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On the Relative Deservingness of Capital and Labor

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We study whether different factor inputs, capital and labor, are perceived as differentially deserving of their returns to production and the impact of such perceptions on support for redistributive policies. We develop an experimental paradigm to measure fundamental perceptions of distinct inputs' deservingness, holding constant many factors that may justify differentially rewarding inputs in more natural environments. In representative samples of the U.S. and the Swiss populations, participants decide how to allocate production rewards between providers of work effort and financial investment. We find a tendency to perceive work as more deserving than investment, but also substantial individual heterogeneity. Behaviorally measured deservingness perceptions predict support for policies that differentially tax capital and labor and, in Switzerland, voting in a national referendum on capital taxation. We show that these relationships are independent of other fairness perceptions and economic and social considerations. Our work highlights the significance of notions of deservingness in shaping policy support.

Keywords: deservingness, fairness, redistribution, capital gains

JEL Codes: D33, D72, H23

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“The fairness of taxing more lightly incomes from wages, salaries and professional services than the incomes from business or from investments is beyond question.”

Andrew Mellon (1924, pages 56-57)

1. Introduction

Perceptions of deservingness are an important determinant of how individuals evaluate income distributions (e.g., Sen, 1999; Konow, 2003; Alesina & Angeletos, 2005; Fong, 2007; Mankiw, 2010). A growing experimental literature investigates what people perceive to be fair distributions of income between individuals engaged in production. Such studies typically involve a single productive activity, most often an effortful task, and explore how individuals’ productivity and random output shocks influence perceptions of deservingness (e.g., Konow, 2000; Cappelen et al., 2007, 2013; Fischbacher et al., 2017; Almås et al., 2020; Andre, 2024). Although focusing on a single dimension of productive input facilitates direct comparisons between individuals’ efforts and their output, production in real-world contexts typically involves distinct factor inputs—such as capital, labor, innovation, and management. Little is known about how people perceive the deservingness of distinct productive factors and how these perceptions influence attitudes toward redistribution.

We address this gap by investigating whether different production inputs are perceived as differentially deserving of the rewards they jointly produce and how such perceptions affect attitudes and voting behavior toward real-world policies that distribute income between distinct input providers. We focus on the case of capital and labor inputs, for which the allocation of production rewards has long been of interest to economists.¹ More recently, globally rising capital shares have renewed attention on this topic (Karabarbounis and Neiman, 2014; Autor et al., 2020; Barkai, 2020; Koh et al., 2020; Kehrig and Vincent, 2021) and accounts of low capital income tax rates paid by the wealthy have spurred debate regarding what constitute fair distributions of the returns from investing versus income from work (Eisinger et al., 2021; Tankersley, 2021).²

¹ This topic featured prominently in both Adam Smith’s *Wealth of Nations* (1776) and Karl Marx’s *Capital* (1867). Furthermore, David Ricardo (1817, Preface) referred to regulating the distribution of wealth between the providers of capital and labor as “the principal problem in Political Economy.”

² Relatedly, Piketty and Saez (2014) argue that capital shares are a primary source of persistent inequality and that rising capital shares and highly concentrated capital ownership can drive increases in inequality.

Economists have long recognized that capital and labor returns are often perceived as differentially deserving and that such perceptions may play a role in tax policy. As noted by Atkinson (2009), for example, “people refer to wages, salaries, and self-employment income as ‘*earned*’ income, and to profits and rent as ‘*unearned*’ income” (p. 13, emphasis added). Historically, such differential perceptions of the two inputs’ deservingness shaped economists’ and policymakers’ views of fair taxation and the design of tax policy (Mill, 1884; Seligman, 1921; Kornhauser, 1994; Daunton, 2002; Thorndike, 2007; Slemrod, 2007; Sheffrin, 2017).³ However, empirical evidence of these perceptions, their causes, and their role in shaping support for redistribution remains absent.⁴

As a first empirical indication of views about the relative deservingness of capital and labor income, Figure 1 shows that most respondents in a representative sample of U.S. adults viewed labor income as more “deserved” or “earned” than investment income, although many considered both inputs equally deserving. Importantly, it is unclear what drives these perceptions and whether these responses reflect fundamental fairness views or other perceived differences between capital and labor inputs, such as productivity differences or beliefs about the deservingness of the types of people who earn capital and labor income.

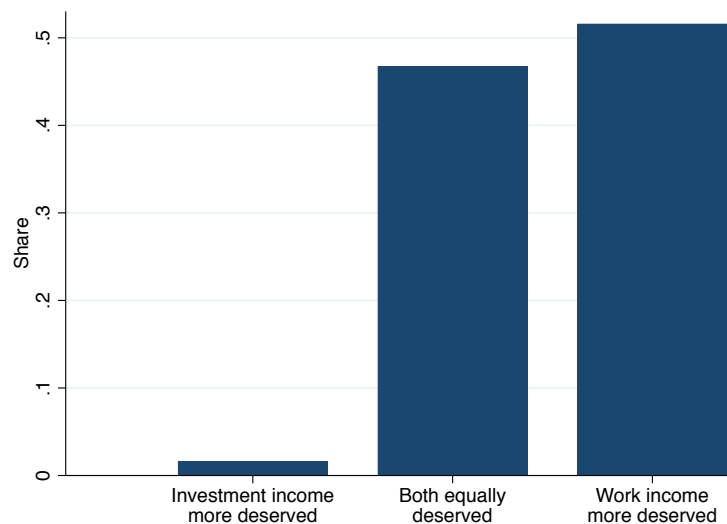
We introduce an experimental paradigm to study whether income from work and income from investing are perceived as fundamentally differentially deserved, holding constant many orthogonal real-world factors that may influence attitudes toward differentially rewarding the providers of capital and labor inputs. The design also lets us systematically vary some of these factors, providing causal evidence on their importance in shaping fairness perceptions. We also collect data on support for real-world policies that differentially reward capital and labor—including voting in a consequential national-level referendum—to investigate the role that deservingness

³ For example, Slemrod (2007), notes that “a century ago, most economists thought that [...] capital income should be taxed at a *higher* rate than labor income. Back then, the terms used were earned income (derived from personal exertion) and unearned income (derived without personal exertion) or [...] ‘industrious’ and ‘lazy’ incomes.” Slemrod argues that such reasoning led to preferential treatment of earned (labor) income in British income taxation in 1907 and sparked regular discussions about the introduction of similar policies in the United States.

⁴ Related academic research studies the optimal taxation of capital and labor income from a theoretical perspective (Scheuer and Wolitzky, 2016; Scheuer and Slemrod, 2021), though not focusing on perceptions of the distinct inputs’ deservingness.

perceptions play in shaping such policies. We complement these data with survey responses measuring the perceived consequences of differentially taxing capital and labor, allowing us to compare the role of deservingness perceptions with other factors in shaping support for real-world distributional policies.

Figure 1. Attitudes towards investment income in the U.S. population



Notes: The figure shows responses to the question, “This question asks you to compare \$1 in income from working with \$1 in income from investing (e.g., capital gains and dividends). Are both types of income equally “earned” or “deserved,” or is one of them more “earned” or “deserved?”” Sample: Representative sample of the U.S. population (N=558) recruited on Prolific in October 2021. See also Section 3.2.5.

In our experimental paradigm, an “investor” and a “worker” provide inputs to a joint project in the form of monetary investment and work effort, respectively. Our design makes the inputs highly comparable by equalizing the characteristics of their providers, the costs of their provision, and their productivity. A separate group of “spectators” allocate the project rewards between investors and workers across scenarios that vary, by treatment, the input amounts and their marginal products. Spectators’ decisions have real consequences for a worker-investor pair. We focus on the spectators’ allocation choices (as in Cappelen et al., 2013), to measure and characterize the views held by representative samples in two countries regarding the relative deservingness of capital and labor.

In a first pre-registered study of a representative sample of the U.S. population, we find that spectators tend to allocate a greater share to labor than to capital. On average, spectators allocate 4 percentage points more of the production reward to the

worker than to the investor ($p < 0.001$). However, there is substantial heterogeneity in fairness views; while most spectators (64%) allocate a larger share to the worker, a non-negligible minority (36%) perceives investment as more deserving than work. Thus, using a stylized setting involving simple choices regarding whether to reward someone who works versus someone who invests money—while holding everything else largely constant—we document a tendency, albeit not universal, to view labor as more deserving than capital.

Our data also allow for a precise characterization of the relevance of other factors for determining perceptions of deservingness between the two inputs. For example, we observe that allocated capital and labor shares are sensitive to the relative amounts of the inputs and to their marginal products, consistent with earlier studies involving a single input (Konow, 2000; Cappelen et al., 2013). Our analysis further reveals that perceptions of the relative deservingness of labor and capital are independent of fairness views concerning the relative amounts and productivities of factor inputs, producing a regular shift in fairness perceptions toward favoring labor over capital even when accounting for variation in these other considerations. Moreover, perceptions of the relative deservingness of labor and capital do not systematically correlate with the weight individuals place on input amounts or productivities, providing evidence that the deservingness perceptions we measure represent a distinct fairness concern.

Importantly, variation in the perceived deservingness of capital and labor inputs partly accounts for support for real-world policies that differentially reward these inputs. Our behavioral measure of the tendency to perceive labor as more deserving than capital predicts support for higher taxation of capital income relative to labor income, both in survey responses collected immediately after the experiment and in an ostensibly unrelated follow-up survey conducted weeks later with the same population. Perceptions of the deservingness of distinct inputs thus appear to matter in shaping support for redistributive policies that treat the providers of such inputs differently.⁵

⁵ Importantly, perceptions of deservingness do not predict support for policies that tax income irrespective of its source, such as the taxation of millionaires, providing further evidence that our measure captures views specific to the capital-labor distinction and not broader beliefs about income redistribution.

Our second pre-registered study replicates and extends the above findings in the context of a Swiss referendum on increasing taxes on capital income. Using our experimental paradigm to study a representative sample of Swiss adults, we find that 70% of spectators view work as more deserving than capital, a statistically significantly larger share of spectators than those who allocate greater rewards to the investor ($p < 0.001$). On average, spectators give 11.2 percentage points more to the worker ($p < 0.001$). As in our first study, we find that those who allocate more to labor state greater support for taxing capital income at a higher rate than income from work.

The timing of our study in Switzerland allows us to study how our behavioral measure of relative deservingness perceptions correlates with support for a real policy initiative—a nationwide referendum on taxing capital income above a threshold at 1.5 times the rate of labor income. We find that spectators who allocate more to the worker in our experiment also report greater support for the initiative, donate more to the committee supporting the initiative, and are more likely to report having voted in favor of the initiative in an ostensibly unrelated follow-up survey. When matching our experimental data to Swiss administrative data on regional voting outcomes, we find that regions in which individuals allocated larger shares to workers in our experiment recorded higher approval rates in the actual referendum.

