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Do We Value Mobility?

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Abstract Is there a trade-off between people's preference for income equality and income mobility? Testing for the existence of such a trade-off is difficult because mobility is a multifaceted concept. We analyse results from a questionnaire experiment based on simple precise concepts of income inequality and income mobility. We find no direct trade-off in preference between mobility and equality, but an indirect trade-off, applying when more income mobility can only be obtained at the expense of some income inequality. Mobility preference – but not equality preference – appears to be driven by personal experience of mobility.

Keywords. Income inequality, income mobility, people ethical preferences.

JEL Classification: D63

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1 Introduction

Do people value income mobility along with other apparently desirable economic objectives? In contrast to the extensive literature on simple distributional comparisons in terms of inequality, poverty and social welfare, the welfare-economic basis underlying preferences for income mobility is not clear. It may be that there is a connection between mobility and equality of opportunity and that greater income mobility is thus socially desirable, but there is no single accepted formal argument to establish this. Nevertheless there is, perhaps, an accepted consensus that greater mobility in society is a "good thing" and so it makes sense to see whether people do indeed value this good thing in the way that we suppose that they do. The contribution of this paper is to suggest a way of characterising a trade-off between mobility and other apparently desirable social objectives and of looking at the factors which may predispose people to value mobility particularly highly.

Income mobility is a topic that crosses disciplines which partly explains the difficulty of finding a way of appraising a unique formal notion of mobility (Van de gaer et al. 2001, Formby et al. 2004). While sociologists and statisticians are especially interested in measuring mobility in the abstract,[1] economists are often interested in judging and evaluating income mobility from a welfare-based perspective. In the theoretical literature this is done either using explicit welfare functions or axiomatic approaches.[2] Our analysis has both normative and empirical content: it is based on a questionnaire study and is rooted in empirical social choice.[3] Its premise is that in the debates about principles of social justice it is important to engage with the way people actually think, both in order to avoid becoming hostage of scientific conventions and because it is real people who bear the consequences of decisions based on untested normative principles.

Can we find a way of eliciting people's preferences for intergenerational mobility? We suggest that it is appropriate to try to find a context-free way of representing the problem similar to the way that is done when making inequality or welfare comparisons using principles of distributional dominance. However, we need to go carefully here because, although multidimensional versions of dominance principles are available, it is not clear that these formal results are particularly illuminating in terms of what is commonly understood by income mobility. Furthermore, if we want to understand whether people *value* mobility it is useful to have a representation of the problem that allows both for clear mobility comparisons and for a trade-off against some other

[1] Prais (1955), Rogoff (1953), Duncan (1966), Goldthorpe (1980), Conlisk (1990).

[2] For welfare approaches see Atkinson (1981), Atkinson and Bourguignon (1982); Chakravarty et al. (1985), Dardanoni (1993), Gottschalk and Spolaore (2002), Markandya (1982); for axiomatic approaches see Shorrocks (1978), Cowell (1985), Cowell and Flachaire (2011), Fields and Ok (1996), Mitra and Ok (1998), D'Agostino and Dardanoni (2009).

[3] See Gaertner and Schokkaert (2012), the seminal articles by Yaari and Bar-Hillel (1984), Amiel and Cowell (1992) and the overviews in Amiel (1999) and Konow (2003). For complementary studies using the experimental method see e.g., Traub et al. (2005), Krawczyk (2010), and Cappelen et al. (2010).

social goal. In our questionnaire we focus on intergenerational income mobility and we suggest a method of investigating a possible trade-off between mobility and equality in people's preferences.

Intergenerational mobility is also a central issue in distributive justice debates: how should one account for accidents of birth when seeking a just distribution of final outcomes? Some argue that only income inequalities arising from differences at birth should be a cause for concern. In our approach we contrast the liberal position that all forms of income differences are equally unjustified unless they go to the advantage of the least well-off people and also with intermediate positions. We identify meritocratic views that allow income inequality to the extent that it serves the purpose of rewarding talent or desert: this position does not necessarily imply an ethical substitution between income mobility and income equality.[4]

In a real-world society there are several complex interactions between intergenerational mobility and economic inequality that may be difficult to consider in a questionnaire. Among other things, there is a very large literature both in economics and in sociology studying the interaction between mobility and inequality during the course of economic development and focusing on the process of formation of social classes and their mixing (see, e.g., Galor and Moav 2006, as an example of a recent study in the economics literature; see Erikson and Goldthorpe 1992, as a classical one in sociology). The study of intergenerational mobility in connection with the evolution of the general structure of the society is not in the purpose of our study. This is because we are interested in analysing key distributional principles. In our approach the distinction between rich and poor does not refer to capitalists and workers; nor to other distinctions based on people's functional roles. We employ a notion of mobility based on the comparison between parents' and children's personal distributions of income, not functional or occupational. For the same reason we do not consider the possible distinction between the role of nature versus nurture in the mechanism of income transmission; and we focus on relative income positions of parents and children, rather than on concepts that have an absolute significance such as poverty or affluence.

Nevertheless, because different assumptions may be made in different cultures about the nature of mobility and the importance of mobility versus equality, we conducted the questionnaire in three different countries to check whether the answers to the questionnaire are consistent or there are variations between samples. The three countries – UK, Italy and Israel – provide an interesting mixture of societies with different experiences of inequality and mobility (see Breen and Luijxk 2004, and below).

There is also a recent wave of empirical studies that analyse the way preferences for policies that equalize incomes are affected by factors related to

[4] Underlying the liberal position is the view that identifies income mobility with equality of opportunity (Stokey 1998, p.161). However "equality of opportunity" has a variety of interpretations: it is used in the egalitarian literature to describe a situation of procedural equality of opportunity (Rawls 1971) or to represent the ideal of an egalitarianism tempered by responsibility (Dworkin 1981, Roemer 1998).

mobility (see for example, Fong 2001, Corneo and Grüner 2002, Alesina and La Ferrara 2005, Isaksson and Lindskog 2009). This literature, associated with the theoretical approaches in Hirschman (1973), Piketty (1995), Benabou and Ok (2001), typically finds that support for an equalization of income expressed in social surveys is affected by people's prospects of upwards mobility and by other factors which are generally thought to promote mobility. So part of our analysis focuses on the possible effect of characteristics both of the respondents and of the samples on abstract preferences of people for mobility and for equality.

The relationships between economic inequality and intergenerational mobility is also very important for public policy. Indeed, a very hot topic in the current political economy debates is whether governments should pursue policies that promote equality of opportunities more than policies that pursue equality of outcomes, or vice versa (OECD 2011). For example, should the governments increase resources devoted to traditional redistributive policies to reduce ex-post income gaps or should increase the free provision of high-quality public services (e.g., in education, health, family services, etc.) to favour mobility? Our questionnaire has in principle some relevance also for this discussion and it provides some evidence on students attitudes on the two approaches. At the same time, various reasons prevent to establish a too simple connection between abstract preferences for inequality and mobility and their implications for public policy. This is because, in addition to ethical values, the effects of public policies on the matters (and the opinions of people on them) also depend on the causal factors that one believes drive the mechanism of intergenerational income transmissions. As already remarked, our analysis abstracts from the possible complex interactions between intergenerational mobility and economic inequality occurring in the real world. For example, while our questionnaire focusses on the ethical trade-off between equality and mobility, there is a body of evidence on a so called Great Gatsby curve indicating that intergenerational mobility and income inequality are often positively correlated (Corak 2013).[5] In such a case, disentangling the effects of policies that promote equality of outcomes or equality of opportunities may become particularly problematic. In the conclusion, after presenting the results of the questionnaire, we will devote

