that poverty is caused by bad luck are in favour of increasing it. When social beliefs are crossed with reciprocity norms, we found that those believing in self-determination and expecting a counterpart from beneficiaries of public assistance are in favour of decreasing the minimal income.

4. Conclusion.

In this paper we empirically discussed three models of social preferences, which offer competing explanations of the demand for redistribution. For that we considered the social insurance model, the social beliefs model and the reciprocity model.

The social insurance model is not validated by our econometric analysis, more specifically neither the income of respondents nor the subjective feeling of being exposed to a variously defined social risk, are good predictors of the demand for redistribution. Indeed, for high-income classes there is evidence that preferences for redistribution are not self-interested.

³⁴ There is also a significant difference between the impact of socio-economic characteristics on the explained variable. Respondents under 35 years old are now significantly in favour of an increase of the RMI, while both the region and the urbanization rate do not affect significantly their opinion.

For our data, a more satisfying explanation of redistribution was found to be relying on social beliefs and reciprocity norms. In particular, individuals believing that lack of effort is the cause of economic precariousness demand less redistribution, while those who believe that unlucky exogenous circumstances determine poverty and exclusion support redistribution.

We thus outlined the existence of a joint effect between norms about determinants for getting ahead in life and the expectations of reciprocating public help. Individuals who believe in both self-determination and reciprocity are more in favour of redistribution than other individuals who, though sharing the same view about personal responsibility, do not expect any counterpart from redistribution. We interpreted this finding by suggesting that the existence of workfare measures might exert a positive effect on the stigmatisation felt towards recipients of public help. However, we pointed out that asking for counterparts could also indicate a willingness to sanction those who are deemed as not cooperative, namely those who are considered responsible for being worst-off.

In our paper, we came to these conclusions by considering that social beliefs are exogenous and stable. However, it is likely that, in reality, social beliefs evolve with individual's experience and are revised by agents as long as they go through unpredictable events which lead them to modify their judgement about what explains poverty and economic success. The econometric model we used in this work assumes that beliefs are given, without raising the question of how beliefs emerge and why they are as such. Moreover, as we use a cross-sectional survey, we could not clearly study whether these beliefs change over years and what is the individual's episode, if any, which stands crucial for this change. Some useful extensions of the present work could be carried out along these lines.

Finally, it would be also worth making a clear-cut distinction between social beliefs and ethical judgements about the determinants of economic outcomes. Following the traditional

approach in the field of research on social preferences on public redistribution, our paper makes no difference between individuals' positive judgements (what one believes about what explain final outcome) and individuals' normative judgements (what one believes about what *should* explain final outcome). The empirical knowledge of both is needed to better understand redistributive preferences. However, as they might affect the demand for redistribution in very different directions, a more satisfying model should take into account them separately in order to establish how the potential dilemma between what one thinks *is* and what one thinks *ought to be*, is sorted out.

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