We also conducted an additional survey in Switzerland in which we elicited respondents' beliefs about several potentially important factors related to the taxation of capital and labor. These include perceptions of how variation in such taxes would personally influence the respondent, how they would affect macroeconomic conditions, and the characteristics of those who earn their income from working versus investing. We find, first, that respondents perceive substantial differences between capital and labor as inputs into production, in terms of the providers of these inputs (e.g., honesty), characteristics of the inputs (e.g., risk and productivity), and the personal and societal consequences of taxing them. Second, our measure of the perceived deservingness of capital and labor is not predicted by variation in these factors, indicating that our design succeeded in eliminating the importance of these orthogonal factors. Third, these perceptions predict how respondents answer survey questions about the deservingness of labor and capital (like those reported in Figure 1), illustrating that such survey items capture a broad range of perceptions related to capital and labor, rather than only

fundamental views about relative deservingness.⁶ Finally, support for the initiative proposing higher capital taxation is determined both by perceptions of the inherent deservingness of capital and labor and by beliefs about variation in these other factors. These findings help reconcile why the referendum ultimately failed despite most Swiss adults perceiving labor as more deserving than capital, as beliefs about other factors also play a role in determining support for the proposed policy.

Overall, our findings suggest that income from two distinct inputs into production—labor and capital—are generally perceived as fundamentally distinct in terms of the degrees to which they yield “earned” entitlements to the wealth they help produce, and that such perceptions about the deservingness of capital and labor play a role in shaping policy preferences. The perception that capital income is not “work”—and is therefore less deserving of being rewarded than labor income—seems to be a stable individually held notion of fairness, distinct from other factors affecting perceptions of deservingness. Moreover, it plays an important role in determining attitudes toward different forms of taxation, independently of beliefs about other consequences that may result from differentially taxing capital and labor income.

This paper contributes to a growing economic literature on how perceptions of distributive justice influence support for varying wealth allocations, extending experimental studies beyond settings with only one input (Konow, 2000; Cappelen et al., 2007, 2013; Fischbacher et al., 2017). We study deservingness perceptions in situations where production aggregates fundamentally distinct factor inputs, finding that they are perceived as differentially deserving. We also document that such perceptions influence broader beliefs of what constitute “fair” allocations of production rewards in societies, even when holding constant other considerations related to the provision and productivity of distinct factor inputs. The deservingness considerations we study differ fundamentally from those studied in prior literature. Whereas earlier work focused on how unequal contributions can justify unequal income distributions, our findings demonstrate that individuals can view providers of distinct inputs as

⁶ This finding relates to recent work examining the validity of self-reported survey items as proxies for behavioral measures, finding that such items often correlate with constructs they are not intended to capture (Chapman et al., 2025).

differently deserving even when their productive contributions are equivalent from a meritocratic perspective based on productivity.

We also contribute to the literature on the determinants of preferences for redistribution (Alesina and Giuliano, 2011). Prior work has shown that varying forms of social preferences relate to support for redistribution (Fisman et al., 2017; Almås et al., 2020; Kerschbamer and Müller, 2020; Stantcheva, 2021; Fehr et al., 2024). We contribute to this literature by showing that individuals' heterogeneous perceptions of the deservingness of different inputs measured in a stylized setting predict support for policies that play a critical role in redistributing income. In related work, Fisman et al. (2020) use hypothetical choice scenarios to study individuals' preferences over jointly taxing income and wealth. However, they do not study basic perceptions of the deservingness of different factor inputs as a basis for policy preferences. Moreover, our analysis also provides insights into how considerations of fairness and deservingness influence support for concrete policies affecting the distribution of wealth in a society, along with perceptions of the likely consequences of such policies.

The rest of our paper proceeds as follows. In the next section, we describe a simple theoretical framework that we use to study deservingness perceptions. Sections 3 and 4 present the designs and results of our two studies in the U.S. and in Switzerland. Section 5 reports results on the role of perceptions about labor and capital, beyond deservingness views. Section 6 concludes.

2. Theoretical framework

We study situations in which two individuals, a *worker* and an *investor*, contribute to a joint project. The worker and investor provide factor inputs, $L \in \mathbb{R}_{\geq 0}$ and $K \in \mathbb{R}_{\geq 0}$, respectively, whose provision incurs costs, $c_L(L)$ and $c_K(K)$, that are increasing in the amounts provided. We consider cases in which it is possible to directly compare the amounts of inputs provided across the two factors in terms of their provision costs. This is the case, for example, when for any amount of L , there exists a comparable amount of K such that $c_L(L) = c_K(K)$. For simplicity, we denote such a mapping as referring to equal *amounts* of L and K .⁷

⁷ This implies that, for all $x \in \mathbb{R}_{\geq 0}$, $c_L(x) = c_K(x)$. We design our studies to ensure that this condition is met, as discussed in Section 3.1.3.

The two inputs jointly produce output, Y . We focus on the standard case of a Cobb-Douglas production function: $Y = AK^\alpha L^{1-\alpha}$ with $A > 0$ and $\alpha \in (0,1)$, where α captures the relative productivity of capital and labor in production. This production function makes the inputs also comparable in terms of productivity; for example, when $\alpha = 0.5$, equal amounts of L and K have the same marginal productivity.

A third person uninvolved in production, the *spectator*, then allocates Y between the investor and the worker, giving a share $s(L, K, \alpha)$ to the worker and a share $1 - s(L, K, \alpha)$ to the investor. Through revealed preference, we interpret this allocation as the spectator's fairness view (Konow, 2000). The set of possible fairness views, $\mathcal{S}$, includes all functions from $\mathbb{R}_{\geq 0} \times \mathbb{R}_{\geq 0} \times (0,1)$ to $[0,1]$. In the following, we characterize different fairness views.

Our primary focus lies on views about the relative deservingness of different types of factor inputs. We test whether spectators treat the two inputs symmetrically—that is, whether workers and investors are rewarded equally when they provide the same relative amounts of the two inputs and when they have the same productivity. We call this property of fairness views *Equal Deservingness*:

Definition: A fairness view $s \in \mathcal{S}$ satisfies **Equal Deservingness** if and only if $s(X, Z, \alpha) = 1 - s(Z, X, 1 - \alpha)$ for all X, Z in $\mathbb{R}_{\geq 0}$ and all α in $(0,1)$.

A fairness view that satisfies Equal Deservingness gives 50% to both the worker and the investor when they provide the same input level and have the same productivity ($s(X, X, 0.5) = 1 - s(X, X, 0.5) = 0.5$). More generally, Equal Deservingness implies that, if the worker provides X and has productivity $\alpha \in (0,1)$, and the investor provides Z , the worker should receive the same share the investor would receive if she had instead provided X and had productivity α , and the worker had provided Z .

Next, suppose that a spectator makes allocation decisions across a set of parameter combinations, (L, K, α) . Let the set of parameter combinations, denoted by $\mathcal{A}$, be defined as *symmetric* whenever $(X, Z, \alpha) \in \mathcal{A}$ implies that $(Z, X, 1 - \alpha) \in \mathcal{A}$. Then, Equal Deservingness implies that, on average across all parameter combinations in $\mathcal{A}$, the spectator divides the project output evenly:

Observation 1: If a fairness view $s \in \mathcal{S}$ satisfies Equal Deservingness, and the spectator faces a symmetric set of parameter combinations, $\mathcal{A}$, then, on average, the spectator will allocate 50% of the project output to the worker:

$$\frac{1}{|\mathcal{A}|} \sum_{(L,K,\alpha) \in \mathcal{A}} s(L, K, \alpha) = 0.5.$$

Proof: First, note that Equal Deservingness implies that $\sum_{(X,Z,\alpha) \in \mathcal{A}} s(X, Z, \alpha) = \sum_{(X,Z,\alpha) \in \mathcal{A}} 1 - s(Z, X, 1 - \alpha)$. To finish the proof, note that the symmetry of $\mathcal{A}$ implies that $\sum_{(X,Z,\alpha) \in \mathcal{A}} s(Z, X, 1 - \alpha) = \sum_{(X,Z,\alpha) \in \mathcal{A}} s(X, Z, \alpha)$.

In our empirical analysis of spectator's allocations, we analyze both individual paired decisions of the form, $s(X, Z, \alpha)$, $1 - s(Z, X, 1 - \alpha)$, as well as aggregated decisions across choice sets satisfying the above symmetry condition. We test the null hypothesis of Equal Deservingness against the alternative, corresponding to a fairness view that treats one input as relatively more deserving.

Next, we consider how the above notions of fairness relate to other concepts relevant for the types of distributional choices that we study. The economic literature on distributive justice often finds that people have egalitarian, meritocratic, and libertarian fairness views (e.g., Cappelen et al., 2007). The following definition formally defines these fairness views in our framework:

Definition: A fairness view $s \in \mathcal{S}$ is

- i. **Egalitarian** if $s(L, K, \alpha) = 0.5$,
- ii. **Meritocratic** if $s(L, K, \alpha) = \frac{L}{L+K}$,
- iii. **Market libertarian** if $s(L, K, \alpha) = 1 - \alpha$

for all $L, K \in \mathbb{R}_{\geq 0}$ and all $\alpha \in (0,1)$.

Spectators with egalitarian views always allocate 50% to the worker (and the investor), independently of the amounts and productivities of the factor inputs. Those with meritocratic views allocate Y according to the relative amounts of the provided input factors. Prior work operationalizes libertarian fairness as the allocation that gives everyone what he/she produces (e.g., Cappelen et al., 2007; Almås et al., 2020), which is not well defined in settings with a multiplicative production function. Instead, we introduce what we call the market libertarian fairness view, which builds on the

endorsement of free-market economies by libertarianism (e.g., Von Mises, 1949; Hayek, 1960; Friedman, 1962). According to the market libertarian fairness view, workers and investors are compensated according to the marginal products of their respective inputs, which corresponds to the compensation they would receive in competitive market economies. For the Cobb-Douglas production function, this equates to a share of $1 - \alpha$ for the worker. Note that the egalitarian, meritocratic and market libertarian views all satisfy Equal Deservingness.

3. Deservingness views and policy attitudes in the U.S.

3.1 Design

Our experimental design closely follows the theoretical framework. We pre-registered the data collection and analyses in the OSF Registry (<https://osf.io/3gskz/>).⁸

We recruited 2,409 participants in two samples in June 2021. One sample consists of 1,606 participants recruited on Amazon Mechanical Turk with help of the survey provider mTurkData. Participants in this sample play the roles of the *workers* and *investors*, who provide labor and capital to joint projects and thereby determine the projects' output. The second sample of 803 participants, the *spectators*, is broadly representative (in terms of age, gender and ethnicity) of the U.S. population, recruited using the survey company Prolific. Appendix Tables A1 and A2 report the list and descriptions of all elicited variables and the sample statistics, respectively. Each spectator is matched with one worker-investor pair and allocates the project output between these two participants. Our focus is on the spectators' allocation choices.

In the following, we first explain the workers' and investors' roles and then those of the spectators. We then discuss how our design holds constant important factors that may drive perceptions of the relative deservingness of capital and labor in more natural environments.

3.1.1 Workers and investors

The workers' and investors' portion of the experiment consists of two parts. The purpose of the first part is to endow all participants with an initial wealth level that

⁸ Instructions and materials are available on OSF: <https://osf.io/gfrvq/files/b2eu5>. We programmed the experiment in oTree (Chen, Schonger and Wickens, 2016).

investors can then invest in the second part. Importantly, it also helps to establish comparability between capital and labor inputs by equalizing the unit costs of providing these inputs.

In the first part, before they are informed of their roles as workers and investors, all participants work on a task for 6 minutes and earn \$1.20.⁹ The task consists of positioning on-screen sliders at value position 50 (Gill and Prowse, 2012). During the 6 minutes, participants see a new slider every ten seconds, and they must correctly position each slider within ten seconds. If they fall behind, they can catch up by positioning the remaining sliders in less than ten seconds. We also give participants some extra time at the end to finish. This task is designed so that almost all participants can complete it within the allocated time while providing a steady level of effort. If participants do not complete the task, they are not allowed to proceed with the study. The compensation for this part (\$0.20 per minute) corresponds to the standard payment rate offered to participants by the survey provider at the time of the study.