[5] **The term Great Gatsby curve was used for the first time by Krueger (2012), in a speech delivered to the Center for American Congress. The evidence is attracting a harsh debate, particularly in the US. For some, the curve simply rejects on empirical ground the idea that income inequality is acceptable as long as there is income mobility, since it shows that more inequality of income in the present is likely to make family background play a stronger role in determining the adult outcome of young people. For others, the evidence is neither particularly surprising nor suggestive of any specific conclusions or policy recommendations since it only reflects different degrees of heterogeneity in the ability of people of different countries.**

	C_l	C_h	Parents' margins
P_l	n_{ll}	n_{lh}	$n_{l\cdot} = n_{ll} + n_{lh}$
P_h	n_{hl}	n_{hh}	$n_{h\cdot} = n_{hl} + n_{hh}$
Children's margins	$n_{\cdot l} = n_{ll} + n_{hl}$	$n_{\cdot h} = n_{lh} + n_{hh}$	

Fig. 1 A 2×2 mobility table

a discussion also to this important policy problem with an eye also to future research.

The rest of the paper is organised as follows. Section 2 discusses the main theoretical ideas analysed in the questionnaire. Section 3 explains the approach adopted to elicit people's views and perceptions of mobility and describes the samples used for our study. Sections 4 and 5 examine the results.

2 Welfare economics, income distribution and mobility

Our approach involves hypothetical questions and judgments expressed from the standpoint of an uninvolved external observer.[6] Using hypothetical questions without personal involvement encourages coherent thinking about social mobility comparisons in the abstract, which by their multidimensional nature are intrinsically more problematic than pure inequality comparisons.

We take a standard framework in which there are n dynasties in society, living for two periods: in a typical dynasty the parent is alive in period 0 and the child in period 1. The whole structure of the society can be represented by the joint distribution $H(P, C)$ of the pair of random variables P and C for, respectively, parents' and children's incomes. In particular, the joint distribution $H(P, C)$ contains all the relevant information to study inequality within each generation, mobility between generations and the interplay between the two.

Assume that within each generation income can take only two values: P_l and P_h for parents' low and high incomes, respectively; C_l and C_h for children's incomes. The joint distribution for this simple case can then be represented by the 2×2 mobility table in Figure 1. Here n_{ij} denotes the number of dynasties with parents belonging to category i and children to category j, with $\sum_i \sum_j n_{ij} = n$ and $i, j \in l, h$. Dividing n_{ij} by n gives the relative frequency of children in class j with parents in class i, an estimate of the probability of transition from class i to class j. The row and column sums $n_{i\cdot}$ and $n_{\cdot j}$ give the absolute frequencies of the marginal distributions of parents' and children's incomes, respectively.

[6] This is consistent with David Hume and Adam Smith who argued that the sympathy and impartiality required to discuss distributive justice can only be obtained by putting some distance between the social decision maker and the persons whose welfare is to be evaluated (Bernasconi 2002, Bosmans and Schokkaert 2004, Amiel et al. 2009, Konow 2009).

Society X

Parents	Children \$600	Children \$1000	
\$200	10	0	*10*
\$600	0	10	*10*
	10	*10*	

Society Y

Parents	Children \$400	Children \$1200	
\$200	10	0	*10*
\$600	0	10	*10*
	10	*10*	

Fig. 2 Two tables with different static inequality and the same rigidity

The marginal distributions of parents and children provide information of a static nature: they represent the basis for analysing inequality and welfare within generations. Take Figure 2 where parents have the same marginal distributions (therefore the same inequality) in mobility tables X and Y, while the marginal distribution for children in Y is obtained from X by widening the income gap, so that the child distribution in X Lorenz dominates that in Y. Judging the child marginal distributions on static income inequality, one can say that children's welfare is higher in X than in Y (Atkinson 1970). But how general are welfare judgments based only on static inequality comparisons? In tables W and Z of Figure 3 the marginal distributions for parents and for children are the same as in X and Y, respectively, but with a different association structure between parents' and children's positions. While the association structures in the tables of Figure 2 are characterised by complete rigidity, the formations of the social classes in the tables of Figure 3 are examples of statistical origin independence, characterised by full mixing with 50% of children in each income class coming from poor parents and 50% coming from rich parents.

Society W

Parents	Children \$600	Children \$1000	
\$200	5	5	*10*
\$600	5	5	*10*
	10	*10*	

Society Z

Parents	Children \$400	Children \$1200	
\$200	5	5	*10*
\$600	5	5	*10*
	10	*10*	

Fig. 3 Two tables with different static inequality and origin independence

Our questionnaire uses examples similar to those shown in these figures to study how the welfare that people assign to different societies depends on the extent of income inequality within the children's marginal distribution and

on the strength of intergenerational interdependence between parents' and children's positions.

In analysing a mobility table one has to consider two forms of interdependence occurring between the distributions P and C: *structural mobility* refers to the comparison between parents' and children's marginal distributions of incomes and is affected by the process of economic growth; *exchange mobility* is only concerned with the process of class transition, namely the degree to which parents and children change their relative positions between income classes. The importance of keeping separate these two notions of mobility has been extensively documented (Rogoff 1953, Duncan 1966, Goldthorpe 1980) but, from a normative welfare perspective, the distinction between structural and exchange mobility is more problematic. In particular, while the distinction between the two is recognised conceptually (Markandya 1982), it is difficult to decompose their effects in specific welfare measures (Fields and Ok 1999, p. 565). Welfare studies on intergenerational mobility typically focus on exchange mobility, while the effect of structural mobility has attracted less interest.

Here we limit the possible role of structural mobility on welfare judgments by comparing scenarios where marginal distributions can be different for at most a different amount of inequality in the children's generation (as between X and W, on the one side, and Y and Z, on the other). Moreover, we will consider scenarios which maintain a symmetric configuration and where both generations of parents and children are divided evenly between rich and poor. With the latter restrictions the strength of association between parents and children in a 2×2 mobility table can be measured directly by the proportion of children which change their positions with respect to their parents, formally the parameter $m = 1 - n_{ii}/n_i$. In a rigid society such as Figure 2 $m = 0$; in a society with full mixing $m = 0.5$ (Figure 3); partial mixing (some positive association) has $0 < m < 0.5$.[7]

A change in intergenerational income dependence can have two opposing effects on welfare: an increase in independence reduces inequality between dynasties, but it also increases intertemporal fluctuations of incomes within dynasties (Atkinson 1981). Extending the theory of stochastic dominance to a multidimensional context Atkinson and Bourguignon (1982) have shown that in a dynamic welfare framework which considers only these two effects of mobility, the social optimum (for a mobility table with fix marginal distributions) collapses either to a case of complete rigidity or to one with full reversal.

