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Procedural fairness and the tolerance for income inequality

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ABSTRACT

This paper presents an experiment investigating what cultural and institutional factors underlying a society might render its members more or less tolerant of inequality in favor of greater efficiency. The specific institutional factors we address concern the fairness in the procedures or mechanisms through which individuals believe initial positions or roles in society are determined. Subjects' initial positions (rich vs. poor) are determined based on various criteria (random, meritocratic, arbitrary, and rewarding uncooperative behavior) and individuals' willingness to approve Pareto improvement when the improvement is mainly in favor of the already rich is measured. Our findings show that individuals' willingness to accept higher but more unequal outcomes depends on the source of the initial inequality and random assignment leads to the most tolerance for disadvantageous inequality, generating doubt about commonly held views concerning meritocracy. Moreover, holding the procedures constant, subjects reveal greater tolerance for inequality when self and the opponent share common group identity.

1. Introduction

That the utility of individuals depends on relative as well as absolute earnings (Dusenberry, 1949; Easterlin, 1974; Frank, 1985) has been well established in the economics literature. The investigation to understand the precise nature of individual behavior with respect to inequality is one of the most lively areas of research recently (see e.g. Bolton and Ockenfels, 2000; Charness and Rabin, 2002; Fehr and Schmidt, 1999).

The issue of relative earnings and inequality becomes particularly salient when it comes to the debate on policies whose expected outcomes are Pareto improving yet inequality increasing. For instance, economic growth is a fundamental goal embraced by most nations. Yet many policies aimed at promoting growth have features that are inequality increasing. To make the situation we are referring to clear, suppose that there is a set of policies that require providing public resources to the already well off (such as elite businesses) initially with the premise that this shifting of public resources will eventually increase everyone's income through enhanced growth. Also suppose that the policies are guaranteed to raise income for *everyone* but to raise the income of the already wealthy by a disproportionate amount leading to an increase in inequality. Would the poorer segment who receives lesser benefit be opposed to the policy due to concerns over the increase in inequality, despite the expected rise in their absolute income? If so, what factors might be accountable for the public opposition to Pareto improving yet inequality expanding policy changes?

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This paper aims to advance our understanding of individuals' tolerance for income inequality by investigating what cultural and institutional factors underlying a society might render its members more or less willing to approve Pareto improvement when the improvement is mainly in favor of the already rich. While we study this issue in a highly stylized environment, understanding the determinants of individual preferences can nevertheless shed important light on understanding how public opinion is formed. Under democracy, public consensus and support is critical to the successful implementation of policies. Even if policy makers have the "right" set of interventions ready, their implementation and success is not guaranteed unless the public supports their adoption.

The specific institutional factors we address concern the fairness in the procedures or mechanisms through which individuals believe initial positions or roles in society are determined. Our study is strongly related to a growing literature on procedural fairness including Hoffman et al. (1994) and Bolton et al. (2005). These studies demonstrate that different mechanisms that are used to determine the roles in an experiment can have a strong impact on how fair individuals perceive the situation to be and that this can influence behavior. There is also substantial evidence that has been accumulated showing that how individuals view inequality and redistribution is heavily influenced by the perceived source of inequality, see e.g. Piketty (1995), Ravallion and Lokshin (2000), Alesina et al. (2001), Fong (2001), Alesina and Angeletos (2005), Alesina and La Ferrara (2005), Benabou and Tirole (2006), and Durante and Putterman (2009). Much of this work has examined the degree to which people believe that one's realized income and earnings are based on luck versus individual effort with the focus being on how willing rich individuals are to support *ex post* redistribution to help the poor as these beliefs change. Our focus is in some respects the flip side of this question as we are looking at when the poor and the middle class are willing to support programs that they know *ex ante* will raise their own income but will also raise the income of the already wealthy at a faster rate, a key feature present in many of the pro-growth policies.[2] While one might suspect similar factors to affect the willingness of the disadvantaged individuals to support policies of this nature, it is not entirely obvious from the previous literature how those effects will manifest.

The present study is also closely related to studies such as Konow (2000), Frohlich et al. (2004) and Cappelen et al. (2007) that experimentally investigate the effect of fairness concerns on individual behavior. In these studies subjects go through two phases, first, the production phase in which each person makes earnings by performing a task (e.g. stuffing mailing envelopes, correcting spelling errors, making investment decisions, etc.) and then the distribution phase in which individuals are paired with another person and decide on how to divide their *pooled* earnings from the production phase. The main variation is that players in a pair may bring different earnings into the pool of total income for reasons that are under their control (e.g. effort) and for reasons that are outside their control (e.g. different piece rates, different rates of return on investment, etc.); *cf*. the "Accountability Principle" in Konow (1996). Therefore, by looking at the pattern in which subjects divide the total income between self and opponent when their relative contribution to the total pool of income and the sources for the earnings difference are varied, these studies allow us to have a grasp on the fairness ideals (e.g. egalitarian, liberal egalitarian, libertarian, etc.) underlying the individual behavior. In these studies subjects deal with the question of how to divide the total income of a *fixed* size between self and the partner and their choices in the distribution phase do not have any efficiency consequences for the pair (or society). In contrast, the present study is concerned with the question of how perceived fairness in the procedures that determined subjects' initial positions (rich vs. poor) can influence their behavior in situations that call for choices between equity vs. efficiency. We hypothesize that if disadvantaged individuals find the role assignment mechanism as "unfair", they would rather stay in a status with low inequality and low income for all. By contrast, if individuals find the role assignment mechanism as "fair", they would choose an allocation that leads to higher income for all even if this is accompanied by greater income inequality.

Our design also allows us to investigate conditional on the procedures or mechanisms that determined the initial positions, whether and how the relative characteristics of individuals in the pair might affect their tolerance for the inequality. For instance, individuals may have differential tolerance for the advancement of others depending on how closely they identify with the other member in the pair. There is a long literature showing that individuals exhibit in-group favoritism even when the group identity is based on a very minimal and virtually meaningless distinction between groups, such as the color of their shirts (Tajfel et al., 1971). We examine if and to what extent some additional information on the relative characteristics of the individuals in a pair can mitigate or amplify the effect of procedures or mechanisms in use.

We investigate these issues using a controlled laboratory experiment, in which we vary the mechanism which assigns people to their roles (advantaged vs. disadvantaged) as well as manipulate the information displayed regarding the characteristics of the players in a pair. Our approach involves having subjects in the role of disadvantaged citizens choosing how much of their endowment to pass to an advantaged individual knowing that when they do so the money transferred and the endowment of the advantaged person will jointly generate an investment return which will then be shared between the two individuals according to a *fixed and known* rule. An important feature of this investment technology is such that the disadvantaged person will always receive more money in return than she transfers to the advantaged individual, making full transfer a transparently money maximizing choice. This investment and transfer technology are common knowledge

[2] Examples include industrial policies and directed credit programs, a leading tool of development policy for East Asian countries in the 1960s and 1970s (see e.g. Stiglitz and Uy, 1996; Vittas and Cho, 1996) as well as the trade liberalization that many developing countries underwent in the 1980s and 1990s (Goldberg and Pavcnik, 2007).