In the second part, participants are matched in groups of two, a worker and an investor. Each of them decides how much to contribute to a joint project. The workers and investors make their choices simultaneously.

The worker contributes by working, which consists of the same task as in the first part, that is, moving sliders to position 50. The worker selects 0, 1, 2 or 3 “work units,” L . For each unit contributed, the worker works for an additional two minutes on the slider task.¹⁰

The investor contributes by investing money. The investor selects 0, 1, 2 or 3 “investment units,” K . For each unit contributed, the investor invests \$0.4 of his/her earnings from the first part, which is then subtracted from the investor’s payment for the first part. Note that for each unit contributed by the investor, this corresponds to two minutes of work that the investor completed in the first part. The investor is finished

⁹ At the beginning of the experiment, all participants are informed that the study has two parts. They receive instructions for the second part only at the beginning of this part.

¹⁰ Note that the first part screens out participants who are unable to perform the slider task. Therefore, workers and investors alike who proceed to the second part of the experiment have demonstrated the ability to complete the task on time. Indeed, almost all workers (99.5%) completed the work they committed to perform in Part 2.

with the second part after making his/her investment decision; that is, the investor does not have to wait for the worker to implement his/her choice.¹¹

Based on the amount of work and investment provided, the project generates revenue (in dollars) according to the production function, $Y(K, L, \alpha) = 2.5 K^\alpha L^{1-\alpha}$, with α randomly drawn to be either 0.25, 0.5 or 0.75 with equal probability. Both the worker and the investor know α when they make their input choices. We explain the production function in detail to participants and provide tables that show the project revenue for all possible values of L , K and α . Moreover, workers and investors must correctly calculate the output, Y , for different combinations of L , K and α , before making any decisions. We announce to workers and investors that a third participant, the spectator, will split the project output between them, knowing L , K and α .

Finally, we elicit participants' sociodemographic characteristics and beliefs and fairness views about the allocation of project revenue, Y . The portion of the study completed by workers and investors takes about 20 minutes. Participants receive a fixed payment of \$2 plus a bonus payment based on the outcome of the production task; the realized average bonus payment was \$3.27.

3.1.2 Spectators

We recruit a second sample that is broadly representative—in terms of age, gender and ethnicity—of the U.S. population to play the role of spectators. Spectators first receive detailed instructions about the roles of workers and investors, including about the specific tasks performed by these participants. Next, each spectator is matched with one worker-investor pair and allocates the project output, Y , between the worker and investor, conditional on L , K and α .¹²

We use the strategy method to elicit spectators' choices. That is, spectators choose an allocation for each possible value of L , K and α that yield $Y(K, L, \alpha) > 0$.¹³

¹¹ After completing their investment decisions, investors are free to take on other tasks available on MTurk, where the standard compensation rate of \$0.20 per minute matches what workers receive for their continued participation.

¹² Spectators make their allocation choice by positioning a marker on a slider that goes from 0 until Y . Appendix Figure A1 illustrates the interface. One participant receives the share on one side of the positioned marker while the other participant receives the share on the other side. We randomize whether the worker or the investor receives the part on the left of the marker.

¹³ We measured spectators' beliefs about workers and investors input choices in a separate sample. Spectators believe that a substantial fraction of workers and investors choose each possible input choice.

Hence, each spectator makes a total of 27 allocation choices. We randomize the order in which spectators face the different allocation choices. The choice for L, K, α that corresponds to the actual outcome in the matched pair is then implemented. We will refer to the share that a spectator allocates to the worker in the allocation choice for L, K, α as $s_i(L, K, \alpha)$. Our pre-registered primary measure of spectators' perceptions of the relative deservingness of labor and capital is the average shares spectators give to the workers, or the *deservingness of labor*, d_i :

$$d_i = \frac{1}{27} \sum_{L \in \{1,2,3\}} \sum_{K \in \{1,2,3\}} \sum_{\alpha \in \{0.25, 0.5, 0.75\}} s_i(L, K, \alpha).$$

Note that spectators make allocation decisions across a symmetric set of parameter combinations. Hence, Observation 1 applies: if spectators adhere to the principle of Equal Deservingness, then d_i should equal 0.5.

Next, spectators complete a survey. Most importantly, we elicit their policy preferences. As specified in our pre-analysis plan, our primary measure is the attitude towards capital income taxation (*Attitude capital income tax*) which captures participants' views on how investment income (capital gains and dividends) should be taxed relative to labor income. This variable ranges from 0 to 1 in steps of 0.25, 0 indicating "At a much lower rate than income from work" and 1 "At a much higher rate than income from work." If fundamental views about relative deservingness of capital and labor influence policy attitudes, we would expect our deservingness measure, d_i , to be positively correlated with support for higher capital income taxation. We also elicited two additional policy preferences, which we pre-registered as secondary measures. First, we measure attitudes toward raising the federal minimum wage to \$15.00 an hour (*Attitude minimum wage*), ranging from 0 ("Strongly oppose") to 1 ("Strongly favor") in steps of 1/3. We pre-registered that we expected a positive correlation between d_i and support for the minimum wage, based on minimum wages being a relevant policy for rewarding those who provide labor. Second, we measure attitudes toward taxing millionaires (*Attitude income tax*), asking whether income taxes

Hence, spectators believe that each of their 27 choices could impact the worker and the investor. Moreover, the spectators believe that investors and workers make similar input choices. We discuss spectator beliefs in detail in Appendix E.

on millionaires should be increased, remain the same, or be decreased. Unlike the other two measures, this measure captures broader redistribution preferences and does not directly correspond to rewarding those who provide capital or labor. Hence, we pre-registered that we do not expect a relationship between this variable and d_i .¹⁴

We also elicit spectators' socio-economic characteristics, political positions, and self-reported measures of risk, time and social preferences (Falk et al., 2018). Importantly, we also measure spectators' beliefs about effort costs for doing the slider task to verify they perceive the cost equivalence between unit amounts of capital and labor. Descriptions of all control variables and the corresponding summary statistics are in Appendix Tables A1 and A2, respectively. Spectators receive a fixed payment of \$7 for approximately 30 minutes of study completion time.

3.1.3 Discussion of the design

Responses to simple survey questions about the deservingness of labor and capital—such as those presented in Figure 1—as well as preferences over real-world policies that differentially reward labor and capital may reflect not only views about the fundamental deservingness of capital and labor, *per se*, but also consideration of other factors. A key feature of our experimental design is that it eliminates many such factors that might vary with the provision of and returns to labor and capital inputs in more natural environments:

- *Costs of inputs*: There may often be different costs associated with providing distinct factor inputs. Our design equates these costs by using the same tasks for both capital acquisition and labor provision. Each unit of capital corresponds to two minutes of work the investor performed in Part 1, and each unit of labor corresponds to two minutes of work in Part 2. This approach is valid under the assumption that the first six minutes of work in the first part of the experiment, in which the investor earns her wealth, do not require less effort than doing the additional work in the second part. In Appendix D, we provide supporting evidence for this assumption, relying on reservation wages that we elicited in a separate sample. Moreover, most

¹⁴ The variable *Attitude capital income tax* is based on a question from the CBS/NYT National Poll (2012). The variable *Attitude minimum wage* is taken from Pew Research (2019). The variable *Attitude income tax* is taken from Kuziemko, et al. (2015).

spectators (86% in the U.S. study and 75% in the Swiss study) believe that effort costs are linear, indicating they perceive this cost equivalence.¹⁵

- *Differences in personal characteristics*: Real-world workers and investors may differ systematically in their personal characteristics, including wealth and perceived scrupulousness, which could affect people's attitudes toward policies that impact these groups. Our design randomly allocates participants to the roles of worker and investor, thereby holding personal characteristics constant.
- *Sources of wealth*: Wealth is usually accumulated through a combination of luck (e.g., inheritance) and merit (e.g., savings from past work), which may influence the degree to which people perceive it or the returns it produces as deserved. In our experimental design, capital is only earned through a form of merit that is identical to the provision of labor.
- *Productivity of input factors*: Investment and work typically differ in their marginal productivity. Our design holds marginal productivity constant between the two input factors for $\alpha = 0.5$. Moreover, our design provides causal evidence on how perceptions of deservingness react to variation in productivity.
- *Risk*: Providing different kinds of inputs may involve differential risk—for example, wages may be less variable than returns on investment, meaning that investors may be rewarded for taking on greater risk. In our design, the primary source of risk is the strategic uncertainty regarding the input provided by the other party. As we show in the Results section, there are no substantial differences in the number of factor units the workers and the investors provide. Moreover, in Appendix E we show that the spectators believe that the distributions of inputs provided by investors and workers are similar.
- *Economic consequences*: People might not support high capital income taxation because of concerns about the resulting economic consequences, including reduced savings rates, capital flight, and slower economic growth. Our experimental design eliminates such consequences.

¹⁵ When we restrict our sample to spectators who believe costs are linear, we find qualitatively identical results (see Appendix D).

Our design eliminates the above distinctions between the two factor inputs and those who provide them, leaving only the fact that one party provides wealth as an input and the other labor. As part of the Swiss study, we further measure spectators' perceptions of these factors and show that (i) they matter when respondents answer survey questions about the deservingness of labor and capital (as in Figure 1) and express preferences over real-world policies, but (ii) our design successfully eliminates the influence of these factors in eliciting perceived deservingness of capital and labor (see Section 5).

As our study aims to elicit preferences about the relative deservingness of investment and work, in the instructions we refer to the worker as “the individual who works” and to the investor as “the individual who invests.” We do so to make the situation and the distinction between the two input providers clear to spectators.

3.2 Results

Investors and workers regularly chose all four possible choice options—0, 1, 2 or 3 units—though the modal input choice for all values of α and both input factors was 3 units (see Appendix Table C1). On average, workers provided 2.22 units of labor and investors 2.17 units of investment. The difference of 0.05 units is not statistically significantly different from zero (t-test, $t_{1604} = 0.99, p = 0.32$). Investors and workers also generally expected the spectators to allocate shares evenly. Appendix C provides detailed results on worker and investor behavior and beliefs.

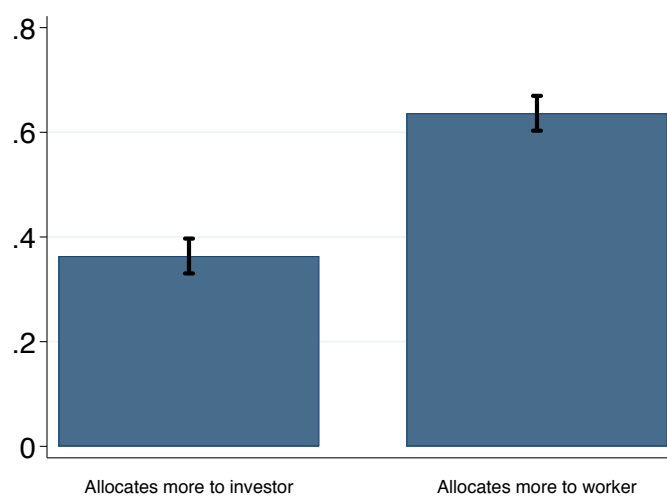
Our analysis focuses on the spectators' allocation choices. We construct measures and report test results as specified in our pre-analysis plan. We first examine the perceptions of the relative deservingness of labor and capital, i.e., whether spectators favor one input factor over the other one. As a null hypothesis, we use the principle of Equal Deservingness of factor inputs (see Section 2). We also investigate whether other fairness views—in particular, egalitarian, meritocratic and market libertarian standards—can further explain the spectators' fairness perceptions. Second, we study heterogeneity in views concerning the deservingness of different input factors and investigate how such heterogeneity maps into different policy preferences.