An important limitation of this type of framework is that it does not recognize any special value to the case of full mixing ($m = 0.5$) although, from a welfare perspective, this case has been taken as an indicator of equality of op-

[7] Negative association, where $0.5 < m \leq 1$, is only of theoretical interest since real world mobility data never show complete reversal between parents and children's economic positions; see Dardanoni et al. (2012) who show that the hypothesis of nonnegative association cannot be rejected in almost all social mobility tables in 149 different countries and time periods.

portunity (Shorrocks 1978, Dardanoni 1993, Gottschalk and Spolaore 2002).[8] Although the relation between preferences for income mobility and for income equality has not received great attention in the welfare-measurement literature, within the general literature on distributive justice, the issue is a matter of lively debate. There are three main views:

1. *The substitution view.*[9] Origin independence should be the main objective of a just society and a concern for income inequality should only receive social concern if partial or complete rigidities cannot be fully removed. According to this view, in the comparison between X and Y of Figure 2, X might be socially preferred, since the greater static inequality for the children marginal distribution in Y is inherited from parents; but in the comparison between W and Z of Figure 3, Z should be preferred since now, due to the condition of origin independence, the greater inequality of the latter table is considered a sign of better opportunities – a "land of opportunities".
2. *Priority for the worst off.* Equality of opportunity and of outcome should be considered on different ethical grounds and the degree of static inequality in a society should always be kept at the minimum compatible with the maximum level of income for the least well-off people (Rawls 1971). Under this approach, X is better than Y in Figure 2 *and* W is better than Z in Figure 3.
3. *Intermediate position.* In a well-organized society talents should be promoted and this requires equality of opportunity. Often this idea is linked to the role of incentives for economic efficiency (Loury 1981), but in addition there may be fairness considerations that do not imply a substitution between equality of opportunity and equality of outcome. One may support the idea that rewards gained by individuals should be related to their individual desert; but also that income inequality should be accepted only to the extent it serves such a purpose.

Consider a comparison between X and Z, in addition to those between X and Y and between W and Z. According to the substitution view, together with X preferred to Y and Z to W, Z should also be preferred to X. On the other hand, any theory which values equality but not mobility implies X preferred to Y, W to Z, and X to Z. Someone who values both mobility and equality may instead prefer X to Y, W to Z, but Z to X. The latter preferences indicate

[8] For example, Shorrocks (1978) developed an axiomatic approach to mobility measurement where an axiom is explicitly introduced which assigns maximum value to transition matrices (a reduced form of mobility tables which do not give information on the marginal distributions) with "the least amount of predictability". Dardanoni (1993) presents a model where children coming from parents in lower economic positions receive a higher weight in the social evaluation than those coming from better positioned families: as he restricts attention to tables with non-negative dependence, it follows that welfare is maximised, *ceteris paribus*, by mobility tables with origin independence. Gottschalk and Spolaore (2002) also develop a framework where a specific form of inequality aversion restricted to the children's generation is shown to induce a strict preference for independence.

[9] See Field and Ok's (1999) remark about Friedman (1962).

that there may be an ethic which values both equality of opportunities and equality of outcomes and which, therefore, entails a trade-off between the two notions only in cases where more of one type of equality necessitates less of the other.[10]

3 The Approach

Testing whether people value mobility in the abstract and whether there is a trade-off in preference for equality and mobility is not simple. Empirical analyses using field data meet the problem that preference can be inferred, but not directly tested. The same difficulty emerges with experimental investigations. Studies based on general social surveys also have problems investigating pure distributive principles because of the difficulty of maintaining control over the various conceptual subtleties typically involved in distributional issues.[11] A complementary method, increasingly used in empirical social choice, is to conduct focused questionnaires using university students as participants (Gartner and Schokkaert 2013 provide a review of the approach). Students are clearly not representative of the general population and they are mainly chosen in this kind of investigation for the fact that they are easily recruited. Nevertheless it is reasonable to assume that students are sufficiently numerate and accustomed to logical reasoning in order to make reasoned choice when faced with abstract questions. In some instances this may be particularly important, not to obtain fully representative results, but in order to inform theorists about what other reasonable people think on complex issues and to avoid the risk that theory "becomes hostage of the conventions that accompany any academic specialism" (Amiel and Cowell 1992, p. 4).[12] This objective may be especially relevant with social mobility comparisons, given their multidimensional nature.

Another methodological issue concerns the fact that questionnaire studies use hypothetical questions and do not provide financial incentives for people to answer truthfully. Proper financial incentives are particularly important in economic experiments to motivate subjects' behaviour in situations where self-interest is at stake, as in laboratory games, markets, etc.. **(Falk and Heck-**

[10] There are views that value *neither* equality *nor* mobility: according to Nozick (1974), any inequality that has not been obtained by expropriation or exploitation can be justified.

[11] **An interesting recent method that tries to increase control in online survey studies uses commercial platforms like Amazon Mechanichal Turk (Bohannon 2011). Up to now this method has been however used to conduct survey on more practical issues, like political preferences for redistribution (Kuziemko 2013). Perhaps in the future, it may be interesting to explore the possibility to apply the method also for conducting questionnaire focussed on abstract principles.**

[12] Gartner and Schokkaert (2013) argue that in some cases students may also represent a specifically interesting subgroup of the population to focus on since they may be seen as the future economic and political elite of the country and therefore in the position to affect actual economic and social policy.

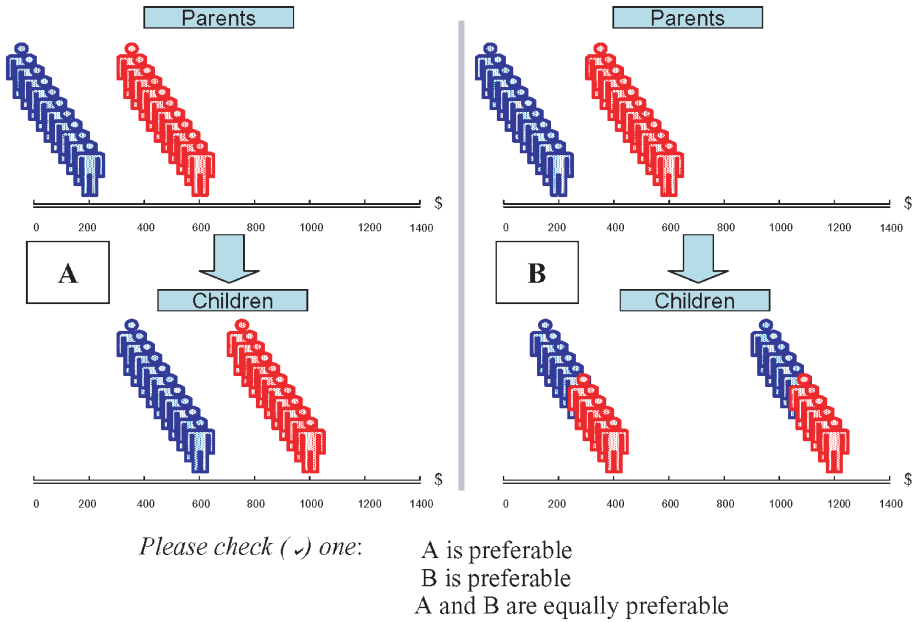

Fig. 4 Example of a question display

man 2009).[13] In the questionnaire studies the focus is on people's opinions and their ethical preferences. It is not clear which financial incentives would be relevant in such a context. As previously remarked, a long tradition in the theory of justice argues that ethical opinions on distributive matters should be given from an impartial position. It is still true that without financial incentives there may be inaccuracies in the answers by some respondents if the questions are particularly difficult or the respondent is tired; but it is not obvious why the majority of respondents should not try to answer carefully and truthfully if the questions are sufficiently clear and students volunteer to participate. Finally, if the participants give arbitrary, random or clearly unwise responses, this should show up in the results.

