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Intergenerational egalitarianism

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Abstract

I study the egalitarian way of distributing resources across generations. Distributional equity deeply conflicts with the Pareto principle: efficient allocations cannot guarantee that *i*) each generation be assigned a consumption bundle that is at least as large as an arbitrarily small fraction of the bundle assigned to any other generation and that *ii*) each generation finds its assigned bundle at least as desirable as an arbitrarily small fraction of the bundle assigned to any other generation with the same preferences. Overcoming such tension unveils a new ethical dilemma for intergenerational equity: the *short-term/long-term inequality trade-off*. The egalitarian ethical observer can choose between: *i*) “weak equity” among all generations (at the cost of possibly large inequalities among proximate ones) and *ii*) “strong equity” among few successive generations (at the cost of possibly large inequalities among distant ones).

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1. Introduction

This paper investigates the egalitarian way of distributing resources over time. The egalitarian alternative doesn't need to be selected for allocating resources, but it is a necessary reference point for evaluating inequality of allocations and inequality aversion of different theories of intergenerational justice.

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I consider a dynamic model of production, consumption, and investment. In each period, production transforms available capital goods into output. Output can be partly allocated for the consumption of the currently living generation and, for the remaining part, invested as capital goods for use in the following period. The egalitarian distribution of resources is identified by an (allocation) **rule**, i.e. a correspondence that selects a subset of feasible allocations for each intergenerational distribution problem.¹

A new impossibility result for intergenerational justice arises. Let fairness be interpreted by the following two requirements: *no-domination* requires that no generation is given less consumption than any other generation; *equal treatment of equals* requires that no generation finds its consumption less desirable than that assigned to any other generation with the same preferences. These equity conditions are together not compatible with Pareto efficiency. More strikingly, even if we were to accept considerably weaker versions of such axioms, in fact infinitely weaker, the impossibility result remains.

The main result is to show that overcoming such tension is possible and determines a new ethical trade-off. The egalitarian planner has to make a choice: on the one hand, some allocations satisfy strong equity conditions among proximate generations, but allow for large inequalities among distant generations (*long-term inequality*); on the other hand, some allocations satisfy sufficiently weak equity conditions among all generations, but allow for some inequalities among proximate generations (*short-term inequality*). I name this ethical dilemma the *long-term/short-term inequality trade-off*.

Along the lines of such ethical choice, two families of rules arise: the “time independent rules” and the “sequential rules”. Time independent rules are rules that treat each generation independently of the time they live in. Belonging to this family, an adapted version of the “budget constrained Pareto optimal” method, introduced by Moulin [9], and the “egalitarian equivalent” solution, by Pazner and Schmeidler [12]. The first rule guarantees that no generation is given less than any other generation (*no-domination*), but cannot ensure that each generation finds its consumption bundle at least as desirable as an (arbitrarily small) fraction of what is assigned to any other generation with the same preferences. The second rule guarantees that generations with the same preferences are treated alike (*equal treatment of equals*), but cannot ensure that each generation be given more than an (arbitrarily small) fraction of what is given to any other generation.

Sequential rules select allocations that satisfy both fairness requirement, i.e. *no-domination* and *equal treatment of equals*, among *pairs* of successive generations. Equitable distribution of resources among proximate generations comes, however, at the cost of long-term inequalities: equity cannot be guaranteed among more distant generations.

1.1. Related literature

The axiomatic literature on intergenerational equity has its roots in the seminal contributions of Koopmans [8] and Diamond [3]. Diamond, in particular, establishes a key negative result: there is no continuous ordering that is Pareto efficient and treats all generations equally. The egalitarian concern is interpreted as “finite anonymity”; it requires the ranking to be invariant

¹ Differently from the majority of contributions on intergenerational equity, this approach belongs to the literature on fair allocation theory. In this setting, the social choice is described by a rule and the appeal of a rule is judged by the social relevance of the axioms it satisfies. For a survey on fair allocation theory, see Thomson [15]. I discuss how the present contribution relates to the literature in the next subsection.

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