3.2.1 Perceptions of relative deservingness

Spectators tend to view work as more deserving than investment. Figure 2 shows that 64% of spectators allocate more to the worker ($d_i > 0.5$), on average, which is

statistically significantly larger than the share of spectators that allocate more to the investor ($t_{802} = 8.03, p < 0.001$). On average, workers receive 52% of the output—2 percentage points above an equal split—resulting in a 4 percentage-point average gap between worker and investor shares ($t_{802} = 5.43, p < 0.001$).¹⁶ Hence, our data reject the null hypothesis of Equal Deservingness, instead documenting a tendency to reward labor more than capital.

Figure 2. Test of an equal tendency to reward capital and labor (U.S.)



Notes: This figure plots the share of spectators that allocate more to the investor ($d_i < 0.5$) and the share of spectators that allocate more to the worker ($d_i > 0.5$) when aggregating across the 27 choices. None of the spectators allocated the same amount to the worker and the investor ($d_i = 0.5$) across all 27 choices. $N = 803$.

In the above analysis, we construct the outcome measure by averaging across an individual spectator's 27 allocation choices, consistent with Observation 1 from our theoretical analysis in Section 2. We next consider specific allocation choices in more detail; this allows us to further test Equal Deservingness and to characterize perceptions of deservingness between the two inputs. The data allow for 15 additional unique tests

¹⁶ We pre-registered that, as a secondary analysis, we would study the interaction between fairness views and socio-economic status and political position. Socio-economic status and political position do not predict fairness views (see Appendix Table A3).

of the principle of Equal Deservingness, corresponding to the 15 pairs of symmetric allocation scenarios represented by the following:¹⁷

- i. $s(X, X, 0.5) = 1 - s(X, X, 0.5) = 0.5$ for all X in $\{1, 2, 3\}$ (3 cases)
- ii. $s(X, Z, 0.5) = 1 - s(Z, X, 0.5)$ for all (X, Z) in $\{(1, 2), (1, 3), (2, 3)\}$ (3 cases)
- iii. $s(X, Z, 0.25) = 1 - s(Z, X, 0.75)$ for all X, Z in $\{1, 2, 3\}$ (9 cases).

If spectators allocate larger shares to the worker (left hand side of the above equations) than to the investor (right hand side), they violate Equal Deservingness by viewing work as more deserving than capital.

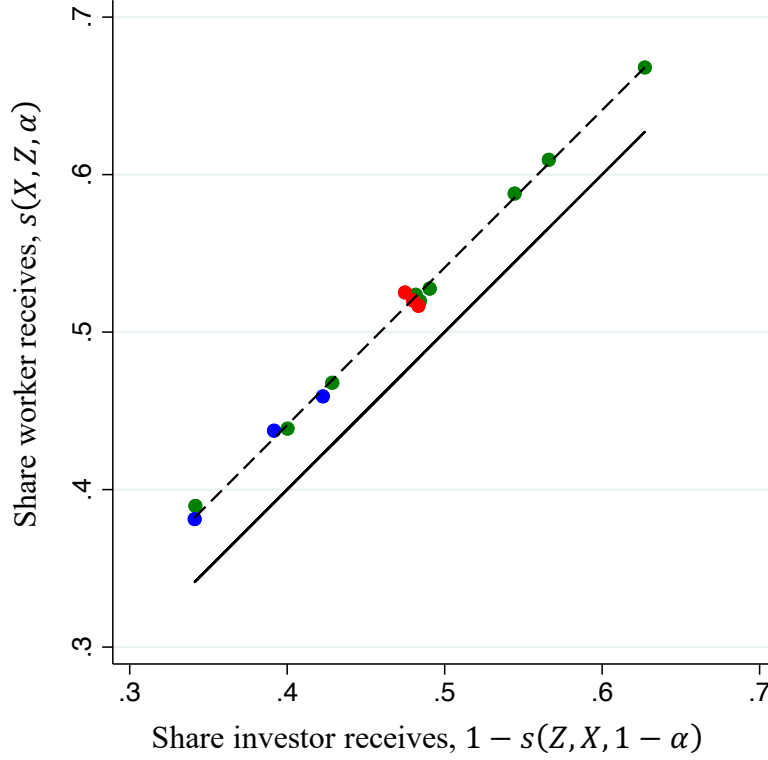
Figure 3 reveals a striking regularity in the extent to which spectators allocate more to workers than to investors. All points are very close to a dashed line that is parallel to the 45-degree line. This pattern suggests that the revealed fairness views can be described well by the following functional form:

$$s(L, K, \alpha) = g(L, K, \alpha) + (d - 0.5),$$

where the function $g(\cdot)$ satisfies Equal Deservingness and $(d - 0.5)$, when positive, measures a general tendency to allocate a greater share to labor. From the analysis in the previous section, we know that, on average, the workers receive 52% of the output, implying $d = 0.52$. This functional form (with $d = 0.52$) implies that all points in Figure 3 must lie on the dashed line. Indeed, we fail to reject the null hypotheses that each of the 15 points lies on the dashed line ($p \geq 0.27$ in all comparisons). This means that spectators treat labor and capital similarly when accounting for changes in the relative amounts and productivities of factor inputs, captured by $g(L, K, \alpha)$; but *independently* of these input- and productivity-based considerations, they allocate a fixed additional share of the total production, on average, $d - 0.5 = 0.02$, to labor. That is, views about the relative deservingness of labor and capital appear to be *additively separable* from fairness views regarding the relative amounts and productivities of factor inputs. Appendix Figure A3 shows that we also find evidence for such additively separable fairness views when we look at subgroups with different levels of d .

¹⁷ These 15 hypotheses jointly imply that $d_i = 0.5$, which we have tested above (following from Observation 1).

Figure 3. Fifteen tests of an equal tendency to reward capital and labor (U.S.)



Notes: This figure plots the shares allocated to the workers against the shares allocated to the investors when they provide the same relative amount of the respective inputs and have the same productivity. Red points correspond to equations i) ($X = Z$, $\alpha = 0.5$); blue points correspond to equations ii) ((X, Z) in $\{(1,2), (1,3), (2,3)\}$, $\alpha = 0.5$); green points correspond to equations iii) ((X, Z) in $\{1,2,3\}$, $\alpha = 0.25$). Equal Deservingness implies that all points must be on the solid (45-degree) line. If, instead, fairness views are characterized by $s(L, K, \alpha) = g(L, K, \alpha) + (d - 0.5)$, where the function $g(\cdot)$ satisfies Equal deservingness and $d = 0.52$, then all points must lie on the dashed line.

3.2.2 Egalitarian, meritocratic, and market libertarian fairness views

The previous section provides evidence that fairness views can be decomposed into two independent components: one that captures views on the relative deservingness of capital and labor, $d - 0.5$, and another component that satisfies Equal Deservingness and reflects spectators' sensitivity to the relative amounts of the inputs and their marginal products, $g(L, K, \alpha)$. In this section, we further characterize $g(L, K, \alpha)$. We study what role egalitarian, meritocratic and market libertarian views play in fairness perceptions. To do so, we model $g(L, K, \alpha)$ as the linear combination of these three fairness views:

$$s(L, K, \alpha) = (1 - \gamma - \delta)0.5 + \gamma \frac{L}{L+K} + \delta(1 - \alpha) + (d - 0.5),$$

where the first term reflects an egalitarian fairness view, the second term reflects a meritocratic view, and the third term corresponds to a market libertarian view, as defined in Section 2.

This functional form assumption for $g(L, K, \alpha)$ captures the data well; Appendix Figure A4 illustrates that the allocation choices are indeed linear in $\frac{L}{L+K}$. We identify the parameters γ , δ , and d with a linear regression model.¹⁸ Table 1 provides the results. We find that meritocratic and egalitarian fairness views play a major role in our setting; spectators put weights of 0.55 and 0.43 on these concerns, respectively. Spectators also give some consideration to the marginal productivity of input factors, consistent with a market libertarian perspective, with a weight of $\delta = 0.02$. Finally, we replicate the main finding from the previous section that spectators perceive labor inputs as more deserving than capital, allocating 4 percentage points ($= 2 * (d - 0.5)$) more to the worker, on average.¹⁹

Table 1. Egalitarian, meritocratic, and market libertarian fairness views (U.S.)

Parameter	Estimate
<i>Meritocratic view</i> ($= \gamma$)	0.549*** (0.015)
<i>Market libertarian view</i> ($= \delta$)	0.022*** (0.005)
<i>Egalitarian view</i> ($= 1 - \gamma - \delta$)	0.429*** (0.016)
<i>Deservingness of labor</i> $- 0.5$ ($= d - 0.5$)	0.020*** (0.004)
N	21'681
R ²	0.216

Notes: The table shows coefficient estimates from linear regressions of allocation choices on $\frac{L}{L+K}$ and $(1 - \alpha)$. The sample consists of 803 individuals that made 27 spectator choices each. Standard errors are clustered at the individual level. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

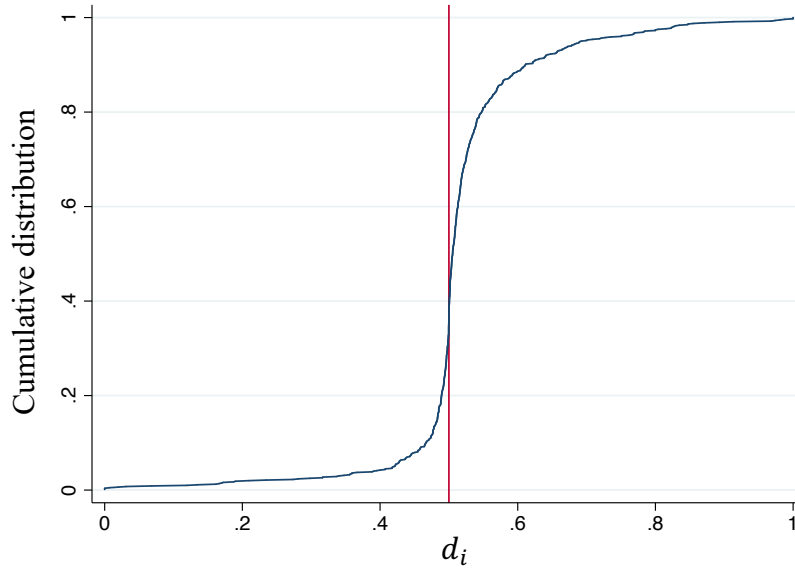
¹⁸ Note that $\frac{1}{27} \sum_L \sum_K \sum_\alpha g(L, K, \alpha)$ is 0.5 because $g(L, K, \alpha) = (1 - \gamma - \delta)0.5 + \gamma \frac{L}{L+K} + \delta(1 - \alpha)$ satisfies Equal Deservingness and spectators make allocation decisions across a symmetric set of parameter combinations (see Observation 1). Hence, d equates to $\frac{1}{27} \sum_L \sum_K \sum_\alpha s(L, K, \alpha)$, which corresponds to the definition that we provided earlier.