3.1 The structure of the questionnaire

We took great effort to make the questionnaire simple and manageable. The main part of the questionnaire consists of eight pair-wise comparisons designed to investigate whether mobility is considered a desirable social objective in the abstract. Each comparison presents a pair of scenarios A and B characterised by different income profiles as in the examples discussed in the previous section; we use "bus queue" pictures (Amiel and Cowell 1999) to represent the

[13] Even with regards to the role of incentives in experimental economics there is however some debate; see Camerer and Hogarth 1999, for a classical article on the issue.

two income groups within each generation of parents and children; dynasties are identified by colour – see Figure 4. (In the example scenario A corresponds to mobility table X of Section 2, B corresponds to mobility table Z). This combines intuitively information about income inequality within each generation and intergenerational mobility. Table 1 summarises the pair-wise comparisons of the questionnaire. For each scenario the two numbers in round brackets give the ratios between parents' and children's incomes for the group of poor and rich, respectively: so $(2, 2)$ means that both the poor group and the rich group double their incomes from the fixed parental levels of \$200 and \$600, respectively. All the scenarios of the questionnaire are based either on (2, 2) or on $(3, 1.67)$. Thus, the total income in the scenarios of the eight pair-wise comparisons are the same under both (2, 2) and $(3, 1.67)$, though the scenarios using $(2, 2)$ are characterised by a widening of the inequality between the poor and the rich. The number in square brackets is the parameter m of Section 2: the higher is m the more mixing there is in society and the greater is the degree of intergenerational mobility. The questionnaire uses three values for m: 50% (full mixing), 20% (partial mixing) and 0% (rigidity).

Table 1 Summary of the mobility scenarios on the questionnaire

	Scenario A	**Scenario B**	
Question 1	(3, 1.67) [50%]	(3, 1.67) [0%]	full mix. v. rigidity
Question 2	(3, 1.67) [50%]	(2, 2) [50%]	full mix. v. full mix.+widening
Question 3	(3, 1.67) [0%]	(2, 2) [50%]	rigidity v. full mix.+widening
Question 4	(3, 1.67) [20%]	(3, 1.67) [0%]	partial mix. v. rigidity
Question 5	(3, 1.67) [20%]	(2, 2) [20%]	partial mix. v. partial mix.+widening
Question 6	(3, 1.67) [0%]	(2, 2) [20%]	rigidity v. partial mix.+widening
Question 7	(3, 1.67) [50%]	(3, 1.67) [20%]	full mix. v. partial mix.
Question 8	(3, 1.67) [0%]	(2, 2) [0%]	rigidity v. rigidity+widening

Comparing scenarios with different combinations of parameters can be used to draw inferences on the various principles and ideas discussed above. Q1 shows two scenarios with the same inequality (no widening), but with mobility higher in A. Q4 and Q7 have a similar structure, but different values for the mixing parameter. Thus, the three questions can be used to investigate whether people value mobility as such, namely when mobility does not interfere with static inequality. The answers to the three questions will show whether more mobility induces stronger preference. In Q2, Q5 and Q8, mobility is the same in both scenarios, but there is widening in the B scenarios; mobility of the scenarios is higher in Q2 than in Q5 and Q8. Therefore, the answers to

each individual question can be used to infer people's attitude towards static income inequality; whereas comparing the distributions of answers across questions will be used to investigate the substitution view: whether more mobility induces a lower support for income equality *per se*. Q3 and Q6 present scenarios where both mobility and inequality are different: in Q3, A is a scenario with rigidity and less inequality than in B, which is characterised by full mixing and widening; Q6 is similar (B has partial mixing). Comparing the distributions of answers between the two questions can provide evidence on people's willingness to sacrifice some income equality in order to obtain more income mobility, an idea that we have suggested may be consistent with an ethic of meritocracy. Evidence on the same notion can also be obtained comparing the answers to Q3 and Q6 with those in Q8, which compares two rigid scenarios and where B has more inequality (widening). By contrast, persistent preferences for A in the three questions would be consistent with a strict egalitarianism. Participants were asked to indicate which scenario they considered socially preferable from an impartial position.[14]

3.2 The samples

The questionnaires were completed in 2009 and 2010 by a total of 356 university students. They were from three home institutions of the authors, namely the University of Venice (Italy), LSE (UK), and Ruppin Academic Center (Israel): 120, 89 and 147 participants, respectively. The questionnaire was administered at the end of lectures. Students were informed about the possibility of participating in a questionnaire and were told that participation was voluntary. Answering the full questionnaire required about 20 minutes. All students were upper-level undergraduates, in most cases with economics as their main subject, but with no specific teaching in the theory of income mobility. Using as respondents students at about the similar stage in education but from different countries allows one to address the question of the impact of cultural background on perception and evaluation of mobility. This will be done below using some further information on the characteristics of the participants collected at the end of the questionnaire. First we present the preferences expressed by participants in the pair-wise comparisons, focusing on five major issues.

Table 2 Results in Q1, Q4, Q7

	Valid resp.	Preference for A	Preference for B	Indif./ not comp.	d-test	χ^2-test
Q1			Percentages			
Italy	120	60.8%	22.5%	16.7%	4.50^{***}	11.05^{*}
UK	89	77.5%	7.9%	14.6%	7.00^{***}	
Israel	147	70.1%	19.7%	10.2%	6.53^{***}	
ALL	*356*	*68.8%*	*17.7%*	*13.5%*	10.31^{***}	
Q4						
Italy	120	56.7%	31.7%	11.7%	2.82^{**}	20.64^{***}
UK	89	84.3%	7.9%	7.9%	7.40^{***}	
Israel	146	66.7%	20.4%	12.9%	6.10^{***}	
ALL	*355*	*67.7%*	*21.1%*	*11.0%*	9.28^{***}	
Q7						
Italy	119	68.3%	22.5%	9.2%	5.17^{***}	4.87
UK	89	68.5%	16.9%	14.6%	5.162^{***}	
Israel	147	70.1%	15.0%	15.0%	7.33^{***}	
ALL	*356*	*69.1%*	*18.0.7%*	*12.6%*	10.28^{***}	

Notes: d-test is a difference-of-proportion test for $H_0 : p(A) = p(B)$, based on the standard normal approximation of the binomial distribution. χ^2-test is for the null hypothesis that answers in Italy, UK, and Israel can be viewed as if drawn from the same population. *, **, ***, denote rejection at, 10%, 5%, and 1% significance levels.

4 Results

1. Do people show support for mobility? If a person values mobility as such then he should choose response A in Q1 (Full Mixing versus Rigidity), Q4 (Partial mixing v rigidity) and Q7 (Full v Partial Mixing). Table 2 reports the answers to the three questions as a percentage of each country sub-sample and in the aggregate (*ALL*). The second column gives the number of valid responses for each question and in each country: there were very few non-responses. In all countries the majority of subjects report a preference for A in all three questions. A difference-of-proportion tests (column d-test) confirms that the differences are statistically significant in all the comparisons. Therefore, we conclude that participants indeed value mobility in all the three countries. χ^2-*tests* reject the null hypothesis of homogeneity in Q1 and Q4, while homogeneity is accepted in Q7. The results of the tests are consistent

[14] "Impartial position" means that the individual whose preferences are considered "is not directly involved in the distributions of income in the society". This was explained in the introduction to the questionnaire, which also explained other features, including the fact that the questionnaire is about "social preferences for the distributions of incomes in hypothetical societies of two generations, the generation of the parents and the generation of the children"; the fact "there are different dimensions which may be involved in considering income distributions"; the way in which displays have to be looked at and interpreted. The full questionnaire is available at http://darp.lse.ac.uk/resources/questionnaires/MobilityQuestionnaireWelfare.pdf

with the evidence that in Q1 and in Q4, there are higher proportions of choices for A, hence stronger preferences for mobility, in the UK than in Israel and in Italy. This interesting piece of evidence will be examined in more detail studying the effect of personal factors.