¹⁹ Although $d - 0.5 = 0.02$ might seem small in comparison to $\gamma = 0.55$ and $1 - \gamma - \delta = 0.43$, note that some combination of the weights for egalitarian, meritocratic and market libertarian views must sum to 1, while the tendency to favor capital or labor can be arbitrarily small.

3.2.3 Heterogeneity in fairness views

We also observe substantial heterogeneity in fairness views. Figure 4 shows the cumulative distribution function of d_i , the average share that each individual spectator allocates to the worker across all 27 choices. At the extremes of the distribution, for example, 10% of spectators allocate more than 61.1% of the project revenue to the worker while 10% of spectators allocate less than 46.7% to the worker.

Figure 4. Distribution of individual-level tendencies to reward labor (U.S.)



Notes: Figure shows the cumulative distribution of the average share the spectators give to the workers, $d_i = \frac{1}{27} \sum_{K \in \{1,2,3\}} \sum_{L \in \{1,2,3\}} \sum_{\alpha \in \{0.25,0.5,0.75\}} s_i(K, L, \alpha)$, where $s_i(K, L, \alpha)$ is the share spectator i allocates to the worker for K, L and α .

To identify egalitarian, meritocratic, and market libertarian fairness views at the individual level, we estimate γ and δ separately for each spectator. Appendix Figure A5 provides the distributions of the estimated parameters, γ_i , δ_i and $1 - \gamma_i - \delta_i$. We find substantial heterogeneity in the weights that participants put on the fairness views, with a general tendency to put substantial weight on both the meritocratic and the egalitarian fairness views. The perceived deservingness of labor, d_i , is neither statistically significantly correlated with γ_i ($t_{801} = -0.88, p = 0.380$), nor with δ_i ($t_{801} = 0.56, p = 0.574$), nor with $1 - \gamma_i - \delta_i$ ($t_{801} = 0.71, p = 0.476$). This result indicates that the share awarded to labor over capital is independent of the weight that a spectator puts on other fairness principles—equal splits (egalitarianism), input amounts (meritocracy), or marginal productivity (market libertarianism). In other

words, spectators who place more weight on any of these principles are no more or less likely than other spectators to perceive labor as more deserving than capital. This observation further suggests that judgments about the relative deservingness of inputs constitute a distinct fairness concern, separate from other principles that guide allocation decisions.

In the above analysis, we model allocation choices as linear combinations of the three fairness views. Alternatively, we can assign the fairness view to each spectator that explains her allocation choices best. We do so by selecting the fairness view, $s(L, K, \alpha)$, that minimizes the squared distance to the allocation choices. We present the results in Appendix I. Based on this procedure, we classify 39.5% of the spectators as egalitarians, 59.0% as meritocrats and 1.5% as market libertarians.²⁰ We again find that deservingness of labor, d_i , is neither statistically significantly different between meritocrats and market libertarians ($t_{484} = 0.63, p = 0.531$), between meritocrats and egalitarians ($t_{789} = 1.24, p = 0.214$), nor between market libertarians and egalitarians ($t_{329} = 0.13, p = 0.895$). Hence, views on the relative deservingness of labor do not exhibit a systematic relationship with fairness views regarding the relative amounts and productivities of factor inputs.

3.2.4 Fairness views and policy preferences

We next examine whether heterogeneity in views about the relative deservingness of capital and labor correlates with variation in support for public policies that differentially reward labor and capital.²¹ Figure 5 illustrates the relationship between the share allocated to the worker, d_i , and attitudes toward capital income taxation. We find that spectators who allocate a larger share to the worker are more supportive of higher capital income taxation.

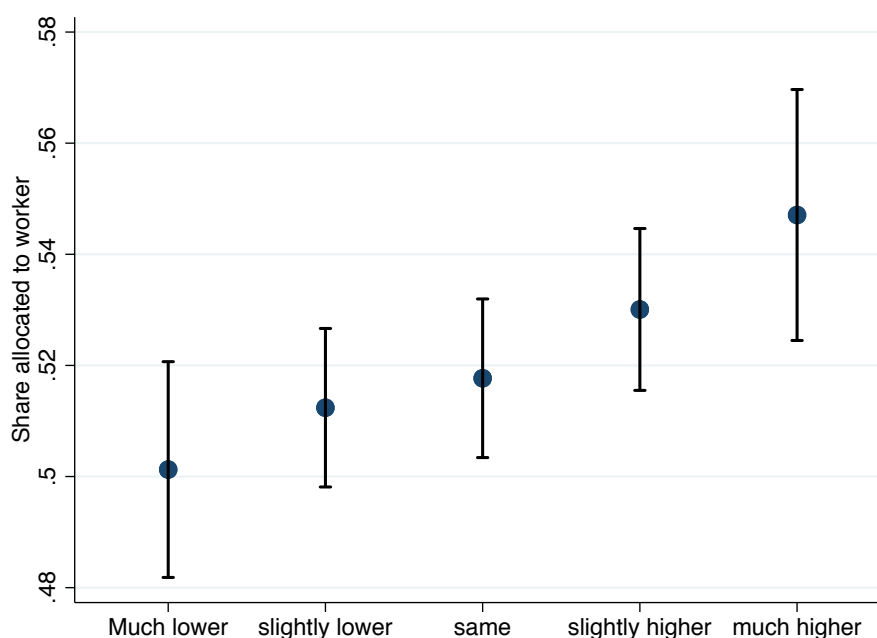
Our pre-registered main analysis regresses (OLS) *Attitude capital income tax* on *Deservingness of labor* (d_i), with both variables standardized. Table 2 reports the coefficient estimates; column (1) shows the pre-registered specification, which controls for age and gender. Spectators who perceive labor as more deserving than capital are

²⁰ The distribution of the three types is close to the shares from the analysis in Table 1, if we were to interpret those estimates as a mixture of “pure types” in the population.

²¹ Appendix Figure A6 gives the raw distributions of all elicited policy preferences.

more supportive of increasing the capital income tax—increasing d_i by one standard deviation is estimated to increase support for a higher capital income tax by 0.13 standard deviations. Specification (2) controls for the weights the individual spectators put on the meritocratic and market libertarian fairness views; we find weak evidence that meritocrats are less supportive of a higher capital income tax, but the introduction of these additional measures does not affect the relationship between d_i and support for taxing capital income. Specifications (3) to (5) progressively introduce broader controls—income and wealth, political orientation, additional sociodemographics, and time, risk, and social-preference measures—and the correlation between d_i and the policy preference remains positive, stable, and highly significant throughout. Additional sensitivity checks reported in Appendix F suggest that even more extensive sets of controls are unlikely to substantially alter the results. Moreover, in Appendix G, we address concerns about measurement error and show that accounting for it using ORIV (Gillen, Snowberg, and Yariv, 2019) increases the coefficient estimates by 10% to 20%.

Figure 5. Relative deservingness and attitudes towards capital income tax (U.S.)



Notes: This figure shows the average share allocated to the worker by spectators, conditional on their views about capital income taxation. *Attitude capital income tax* captures participants' views on how investment income (capital gains and dividends) should be taxed relative to labor income. The response scale ranges from "At a much lower rate than income from work" to "At a much higher rate than income from work."

Table 2. OLS regression of attitudes towards capital income tax (U.S.)

	(1)	(2)	(3)	(4)	(5)
<i>Deservingness of labor</i> ($= d_i$)	0.125*** (0.035)	0.123*** (0.036)	0.113*** (0.033)	0.121*** (0.034)	0.116*** (0.034)
<i>Meritocratic view</i> ($= \gamma_i$)		-0.067* (0.035)	-0.046 (0.034)	-0.033 (0.035)	-0.034 (0.035)
<i>Market libertarian view</i> ($= \delta_i$)		-0.032 (0.035)	-0.022 (0.036)	-0.014 (0.036)	-0.020 (0.035)
Controls:					
Age, gender (pre-reg.)	Yes	Yes	Yes	Yes	Yes
Income, wealth, political orientation			Yes	Yes	Yes
Other sociodemographics				Yes	Yes
Time, risk and social preferences					Yes
N	803	803	803	803	803

Notes: The table shows coefficient estimates from linear regressions of *attitude capital income tax* on deservingness of labor, d_i . Heteroscedasticity robust standard errors are shown in parentheses. We preregistered specification (1) as our main specification. γ_i and δ_i are individual-level parameter estimates capturing the weight each individual places on the meritocratic and market-libertarian views, respectively (see sections 3.2.2 and 3.2.3 for details). We standardize *attitude capital income tax*, d_i , γ_i and δ_i . “Other sociodemographics” include education, ethnicity, employment status, having children, marital status, and state fixed effects. Appendix Table A2 provides summary statistics for all control variables. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

We repeat this analysis for our two secondary, pre-registered measures: *Attitude minimum wage* and *Attitude income tax* (on millionaires). Regressing the minimum-wage item on d_i (controlling for age and gender) shows that spectators who perceive labor as more deserving than capital are also more favorable toward raising the federal minimum wage to \$15; a one standard deviation increase in d_i is associated with a 0.09 standard deviation increase in support ($t_{798} = 2.61$, $p = 0.01$). By contrast, as we expected, there is no statistically significant relationship between d_i and attitudes toward higher income taxation of millionaires (coefficient = 0.05, $t_{798} = 1.56$, $p = 0.12$). These results indicate that the deservingness views captured by d_i are tightly linked to policies that explicitly differentiate between labor and capital—capital-income taxation and the minimum wage—but do not spill over to attitudes toward policies that are unrelated to differentially rewarding capital or labor. The absence of any relationship with the millionaire-tax item also suggests that the strong associations we observe for labor-versus-capital policies are unlikely to be driven by an experimenter demand effect that would push spectators to endorse every redistributive proposal.

To strengthen the evidence that our experimental deservingness measure predicts support for policies that differentially support capital and labor, we conducted a follow-up survey with the original spectators about four months later (in October 2021), in which we again elicited participants’ attitudes toward higher capital income taxes.²²

Our primary purpose in conducting this follow-up survey is to measure the relationship between d_i and support for higher taxation of capital income, in a manner that makes the connection between the two responses less direct and obvious than when they are in the same survey. We blur the connection between the two surveys by using different fonts, formats, and displaying a different co-author’s university logo than the one used in the first wave. A total of 558 individuals participated in the follow-up survey (69.5% of the original sample of spectators); sample retention is orthogonal to deservingness views, d_i (t-test, $p = 0.39$).

We find that the views about relative deservingness measured in the first study predict attitudes towards capital income taxation, collected in the follow-up survey. When regressing support for the capital income tax in the follow-up survey on d_i , controlling for age and gender (replicating the analysis Table 2 and Figure 5), we find that a one standard deviation increase in d_i is associated with a 0.09 standard deviation increase in support of the capital income tax ($t_{553} = 1.82, p = 0.069$). This result alleviates concern that experimenter demand effects may lead respondents to answer consistently across questions within the first data collection.²³

In summary, we find that a tendency to see labor as more deserving than capital is positively associated with support for policies that differently reward labor and capital (i.e., capital income tax and minimum wage). Our findings suggest that differences in perceptions of capital and labor as “deserving” of the rewards they produce can account for some of the variation in public support for these policies.