2. Does more mobility elicit stronger preference? A second issue can be addressed by comparing the answers to Q1, Q4 and Q7: whether more mobility induces stronger preferences or whether preferences for mobility do not depend on the degree of mobility. In the former case, we should expect that the proportions of choice for A in Q1 are higher than in both Q4 and Q7. We do not see any such systematic tendency: looking at simple percentages, A in Q1 is chosen more often than A in Q4 in Italy and Israel, but not in the UK; and it is chosen more often than A in Q7 in the UK, but not in Italy nor Israel (where A is Q1 is chosen as often as in Q7). To obtain further evidence on the issue, Table 3 shows the bivariate distributions of preferences expressed by participants in (Q1,Q4) and (Q1,Q7). Since we did not find any significant difference over the pairs across samples, here the reported percentages are for the full data set of the three countries. The percentages confirm that the majority of participants choosing A in Q1, also chose A in Q4 and Q7; moreover, the percentages for the other categories do not show any tendency to switch from A to B (or to indifference) between Q1 and Q4 and Q7.

Table 3 Distributions of answers in (Q1,Q4) and (Q1,Q7)

	Q4			
		A	B	Indiff.
Q1	A	53.8%	10.4%	4.5%
	B	7.6%	8.5%	1.7%
	Indiff.	6.5%	2.3%	4.8%

	Q7			
		A	B	Indiff.
Q1	A	54.1%	9.3%	5.6%
	B	7.6%	7.3%	2.5%
	Indiff.	7.6%	1.4%	4.5%

3. Do people show support for income equality? Questionnaire experiments have been used before to investigate preferences for equality:[15] the difference here is that preference for static equality may conflict with preference for mobility. In our questionnaire a person who values equality should choose response A in Q2 (Full mixing and widening), Q5 (Partial mixing and widening) and Q8 (Rigidity v simple widening). The answers to the three questions reported in Table 4 show that in all three countries the majority of subjects do indeed

[15] In general, previous questionnaires conducted to investigate people's attitude towards income inequality took the form of a test of the classical Pigou-Dalton principle of transfers (Amiel and Cowell 1992; Amiel and Cowell 1998, Harrison and Seidl 1994, Bernasconi 2002, Traub and Schmidt 2009). Support for the principle depends on the range of the income distribution in which income transfers occur, on the type of verbal or numerical test conducted, on the frames adopted to test it (e.g. whether from a external observer viewpoint, under a condition similar to the "veil of ignorance", or under one of individual risk) – Amiel (1999), Gaertner and Schokkaert (2012).

value equality (they prefer A). Moreover, the differences in proportion between preferences for A and for B are highly significant (*d*-test) and the patterns are homogeneous across the three countries (χ^2-test).

Table 4 Results in Q2, Q5, Q8

	Valid resp.	Preference for A	Preference for B	Indif./ not comp.	*d*-test	χ^2-test
Q2			Percentages			
Italy	120	67.5%	16.7%	15.8%	5.97^{***}	2.64
UK	89	76.4%	14.6%	9.0%	6.00^{***}	
Israel	147	71.4%	16.3%	12.2%	7.22^{***}	
ALL	356	*71.3%*	*16.0%*	*12.6%*	11.11^{***}	
Q5						
Italy	120	68.3%	15.8%	15.8%	6.17^{***}	2.66
UK	89	77.5%	13.5%	9.0%	6.21^{***}	
Israel	147	72.8%	14.3%	12.9%	7.69^{***}	
ALL	356	*72.5%*	*14.6%*	*12.9%*	11.64^{***}	
Q8						
Italy	120	70.8%	13.3%	15.8%	6.76^{***}	4.47
UK	88	80.9%	10.1%	9.0%	6.89^{***}	
Israel	147	78.9%	10.2%	10.9%	8.91^{***}	
ALL	355	*76.7%*	*11.2%*	*11.8%*	13.11^{***}	

4 Does mobility preference reduce support for equality? A person with the "substitution view" should switch preferences from A to B going from Q8 (zero mobility) to Q5 (partial mobility) and to Q2 (perfect mobility, where the B response should be strictly preferred). So the large proportion of A preferences for all three questions in Table 4 suggests that a majority of respondents reject the substitution view; however, there is a moderate tendency of the frequencies of B answers to increase moving from Q8, to Q5 and to Q2 in all the three samples. The difference-of-proportions test reveals some low significance only in the aggregate data for the difference between Q8 and Q2 (with the proportions of B answers increasing from 11.2% to 16.0%, $d = 1.625$, one-tailed $p < 10\%$), but not between Q8 and Q5, nor between Q5 and Q2. Table 5 shows the joint distributions of choices over (Q2,Q5), (Q2,Q8) and (Q5,Q8) which strengthen the evidence that the majority of subjects chose (A,A) over all the three pairs of questions, but confirm the moderate tendency of switching preferences from A to B in going from Q8 to Q2 and Q5.[16] The substitution view is rejected by the majority, but may hold for a small minority of respondents.

[16] This can be verified comparing the proportions of answers of type (B,A) in (Q2,Q8) and (Q5,Q8), with those of type (A,B) which are consistent with an opposite tendency. While the proportions of the latter patterns are very small, the former are larger, with differences that are statistically significant. In particular, in (Q2,Q8) the proportion of answers (B,A)

Table 5 Distributions of answers in (Q2,Q5), (Q2,Q8), (Q5,Q8)

	Q5			
		A	B	Indiff.
Q2	A	62.1%	5.3%	3.4%
	B	5.9%	7.0%	3.1%
	Indiff.	4.5%	2.3%	5.9%

	Q8			
		A	B	Indiff.
Q2	A	63.4%	3.7%	4.2%
	B	8.5%	5.6%	2.0%
	Indiff.	5.1%	2.0%	5.6%
Q5	A	65.6%	2.3%	4.5%
	B	5.9%	6.8%	2.0%
	Indiff.	5.4%	2.3%	5.4%

5 Are people willing to sacrifice some equality for more mobility? The acceptance of an equality-mobility trade-off may arise when some inequality is necessary for greater mobility, as in a meritocracy. The answers to Q3 (Rigidity v Mixing+Widening), Q6 (Rigidity v Partial Mixing+Widening), and Q8 (Rigidity v Simple widening) provide evidence here. The results are consistent with the trade-off if response B in Q3 is chosen more often than in Q6, which in turn is chosen more often than in Q8.[17] The evidence in Table 6 is consistent with the trade-off: in all three samples, the response A decreases, while response B increases sharply moving from Q8 to Q6 and then to Q3. The difference of proportions of response B between the three questions are highly significant.[18] It is also interesting to remark that, while in Q8 and Q3 the majority of responses are for A (see the d-test), in Q3 (where there is full mixing in B) choices are divided evenly between A and B. The preference patterns are similar across countries (χ^2-test).

The trade-off evidence is supported by the joint distributions over (Q3,Q6), (Q3,Q8) and (Q6,Q8) in Table 7: while in all the three pairs the relative majorities of choices are for (A,A), there are also a substantial proportion of (B,A)

is 8.5% (30/355) and those of type (A,B) is 3.7% (13/355) ($d = 2.76$, one-tailed $p < 1\%$); in (Q5,Q8) the answers (B,A) are 5.9% (21/355) and those of type (A,B) is 2.3% (8/355) ($d = 2.6$, one-tailed $p < 1\%$). Instead, there is no significance difference in the frequencies of (A,B) and (B,A) answers in (Q2,Q5).