²² When we collected the initial data, we did not plan to do this follow-up survey, but added it at a later stage. Hence, we did not pre-register it. In the follow-up survey, we also elicited participants’ views on the relative deservingness of capital and labor income by asking them to compare \$1 in income from working with \$1 in income from investing. The distribution of answers to this question is presented in Figure 1 in the Introduction. In Appendix H, we examine the correlation between this survey measure and our experimental measure of relative deservingness.

²³ Attitudes towards capital income taxes are strongly correlated across both surveys ($corr = 0.54, t_{556} = 8.87, p < 0.001$) suggesting that policy preferences exhibit stability over time.

4. Deservingness views and policy attitudes in Switzerland

4.1 Design

Our second study replicates and extends our first study in the context of a popular initiative on increasing taxes on capital revenue in Switzerland, titled “Löhne entlasten, Kapital gerecht besteuern” in German (“Alléger les impôts sur les salaires, imposer équitablement le capital” in French), and voted on by Swiss citizens in a national referendum on 26th of September 2021. The initiative required that capital income exceeding a certain threshold amount be taxed at a rate 1.5 times higher than labor income. The threshold amount would be determined by the legislature; the initiators suggested about CHF 100'000 (about \$108,000 at the time). The additional tax revenues generated by the initiative would be used to lower the taxes of people with low and medium labor income.

The Swiss setting allows us to measure people's support for a specific policy with concrete implications for taxation and the distribution of wealth in a modern society, using consequential measures (e.g., voting behavior and outcomes, campaign donations). Moreover, citizens were well informed about the initiative, which was widely discussed in the media and government communication around the time we conducted the study. According to national surveys, 46% of the population supported the initiative and 45% opposed it at the time of data collection (SRG, 2021). Acceptance of the initiative decreased in the last weeks before the vote and, in the end, the plebiscite received support from 35.1% of the electorate, with 64.9% in opposition.

We pre-registered the data collection and analyses in the OSF Registry (<https://osf.io/v9usj/>).²⁴ We recruited a total of 3,327 participants in two samples in late August and early September 2021. As in the U.S. study, one sample consists of 2,218 participants recruited on Amazon Mechanical Turk to play the roles of the workers and investors. They were paid \$2, plus any bonus payment from the production task. The other sample of 1,109 participants, recruited to serve as spectators, is broadly representative (in terms of age, gender and region) of the Swiss population of eligible voters in the German- and French-speaking regions of Switzerland.²⁵ We recruited

²⁴ Instructions and materials are available on OSF: <https://osf.io/gfrvq/files/b2eu5>.

²⁵ The German and French regions of Switzerland are the main linguistic and cultural regions of Switzerland. In 2017, the population of Switzerland was 62.6% native speakers of German; 22.9%

these participants through the survey company LINK, which actively recruits people to create a representative panel in terms of age, gender, and region.²⁶

The design of the Swiss study closely follows the design of the U.S. study, but we made some simplifications. In the Swiss study, workers and investors can only provide 0, 1, or 2 work and investment units, respectively. Moreover, we fixed the productivity of input factor, α , at 0.5 because the U.S. study found variation in productivity played only a minor role in allocation decisions. Note that $\alpha = 0.5$ equalizes the marginal product of an additional unit of labor and capital. As a result, there are only four combinations of inputs that yield a positive project output, so the spectators only make four choices.²⁷ Otherwise, the experimental procedure is the same as in the first study. Although we lose the ability to characterize fairness views with the same depth as in the U.S. study, these changes substantially simplify the instructions, thereby reducing survey time. Similarly to the U.S. study, our pre-registered main measure of spectators' revealed fairness views is the average shares spectators give to the workers, *Deservingness of labor*:

$$d_i = \frac{1}{4} \sum_{L \in \{1,2\}} \sum_{K \in \{1,2\}} s_i(L, K, 0.5).$$

Next, we elicit participants' policy preferences. First, we measure their attitudes toward capital income taxation, *Attitude capital income tax*, similarly to the U.S. study. We also measure the variable, *Attitude initiative*, by asking participants whether they support or oppose the initiative, from 0 ("Strongly oppose") to 1 ("Strongly support")

French; 8.2% Italian and 0.5% Romansh. We only recruited Swiss nationals because citizenship is a prerequisite for voting.

²⁶ We initially planned to recruit a sample size of 1,400 spectators. However, before data collection began, we decided to reduce the sample size to 1,000 observations to provide participants with a larger participation bonus. We did not update the pre-registration document, which still states a target sample size of 1,400 observations. Importantly, we instructed the survey company to recruit 1,000 participants. To meet quota requirements, the survey company ultimately recruited 1,109 participants. Although this deviates from the original pre-registration plan, the decision was made prior to data collection, and we retain all collected observations in the analysis, which alleviates concerns about bias in the final sample.

²⁷ Because the four spectator choices in the Swiss study are a subset of those in the U.S. study, the U.S. data allow us to evaluate this approach by constructing the U.S. study counterfactual in which we only elicited these four choices. The average of the four choices and the average of the 27 choices, at the individual level, is highly correlated ($\text{corr} = 0.94$). Moreover, we can reject *Equal deservingness* when we only consider the four choices, and the views on the relative deservingness of labor identified with the four choices also predict policy preferences.

in steps of 1/4.²⁸ Participants also make a consequential donation decision: they divide CHF 3 between a committee that supports the initiative and a committee that opposes the initiative. We code this variable, *Donation initiative*, as the amount participants give to the committee that supports the initiative. Finally, we ask participants whether they support the introduction of a minimum wage throughout Switzerland and, if so, what this minimum wage should be. We standardize responses from this five-point item to construct the variable, *Attitude minimum wage*. We pre-registered the variables *Attitude capital income tax* and *Attitude initiative* as our primary policy preference measures and *Donation initiative* and *Attitude minimum wage* as secondary measures.²⁹

We also elicit spectators' attitudes towards taxing people who have worked hard for their income (Stantcheva, 2021), in addition to the control variables elicited in the U.S. study. The description of all control variables and the corresponding summary statistics are provided in the Appendix Tables B1 and B2, respectively.

We provided spectators with German and French instructions, allowing participants to choose their preferred language. The study took spectators about 30 minutes to complete, for which they received a fixed payment of CHF 12.

4.2 Results

4.2.1 Testing Equal Deservingness and further characterizations of fairness views

As in the U.S. study, we find that Swiss spectators tend to favor rewarding work over investment.³⁰ Figure 6a shows that the share of spectators who allocate more to the worker ($d_i > 0.5$; 70.2%) is statistically significantly larger than the share of spectators who allocate more to the investor ($t_{1108} = 14.66, p < 0.001$). On average, workers

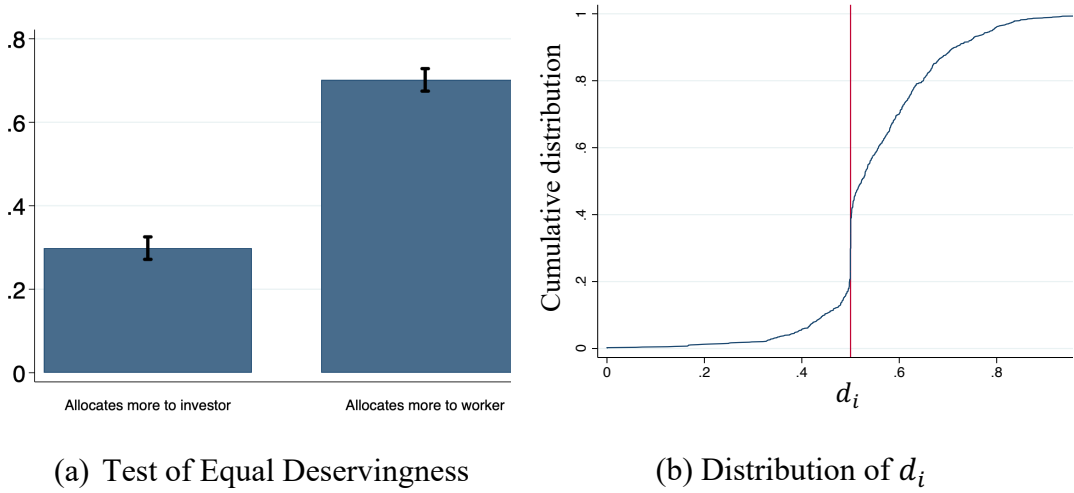
²⁸ We described the initiative as follows: *The initiative "Löhne entlasten, Kapital gerecht besteuern" ["Reduce the tax burden on wages; tax capital fairly"] requires that capital income exceeding a certain threshold amount to be taxed at a rate 1.5 times higher than labor income. The threshold amount would be determined by the legislature; the initiators suggest about CHF 100'000. The additional tax revenues generated by the initiative would be used to lower the taxes of people with low and medium wages."* We took this description from the website of the initiators of the initiative.

²⁹ We took *Attitude minimum wage* from Vimentis (2019). We pre-registered, as a secondary outcome measure, whether participants click on links to websites with information on how to support the initiative or how to oppose the initiative. The links are at the very end of the survey and are presented as not being part of the study. Only 20 participants clicked on a link. As pre-registered, we do not report results given that only few people clicked on the link. However, we still find weak ($p = 0.075$) evidence that participants who allocate more to the worker also click more often on the link to support the initiative.

³⁰ Investors and workers made similar choices and hold similar beliefs as in the U.S. study. We discuss worker and investor behavior in Appendix C. Our focus is on the spectators' allocation choices.

receive 55.6% of the output, which translates into an 11-percentage-point gap between worker and investor shares ($t_{1108} = 15.03, p < 0.001$; corresponding to $d = 0.56$). Hence, our data reject *Observation 1*, and, therefore, also reject the null hypothesis of *Equal Deservingness*.³¹

Figure 6. Distribution of tendencies to reward labor (Switzerland)



Notes: Panel (a) plots the share of spectators who allocate more to the investor ($d_i < 0.5$) and the share of spectators who allocate more to the worker ($d_i > 0.5$), averaging across all four choices. While 18% of spectators treat the worker and investor almost equally, none of them allocated the *exact* same amount to the worker and the investor ($d_i = 0.5$) across the four choices. Panel (b) shows the cumulative distribution of the average share spectators give to the workers, $d_i = \frac{1}{4} \sum_{L \in \{1,2\}} \sum_{K \in \{1,2\}} s_i(L, K, \alpha)$, where $s_i(L, K, \alpha)$ is the share spectator i allocates to the worker for given values of L and K . $N = 1,109$.

The data from the Swiss study allow for three additional tests of *Equal deservingness* based on direct comparisons, corresponding to the cases: $s(1,1,0.5) = 0.5$, $s(2,2,0.5) = 0.5$, and $s(1,2,0.5) = 1 - s(2,1,0.5)$. We can reject all three tests at the 1% level ($t_{1108} = 12.63, t_{1108} = 14.10, t_{1108} = 13.95$, respectively). Moreover, we again find that views about the relative deservingness of labor and capital are additively separable from fairness views regarding the relative amount of factor inputs, similarly to the U.S. study.³² Swiss spectators allocate a larger share to the worker than

³¹ As in the U.S. study, controlling for beliefs about effort costs does not change our findings. When we restrict our analysis to the 829 spectators who believe that effort costs are linear, we find strong evidence against *Equal Deservingness* (see Appendix D for details).

³² That is, fairness views are again well described by $s(L, K, \alpha) = g(L, K, \alpha) + (d - 0.5)$, where $g(\cdot)$ satisfies *Equal deservingness* and $d - 0.5 = 0.056$. Appendix Figure B1 replicates Figure 3 for the Swiss study.

the U.S. spectators (t-test, $t_{1910} = 6.37, p < 0.001$; Wilcoxon rank-sum test, $z = 7.21; p < 0.001$), hinting at the potential existence of cultural differences in the perceived deservingness of capital.³³

We again find that there is substantial heterogeneity in fairness views. Figure 6b shows the cumulative distribution of d_i . While 16.3% of participants allocate more than 2/3 of production to the worker, 18.2% treat the worker and investor almost equally (d_i in $[0.499, 0.501]$) and 2.5% allocate less than 1/3 to the worker.

Our data also allow us to identify the weight participants put on the egalitarian and meritocratic fairness views by estimating a model similar to the one in Section 3.2.2 at both the aggregate and individual level (though omitting the weight corresponding to relative productivity, α , which did not vary in the Swiss study). When we estimate the regression at the aggregate level (clustering standard errors at the individual level), we find that participants put substantial weight on both the meritocratic ($\gamma = 0.609, t_{1108} = 36.24, p < 0.001$) and egalitarian ($1 - \gamma = 0.391, p < 0.001$) views. When we estimate regressions at the individual level, we find that 76.5% and 83.3% of spectators put positive weight on the egalitarian and meritocratic fairness views, respectively. Appendix Figure B4 provides the full distributions. As in the U.S. study, the perceived deservingness of labor, d_i , is not statistically significantly correlated with γ_i ($t_{1107} = -1.46, p = 0.145$), and, therefore, is also not correlated with $1 - \gamma_i$.

4.2.2 Fairness views predict policy preferences

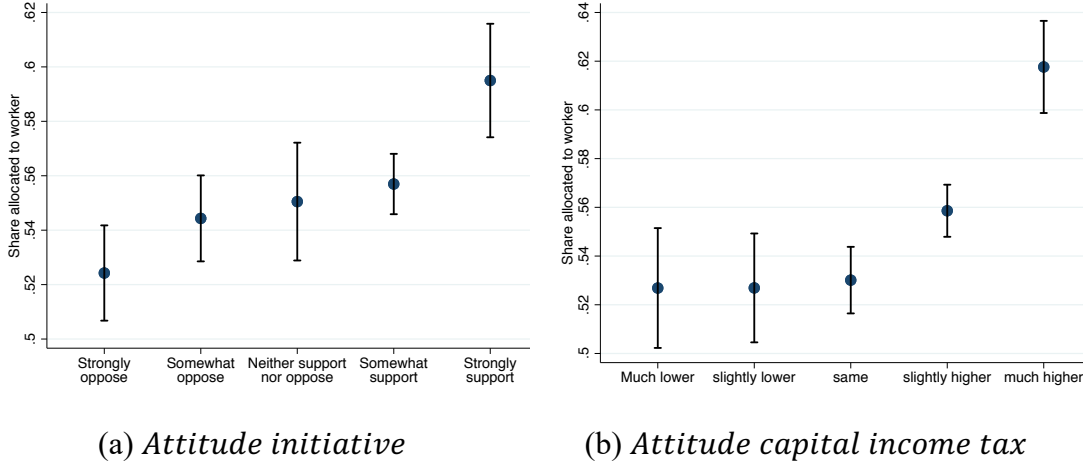
We now examine whether fairness views can account for heterogeneous policy preferences. Figure 7 illustrates the relationships between our pre-registered main policy preference measures (attitudes towards the Swiss initiative and attitudes towards the capital income tax) and the behavioral measure of the relative deservingness of capital and labor, d_i .³⁴ We find that individuals who are more supportive of either the

³³ This comparison is based on the fairness views revealed by the four choice situations common to both studies (i.e., restricting the data from the U.S. study to the choices also used in the Swiss study). Appendix Figure B2 gives the full distributions of d_i in the U.S. and Switzerland. The French and German speaking parts of Switzerland also differ in their cultures (Eugster and Parchet, 2019), but we do not find differences in allocation choices between French and German speaking spectators (t-test: $t_{1107} = 0.80, p = 0.42$; Wilcoxon rank-sum test, $z = 0.97, p = 0.33$). Appendix Figure B3 gives the full distributions of d_i for French and German speakers.

³⁴ Appendix Figure B5 shows the raw distributions of all elicited policy preferences.

Swiss initiative or increasing the capital income tax allocate a larger share of production to the worker.

Figure 7. Relative deservingness and policy preferences (Switzerland)



Notes: This figure shows the average share allocated to the worker by spectators, conditional on *Attitude initiative* (Panel (a)) and *Attitude capital income tax* (Panel (b)). *Attitude initiative* captures views about the Swiss initiative by asking participants whether they support or oppose the initiative, from “Strongly oppose” to “Strongly support”. *Attitude capital income tax* captures participants’ views on how investment income (capital gains and dividends) should be taxed relative to labor income. The response scale ranges from “At a much lower rate than income from work” to “At a much higher rate than income from work.”

For our preregistered main analysis, we regress both *attitude initiative* and *attitude capital income tax* on d_i . We standardize *attitude initiative*, *attitude capital income tax*, and d_i . Table 3 gives the coefficient estimates. Model (1) in each panel shows the pre-registered specification that controls for age and gender. Spectators who perceive labor as more deserving than capital are more supportive of the initiative and of increasing the capital income tax. Specification (2) controls for the individual weights the spectators put on the meritocratic fairness view. Specifications (3) to (5) show that the positive correlations between d_i and the policy preferences are robust to controlling for additional sociodemographics, including income and wealth, political orientation, and risk, time and social preferences.³⁵ Additional sensitivity checks

³⁵ Appendix Table B3 shows that d_i is correlated with political orientation and education, which explains why coefficient estimates for d_i decrease when controlling for these variables. Spectators with a right-wing political orientation and lower education levels allocate less to the worker. These results differ from our findings in the U.S., where we found no statistically significant differences by political orientation (identifying as Republican or Democrat) or education levels. As in the U.S. sample, we do not find any association between the perceived relative deservingness of labor and income or wealth.

suggest that adding a higher number or more comprehensive proxies for individual characteristics is unlikely to substantially alter the results (see Appendix F), and that accounting for measurement error using ORIV (Gillen, Snowberg, and Yariv, 2019) increases the coefficient estimates by 20% to 30% (see Appendix G).

Table 3. OLS regression of policy preferences (Switzerland)

	(1)	(2)	(3)	(4)	(5)
i) Dependent variable: <i>attitude initiative</i>					
<i>Deservingness of labor</i> ($= d_i$)	0.146*** (0.030)	0.145*** (0.030)	0.089*** (0.026)	0.087*** (0.027)	0.081*** (0.026)
<i>Meritocratic view</i> ($= \gamma_i$)		-0.025 (0.029)	-0.002 (0.026)	0.011 (0.026)	0.017 (0.026)
ii) Dependent variable: <i>attitude capital income tax</i>					
<i>Deservingness of labor</i> ($= d_i$)	0.222*** (0.031)	0.224*** (0.031)	0.180*** (0.029)	0.174*** (0.029)	0.165*** (0.029)
<i>Meritocratic view</i> ($= \gamma_i$)		0.048 (0.030)	0.054* (0.028)	0.062* (0.030)	0.070** (0.030)
Controls:					
Age, gender (pre-reg.)	Yes	Yes	Yes	Yes	Yes
Income, wealth, political orientation			Yes	Yes	Yes
Other sociodemographics				Yes	Yes
Time, risk and social preferences					Yes
N	1109	1109	1109	1109	1109

Notes: The table shows coefficient estimates from linear regressions of *attitude initiative* and *attitude capital income tax* on d_i . Heteroscedasticity robust standard errors are shown in parentheses. We preregistered specification (1) as our main specification. The coefficients for γ_i are individual-level parameter estimates capturing the weight each individual places on the meritocratic fairness view (see Sections 3.2.2 and 3.2.3 for details). We standardize *attitude initiative*, *attitude capital income tax*, d_i , and γ_i . Other sociodemographics include education, employment status, having children, marital status, and canton fixed effects. Appendix Table B2 provides summary statistics for all control variables. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

We next turn to our pre-registered secondary outcome variables: attitudes towards the minimum wage, *Attitude minimum wage*, and the costly measure of support for the initiative, *Donation initiative*. We regress both measures on d_i , standardizing *Attitude minimum wage*, *Donation initiative*, and d_i . As in the U.S. study, we find a positive correlation between perceptions of relative deservingness of labor and support for the minimum wage, although the correlation is not statistically significantly different from zero (coefficient = 0.043, $t_{1104} = 1.29$; $p = 0.199$). Moreover, we also find a positive and statistically significant correlation between d_i and *Donation initiative*; that is, spectators who allocate more to the worker also make a larger

donation to the committee that supports the initiative (coefficient = 0.144, $t_{1104} = 4.68, p < 0.001$).

In summary, as in the initial study, we find that viewing labor as more deserving than capital is positively associated with support for policies that favor rewarding labor relative to capital. In the Swiss study, we observe this relationship not only in statements of general support for policies, but also in support for a national referendum and in consequential donation decisions.

4.2.3 Actual vote and regional voting outcomes

We collected our data before participants voted on the initiative and, therefore, could not ask participants how they voted in the main survey. In this section, we provide evidence that fairness views also predict actual voting behavior. We do so using two measures of voting behavior: i) self-reported voting in an obfuscated follow-up survey and ii) Swiss administrative data on regional voting outcomes.³⁶

We conducted a follow-up survey with the same individuals who participated in the Swiss spectator study, collecting responses within two weeks after the vote. This survey asked participants whether and how they voted. We hide the connection between the two surveys by letting at least one week pass between the two surveys, by using different fonts and formats, and by asking respondents how they voted on another unrelated nationwide initiative that took place on the same day.³⁷ This design allows us to address concerns that experimenter demand effects may drive the relationships observed in the main survey.

A total of 895 individuals completed the follow-up survey (80.7% of the original sample of spectators), of which 799 report that they handed in a non-empty vote.³⁸ Sample retention is orthogonal to views on the relative deservingness of capital and labor (t-test, $t_{1107} = -1.01, p = 0.311$). In our sample, 40.2% report that they voted in favor of the initiative, which is close to the actual Swiss average (35.1%).