[17] An alternative hypothesis here is that people do not switch preferences between the three questions, and in particular that they choose in Q3 and Q6 the same scenario A as in Q8. For example, a prediction of "no trade-off" would hold either for individuals who do not care about mobility, or for those who consider the greater inequality of scenario B in the three questions anyhow too high to be compensated for any amount of mobility (even when mobility is perfect as in B of Q3).

[18] For the aggregate sample the increases in response B are: +23.2% (35.4%-11.2%=126/353-40/355) between Q6 and Q8 ($d = 6.597$, one-tailed $p < 1\%$); +39.0% (49.2%-11.2%=159/356-40/355) between Q3 and Q8 ($d = 8.365$, one-tailed $p < 1\%$); +13.8% (49.2%-35.4%=159/356-126/353) between Q3 and Q6 ($d = 1.896$, one-tailed $p < 5\%$);

Table 6 Results in Q3, Q6, Q8

	Valid resp.	Preference for A	Preference for B	Indif. not comp.	d-test	χ^2-test
Q3			Percentages			
Italy	119	45.0%	49.2%	5.8%	-0.56	3.19
UK	89	50.6%	40.4%	9.0%	0.89	
Israel	147	46.9%	43.5%	9.5%	0.52	
ALL	355	*47.2%*	*44.7%*	*7.9%*	*0.44*	
Q6						
Italy	118	54.2%	35.8%	10.0%	2.02*	0.41
UK	88	57.3%	34.8%	7.9%	2.10*	
Israel	147	55.8%	35.4%	8.8%	2.68*	
ALL	353	*55.6%*	*35.4%*	*8.1%*	*3.94***	
Q8						
Italy	120	70.8%	13.3%	15.8%	6.76***	4.47
UK	88	80.9%	10.1%	9.0%	6.89***	
Israel	147	78.9%	10.2%	10.9%	8.91***	
ALL	355	*76.7%*	*11.2%*	*11.8%*	*13.11***	

Table 7 Distributions of answers in (Q3,Q6), (Q3,Q8), (Q6,Q8)

	Q6			
		A	B	Indiff.
Q3	A	37.2%	7.7%	2.6%
	B	15.6%	25.6%	3.4%
	Indiff.	3.1%	2.3%	5.4%

	Q8			
		A	B	Indiff.
Q3	A	39.6%	3.1%	4.5%
	B	31.9%	6.5%	6.5%
	Indiff.	5.7%	1.4%	0.9%
Q6	A	48.6%	3.7%	3.7%
	B	22.2%	6.8%	6.8%
	Indiff.	6.5%	0.6%	1.1%

responses.[19] Moreover, in (Q3,Q6) more than a quarter of the respondents choose (B,B), the scenarios with more mobility.

5 The role of personal factors

It is potentially interesting to know the personal traits that appear to predispose respondents to certain choices. Table 8 reports the actual personal information from the end of the questionnaire. In general we do not observe large differences in the average answers across the three samples. One important difference is that, while all students in Israel and the majority in Italy are

[19] As above, in order to determinate the statistical significance of patterns (BA), they can be contrasted with the symmetric patterns (A,B). The comparison show that: in (Q3,Q6), category (B,A) corresponds to 15.6% (55/352) versus 7.7% (27/352) of (A,B) ($d = 3.20$, one-tailed $p < 1\%$); in (Q3,Q8) answers (BA) are 31.9% (113/354) and those (A,B) are 3.1% (8/354) ($d = 9.25$, one-tailed $p < 1\%$); in (Q6,Q8), (BA) count for 22.1% (78/352) and (A,B) for 3.7% (13/352) ($d = 6.92$, one-tailed $p < 1\%$).

from their respective country, most students in the UK are from abroad (A3). As indicated in the Introduction, in recent years various studies have shown that preferences for redistributions vary systematically across countries and cultures (e.g. Corneo and Grüner 2002, Alesina and La Ferrara 2005, Alesina and Giuliano 2011, Luttmer and Singhal 2011, and references there). Clearly, our samples are by no means representative of the populations of the three countries and therefore our purpose here is not that of conducting a study of preference for redistributions and social mobility across countries. Rather our aim is to study whether people's preferences given in the questionnaire can be explained by any personal factors such as attitudes and attributes of the respondents, including their cultural backgrounds or other characteristics of the samples collected.

Regarding our samples, specific cultural effects may be due to family ties. There is in this respect a rather large literature showing that Italy is an instance of the Southern European culture characterised by very strong family ties which may have implications for people's attitudes towards mobility and inequality (Esping-Andersen 1999, Alesina and Giuliano 2013). On the one hand, family ties imply a tendency of individuals in these societies to rely on various forms of social insurance provided within the family which may reduce people's demand for social mobility. On the other hand, altering the probability of success in the labor market, family ties can increase people's preferences for income equality and their demand for redistributive policies. Northern European countries, including UK, are often considered to express a different culture, where family ties are less important and where social mobility is valued higher.[20] Moreover in these countries success in the labour market is generally viewed as a result of hard work and willpower, rather than luck and others factors beyond the control of the individual. The latter attitude may partly translate in a lower concern for income equality, as has been recently demonstrated in the UK (Georgiadis and Manning 2012). Israel is also an interesting country: for some respects it is often considered culturally similar to Mediterranean European countries, including for what it concerns people attitude towards inequality (Olivera 2013); nevertheless evidence also indicates that in Israel there is more mobility and more inequality than in a typical Southern European country (Breen and Luijkx 2004).

There is also an extensive literature studying the relationships between social mobility and ethnic diversity, but its relevance for the sub-sample of students in our questionnaire who have moved abroad to study is limited.[21]

[20] As is well known, an even stronger attitude for mobility associated with lower preferences for income equality has been especially found in non-European Anglo-Saxon countries like the US, Australia and New Zealand (Alesina and La Ferrara 2005, Alesina and Giuliano 2011).

[21] Indeed, most of the literature on diverse ethnicity and social mobility has focused on the effect of belonging to certain social classes and attitudes toward out-groups and how mobility may affect and may be affected by this relationships, for example for the impact that immigrants may have for the degree of mobility in a society and from here the attitude towards ethnic out-groups between different social classes. There are also studies that have investigated preferences for redistribution between immigrants. An interesting finding here

By contrast we note that the evidence from social surveys generally shows that more educated individuals prefer less redistribution than other segments of the population. This is generally explained with the trade-off argument that higher education decreases preferences for income equality because it raises expectations of mobility in the future (Alesina and Giuliano 2011). Based on the argument, it could then be that students who go abroad to study and reveal in this a particularly strong expectation from the return on education, may have even stronger preferences for mobility and lower for income equality.

Obviously, other differences between the three samples may depend on the specific institutions where we conducted the questionnaire and be partly revealed in the average values of the other attributes reported in Table 8. In all three data sets, most respondents perceive that their family income is high (F1) and just above the country average (F2). This feature is more pronounced in the UK sample.[22] The majority of respondents in all the three samples believe that they will improve on their parents' economic (P1) and social positions (P2). When faced with values attached to mobility, respondents generally agree that independence between parents' and children's income is a desirable property for society (V1) and that income independence is a sign of equality of opportunities (V2). There is slightly less agreement and clear evidence whether the majority support the view that the government's main duty to ensure equality of opportunities or rather that of reducing as much as possible income inequality (V3): on this issue respondents in Italy and Israel are typically half way between the extremes; in the UK there is a slight majority favouring equality of opportunity.

We constructed two individual preference indices: for any respondent *mobility preference* is the number of A responses on Q1, Q4 and Q7; for any respondent *equality preference* is the number of A responses on Q2, Q5 and Q8. Table 9 shows the distributions of respondents across the four possible categories of response and confirms that the majority of respondents value both mobility and equality: for both variables, there are very few 0A; for mobility preference category 3A is the most favoured (although there are differences in pattern across the samples); equality preference category 3A commands an absolute majority in all the three samples. Table 10 presents the results of three specifications of an ordered probit regression for each of the two preference variables with the attributes and attitudes of Table 9 as independent variables (the correlation matrix of the variables is reported in the Appendix).

In the baseline mobility-preference regression only V1 ("independence of parents and children's income in society") is significant: as one would expect, those who agree that independence is desirable value mobility higher; but we do not see any effect on mobility preference from the role of independence

is that the effect of the culture of the country of origin is stronger on attitudes towards redistribution than the effect of the characteristics of the country of destination (Luttmer and Singhal 2011).

[22] It is nevertheless worthwhile to remark that there is no significant correlation between family income (F1) and the nationality of the respondents (A1), see correlation matrix in the Appendix (not even within the UK sample where the correlation is -0.069).

Table 8 Sample characteristics

	Italy	UK	Israel	All
Number of respondents	120	89	147	356
Personal attributes				
A1. Age	20.1	21.0	24.6	22.5
A2. Gender (0 male, 1 female)	0.54	0.40	0.46	0.47
A3. Nationality (1 if from country; 0 otherwise)	0.93	0.27	1.00	0.80
Family attributes				
F1. Family income (1 very low; ...; 5 very high)	2.9	3.4	3.2	3.2
F2. Family income relative to country average (1 much lower;...; 5 much higher)	3.2	3.7	3.4	3.4
Prospects				
P1. Prospective income relative to parental income (1 much lower;...; 5 much higher)	3.4	4.0	3.9	3.8
P2. Prospective social position relative to parental position (1 much lower;...; 5 much higher)	3.5	3.7	3.7	3.6
Values				
V1. Is independence of parents' and children's income levels desirable? (1 strongly agree;..; 5 strongly disagree)	2.3	2.0	2.2	2.2
V2. Is independence of parents' and children's income levels equivalent to equality of opportunity? (1 strongly agree;...; 5 strongly disagree)	2.2	1.9	1.8	1.9
V3. Should the government: *a*. provide equality of opportunity and not alter economic outcomes; or *b*. reduce income differences as much as possible? (1 strongly agree with *a*.; 10 strongly agree with *b*.)	4.8	3.5	5.2	4.6

Table 9 Mobility and equality preferences - distributions by category

	0A	**1A**	**2A**	**3A**	**0A**	**1A**	**2A**	**3A**
	"Mobility preference"				**"Equality preference"**			
Italy	10.8	24.2	33.3	31.7	16.7	10.0	23.3	50.0
UK	9.0	11.2	20.2	59.6	13.5	6.7	11.2	68.5
Israel	10.9	16.3	27.9	44.9	9.5	14.3	19.7	56.5
ALL	*10.4*	*17.7*	*27.8*	*44.1*	*12.9*	*11.0*	*18.8*	*57.3*

as equality of opportunities (V2) nor of the view regarding whether the government should provide equality of opportunities or reduce income differences (V3). In the baseline equality-preference regression family income has a positive effect, which may be interpreted as an altruistic attitude of those perceiving themselves as better-off. Also, participants perceiving better prospects of moving upwards in the social parade are less inclined to value income equality higher than those who perceive to have lower prospects (P2). This result can be seen as consistent with arguments sometimes used in the political economic literature to explain why the poor do not always support real world redistributive policy if they perceive that they can be in a better economic position in the future (Benabou and Ok 2001), but there may also be some deeper factors

Table 10 Ordered probit for the role of personal factors

Baseline regression				
	Mobility preference		Equality preference	
A1. Age	0.0062	(0.025)	0.0440	(0.027)
A2. Gender	-0.1638	(0.1257)	-0.1005	(0.131)
F1. Family income	0.0271	(0.117)	0.2514**	(0.125)
F2. Living standard	-0.0311	(0.111)	-0.0879	(0.117)
P1. Prospect on income	0.0212	(0.093)	0.0368	(0.099)
P2. Prospect. on soc. position	-0.0349	(0.103)	-0.2068*	(0.109)
V1. Indep. desirable	-0.3152***	(0.077)	-0.0130	(0.081)
V2. Indep. as equ. of opport.	-0.1148	(0.081)	0.0114	(0.085)
V3. Equ. opport. v. equ. income	0.0102	(0.026)	-0.0655**	(0.028)
Regression with country dummies				
	Mobility preference		Equality preference	
A1. Age	0.0223	(0.035)	0.0762**	(0.039)
A2. Gender	-0.1460	(0.127)	-0.0709	(0.133)
F1. Family income	-0.0408	(0.120)	0.2419*	(0.128)
F2. Living standard	-0.0822	(0.112)	-0.0978	(0.118)
P1. Prospect on income	-0.0697	(0.100)	0.0311	(0.106)
P2. Prospect. on soc. position	-0.0117	(0.104)	-0.2044*	(0.109)
V1. Indep. desirable	-0.3128***	(0.077)	-0.0068	(0.081)
V2. Indep. as equ. of opport.	-0.0984	(0.082)	0.0049	(0.087)
V3. Equ. opport. v. equ. income	0.0255	(0.027)	-0.0583**	(0.028)
Italy	-0.1356	(0.207)	0.1678	(0.222)
UK	0.5029**	(0.211)	0.3298	(0.224)
Regression with nationality				
	Mobility preference		Equality preference	
A1. Age	0.0209	(0.036)	0.0808**	(0.039)
A2. Gender	-0.1466	(0.127)	-0.0700	(0.133)
A3. Nationality	-0.0547	(0.255)	0.1793	(0.264)
F1. Family income	-0.0394	(0.121)	0.2342*	(0.129)
F2. Living standard	-0.0850	(0.113)	-0.0883	(0.119)
P1. Prospect on income	-0.0700	(0.101)	0.0318	(0.106)
P2. Prospect. on soc. position	-0.0126	(0.104)	-0.2016*	(0.110)
V1. Indep. desirable	-0.3132***	(0.077)	-0.0063	(0.081)
V2. Indep. as equ. of opport.	-0.0983	(0.081)	0.0047	(0.087)
V3. Equ. opport. v. equ. income	0.0251	(0.027)	-0.0571**	(0.028)
Italy	-0.1439	(0.210)	0.1949	(0.225)
UK	0.4580	(0.297)	0.4772	(0.312)

Legend: Standard errors in brackets. Stars *, **, ***, denote rejection at, 10%, 5%, and 1% levels.

weakening preferences for income equality, independent of material interest.[23] The regression also shows that participants who value equality higher seem those to be who agree that government should care about equality of opportunities more than to equality of income (V3). **The effect is small, but opposite to what one might have found more intuitive. However, evidence that people are unsupportive towards policies to redistribute incomes even when they care about economic inequality has also**

[23] Supporting this interpretation note the negative effect of "prospect on social position" (P2) rather than the "prospect on income" (P1), which also has a negative effect. Removing P2 from the regression makes P1 not significant.

been documented in policy surveys (Bartels 2005,). For example, in a recent study Kuzmienenko et al. (2013) show that information on inequality increases substantially people concern about inequality, but it has a very little effect on their support for redistributive policies. As a major explanation they find that people dont trust the ability of governments to reduce inequality through standard policy instruments. We return to the point in the conclusion of the paper.

The second regression uses country dummies (Israel is the base case). The results for mobility preference show a positive and significant impact of the dummy for UK; the dummy for Italy is negative, even if it is not significant. Based on the previous discussion, the results are not totally unexpected even if it is interesting the similarity between Italy and Israel. There are no effects of the country dummy in the regression on equality preference. The results here are perhaps slightly less expected. Based on the discussion at the beginning of this section and on the evidence on V3 in Table 9, one might have expected a negative effect of the UK: the effect is positive (even if not significant), indicating that there is no trade-off in the UK sample between mobility and equality preferences.

The third regression includes a *nationality* dummy. This is constructed from the response to question 3 ("Do you consider yourself ...?" + multiple nationality categories); in effect it is coded as though the question were "do you consider yourself from round here?" taking value 1 ("Yes") or 0 ("No"). The effect is negative, even if not significant. It is nevertheless interesting that the dummy for the UK is now no longer significant,[24] confirming that a relevant contribution for the mobility preferences in the UK sample derives from those students who have literally moved from overseas to study.

6 Concluding discussion

Do people value mobility? Clearly, yes. Is mobility enough? Clearly, no. According to our respondents, if there is greater mobility in society then that is a good thing; but it does not mean that you can forget about equality (Table 5). The evidence shows that the majority of our respondents value positively *both* mobility *and* equality: not only do they reject the extreme position that treats income equality as the only mandatory welfare objective, they also reject the position that considers income mobility as a primary social goal with income equality representing only a concern when the first objective cannot be fully achieved.

Why do people value mobility? When mobility is accompanied by income growth then they are prepared to sacrifice equality: this is evident from Table 6. Although there is no simple, direct trade-off between income mobility and income equality, respondents express willingness to sacrifice some income equality to obtain more income mobility (or vice-versa) when this is necessary.

[24] The regression obviously reports the difference between Israel and the UK; the difference between Italy and the UK remains statistically significant (at $p \approx 0.02$).

We found no evidence of personal factors that have both a positive effect in the evaluation of mobility and a negative effect on the evaluation of income equality (or vice-versa). Family income affects preferences for equality positively, while a prospect of social improvement affect them negatively. There is some evidence of cross country differences in the evaluation of mobility: respondents in the UK value it the most; those in Italy value it the least. Those who have moved to attend their course of study also value mobility.

Although the questionnaire does not address explicit policy issues (neither it was intended to do), our results contain some points of interest also in terms of ongoing policy discussions. Indeed, closely related to the substitution view, there is an ever growing emphasis of some more right-wing economic literature on the role of talents, merits, incentives, both as the main/only factors which should determine people rewards and as the main drivers of countries economic performance. An important policy question arising from the position is whether ex-post inequality should remain a matter for policy concern or whether governments should address their effort to correct ex-ante inequality of opportunity, including that due to family background often considered as the major obstacle to the reward of talents and the full effectiveness of economic incentives.

The evidence we find against the substitution speaks also against a policy objective only oriented to level the playing field and make the economic success unpredictable of the basis of family background. Income inequality remains a major concern for the subjects participating in our study, even when the position of an individual is (statistically) independent from that of parents. Nevertheless, our subjects, even those with stronger preferences for income equality, do not seem particularly supportive of a policy objective by which a governments main duty is that of reducing income differences as much as possible (as shown by the evidence on V3 in the ordered probit regressions).

While this result may surprise at first, there is obviously a difference between valuing income equality and supporting policies that redistribute incomes directly. A government can indeed pursue different policies to promote economic equality, partly also depending on the actual relationships between static inequality and intergenerational mobility. In the present study we have focussed on a trade-off between equality and mobility mainly because we were interested on key distributional principles. There are, however, empirical studies indicating that countries with more statistic inequality are often those with less intergenerational mobility (Corak 2013). This relationship has been recently called the Great Gatsby curve. While there are controversies on the interpretation of the relationship, a possibility is that equality and mobility are in fact the two sides of the same coin. For example, according to the OECD rising economic

inequality can stifle upward social mobility, making it harder for talented and hard-working people to get the rewards they deserve.

Clearly, according to this view, policies to contrast inequality are tide to those capable to increase mobility. Moreover, some people may judge a public policy to promote equality of opportunity also more effective to reduce economic inequality, rather than redistributive policies based on classical tax and income transfer programs. Fuelling the latter position there may for example be standard efficiency considerations or more political ones, like a lack of trust of many people in the ability of the governments to conduct traditional redistributive policies.[25]

The latter tendency has for example been reported in a recent survey conducted by Kuziemko et al. (2013), which is more explicitly focussed on people political attitudes towards representative redistributive policies. The study of these authors is interesting also because it uses a cheap online platform like Amazon Mechanical Turk to conduct a large randomized survey. This permits to the authors to manipulate directly the survey and to ask more complex and focussed questions than is normally allowed by the expensive surveys conducted or commissioned to commercial vendors.

As emphasized at several points in this paper, investigating values concerning intergenerational mobility presents an even stronger challenge than focussing only on inequality because of the multidimensional nature of mobility and because individuals' responses in real-world contexts may be motivated by personal interest and experience. The questionnaire approach we have implemented allows one to make precise the appraisal of the abstract preferences for inequality and mobility through a series of linked pair-wise comparisons. We have used students as sample in our investigation. Students are not representative of the populations. They have offered an interesting initial evidence of the way in which reasonable people perceive subtile ethical issues which are usually discussed only among specialists. In the future it may be important to combine an approach like that followed by Kuziemko et al. (2013) with ours, to investigate further and on a larger scale people ethical preferences for inequality and mobility and analyse with a better understanding how people abstract preferences for inequality and mobility feed into their practical judgments for representative policy instruments.

[25] We just remark that the objective of a policy designed to increase social mobility for equality considerations remains substantially different that one motivated by the substitution view. In the former case a government may indeed go even further than simply levelling the playing field. For example, it may decide to favour a group of particularly disadvantage people and spend to offer them some high-quality public service in an amount greater than the average, in order to speed up the process of their economic integration.

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Appendix

	A1	A2	A3	F1	F2	P1	P2	V1	V2	V3	Italy	UK
A1. Age												
A2. Gender	-0.157											
A.3 Nationality	0.205	0.039										
F1. Family income	0.089	-0.073	-0.117									
F2. Living standard	-0.098	-0.015	-0.220	0.564								
P1. Prospect on income	0.074	-0.042	-0.108	-0.168	-0.111							
P2. Prosp. on soc. position	0.021	0.012	-0.052	-0.165	-0.166	0.590						
V1. Indep. desirable	-0.015	0.121	0.061	-0.037	-0.028	-0.086	-0.059					
V2. Indep. as equ. of opport.	-0.157	0.039	0.007	-0.030	0.001	-0.021	-0.024	0.386				
V3. Equ. opport. v. equ. income	0.169	0.106	0.167	-0.086	-0.158	-0.045	-0.003	0.133	0.179			
Italy	-0.446	0.070	0.265	-0.253	-0.162	-0.336	-0.123	0.115	0.227	0.044		
UK	-0.327	-0.064	-0.779	0.175	0.237	0.150	0.042	-0.097	-0.033	-0.266	-0.395	
Israel	0.707	-0.011	0.428	0.087	-0.053	0.187	0.080	-0.024	-0.186	0.190	-0.601	-0.495