Figure 8a illustrates the relationship between reported voting and individual-level views on the relative deservingness of capital and labor, d_i . Individuals who voted

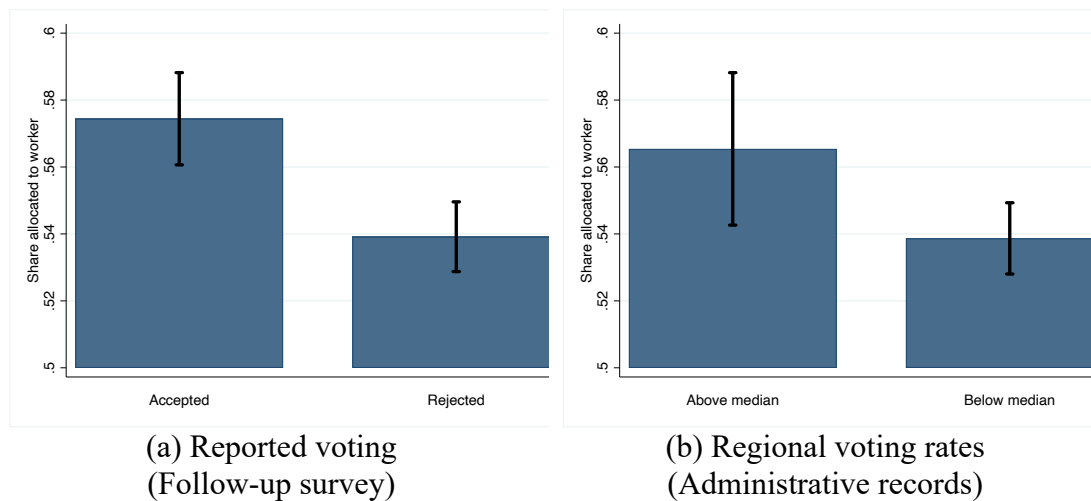
³⁶ These analyses were not included in the pre-analysis plan and should thus be considered exploratory.

³⁷ The Swiss also voted on same-sex marriage on September 26th, with the majority voting in support.

³⁸ 74 participants did not vote, and 22 participants handed in empty votes.

in favor of the initiative allocated a larger share of the production output to the worker (t-test, $t_{797} = -4.07, p = 0.001$). We also regress a dummy for voting in favor of the initiative, *Vote initiative*, on deservingness views, d_i , controlling for age and gender. We standardize both *Vote initiative* and deservingness views. The estimated coefficient is 0.148 ($t_{794} = 4.00, p < 0.001$), which is very close to the estimates we report earlier for attitudes (*Attitude initiative*). Appendix Table B4 shows that the positive correlation is robust to controlling for additional sociodemographic characteristics, including income, wealth, and political orientation.

Figure 8. Tendency to favor work and actual voting (Switzerland)



Notes: This figure shows the average share allocated to the worker by spectators, conditional on reported voting (Panel (a)) and regional voting shares (Panel (b)). Reported voting captures participants' views on the Swiss initiative by asking whether they voted in favor of or against the initiative, measured in a follow-up survey ($N = 799$). Regional voting shares reflect the proportion of voters who supported the initiative across different Swiss regions ("Bezirke"), based on data from the Swiss Federal Statistical Office (FSO). We construct a binary measure using a median split ($N = 120$).

We also study the relationship between our fairness views and regional voting outcomes. To do so, we match our data on fairness views (d_i) with actual voting outcomes in 148 Swiss regions ("Bezirke") provided by the Swiss Federal Statistical Office (FSO). For each region, we calculate the average share that the spectators who live in this region gave to the worker (i.e., the average value of d_i for that region). This gives us a noisy measure of regional deservingness views, which we compare to the vote share in support of the initiative in that region, for the 120 regions for which we have data. Figure 8b illustrates the relationship, showing the average regional share allocated to the worker for regions above and below the median acceptance rate for the

initiative. Regions more supportive of the initiative also allocate a higher share of production to the worker (t-test, $t_{118} = -2.08, p = 0.039$). A regression of standardized vote shares on standardized regional fairness views yields a coefficient estimate of 0.112 ($t_{118} = 1.98, p = 0.050$).³⁹ These findings offer exploratory evidence that deservingness views also predict actual voting outcomes.

5. Broader differences in perceptions of capital and labor

As we noted earlier, support for policies differentially taxing labor and capital may reflect a variety of considerations, including perceptions of the characteristics of people who earn their income from each source and the anticipated economic and societal consequences of taxing these factor inputs. In this section, we examine whether capital and labor are perceived differently along several dimensions other than deservingness, how these differences shape support for taxation, and how they relate to our measure of deservingness.

We address three questions. First, we study the degree to which perceptions of capital and labor indeed differ across multiple dimensions, including our measure of relative deservingness. Second, we study how these varied considerations influence policy attitudes and whether such influences help explain why some individuals support policies that appear to contradict their fairness views—including a large number of participants from our study in Switzerland who perceive labor as more deserving than capital but nevertheless reported voting against the referendum.⁴⁰ Third, we provide evidence on whether our experimental design successfully isolates deservingness perceptions from these other factors, by evaluating the degree to which deservingness perceptions and these factors are orthogonal.

To study these questions, we conducted a new survey in Switzerland in March 2023 to measure how respondents perceive the taxation of capital and labor across

³⁹ For some regions, we have only few spectator observations. Correlations are even stronger when we exclude regions with few observations. For example, if we exclude the 34 regions with less than 4 observations, the coefficient estimate is 0.39 ($t_{84} = 2.60, p = 0.011$).

⁴⁰ According to the study in Switzerland, more than two-thirds of participants from a representative sample of eligible voters perceive income from labor as more deserving than income from investing. However, almost two-thirds of voters voted against the initiative to increase capital income taxation. In our sample of spectators, even among those who view labor income as more deserved ($d_i > 0.5$), 55.1% report having voted against the initiative. This pattern suggests that policy support reflects additional considerations beyond deservingness views alone.

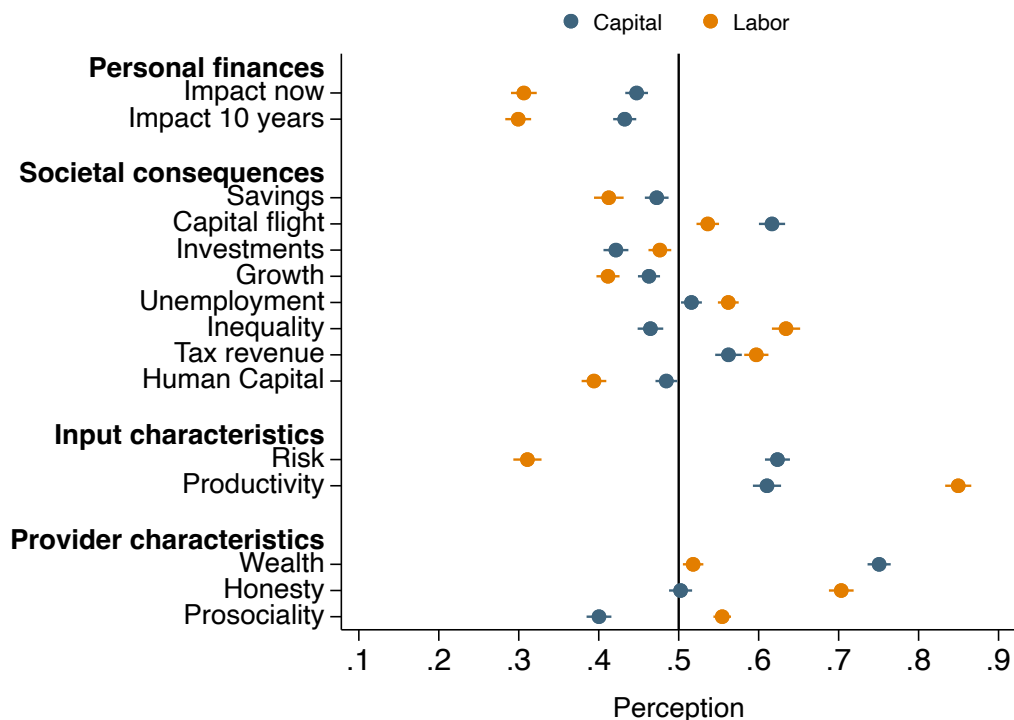
several dimensions. The survey covered three categories: *i*) perceived personal financial impacts of higher capital and income taxation, both currently and in 10 years (4 items), *ii*) perceived broader economic and societal consequences of such taxation, including effects on growth, investment, employment and inequality in Switzerland (16 items), and *iii*) perceptions about the activities of investing and working (e.g., beliefs about their risk, productivity), about the characteristics of those who earn money from investing and working (e.g., wealth, honesty), and about the costs of taxing capital versus labor income (12 items). All survey items are reported in Appendix Table B5. We invited all participants from the initial Swiss study, allowing us to link these perceptions to our earlier measures. A total of 637 individuals participated. Sample retention is orthogonal to views on the relative deservingness of capital and labor (t-test, $t_{1107} = -1.14$, $p = 0.253$).

Figure 9 gives average perceptions of capital and labor (see also Appendix Table B6). The figure shows that respondents perceive capital and labor differently across multiple dimensions. For example, capital taxation is perceived to have a smaller personal financial impact, but more negative effects on investment and inequality. Moreover, investing is perceived as more risky but less productive than working for a wage, and individuals who derive a larger share of their income from investing rather than working are perceived as wealthier, less honest, and less prosocial. Additionally, in single questions not included in the figure, respondents tend to believe that wealth is more often the result of life advantages than of hard work and that enforcing taxes on capital and labor income is similarly costly (see Appendix Table B6).

Using the above measures, we can study the weight that individuals place on several considerations, along with perceptions of relative deservingness, in forming policy attitudes toward the taxation of capital and labor income. We regress our two primary outcome measures from the initial survey—attitudes toward capital income taxation and support for the initiative (both standardized)—on relative deservingness (d_i) and the broader perception measures. All independent variables—including d_i —are standardized to facilitate comparisons of coefficient magnitudes. Appendix Tables B7 and B8 present regression results when we include, separately, the measures of perceived personal financial impacts, perceived broader economic and societal consequences, and other perceptions of investing and working. The tables also report

regressions when including all measures simultaneously, and measures selected using adaptive LASSO.

Figure 9. Broader differences in perceptions of capital and labor



Notes: This figure shows average perceptions of capital and labor, rescaled to range from 0 to 1. For “Personal finances” and “Societal consequences,” we ask participants to consider an increase in the tax on income from investing/working by 5 percentage points. “Personal finances” captures perceived personal financial effects of higher taxation, both currently and in 10 years (0 = large negative impact, 1 = large positive impact). “Societal consequences” captures perceived broader economic and societal effects of higher taxation (0 = large decrease, 1 = large increase). “Input characteristics” captures perceptions of investing and working (0 = not at all risky/important for productivity, 1 = very risky/important for productivity). “Provider characteristics” captures perceptions of those who earn income from investing and working (0 = very poor/dishonest/greedy, 1 = very rich/honest/generous). All survey items are reported in Appendix Table B5. N = 637.

Appendix Tables B7 and B8 provide insights into how individuals trade off varied considerations in determining support for the relative taxation of capital and labor. For example, across specifications and estimation methods, support for higher capital taxation is consistently stronger among those who expect more positive (or less negative) impacts on personal finances, macroeconomic investment, and unemployment. These findings reflect the importance of economic self-interest and broader economic evaluations in shaping policy preferences. Additionally, attitudes toward the social character of investors also appear to play a role. Individuals who

perceive investors as more honest and prosocial and who believe that wealth stems from hard work rather than life advantages, exhibit greater opposition to capital taxation.

The regression results also provide further evidence on the importance of our measure of relative deservingness, d_i , in shaping policy attitudes, even after accounting for the importance individuals place on other factors. The positive relationship between the perceived relative deservingness of labor and support for policies involving higher capital taxation is robust to the inclusion of different sets of perception measures, and close in magnitude to that for the perceived personal financial impacts of higher capital taxation—the key guiding factor in standard economic voting models. When we apply LASSO regressions to identify a more parsimonious model from the full set of 33 predictors (32 perceptions plus d_i), our deservingness measure is among the predictors selected by LASSO (see column (5) in Appendix Tables B7 and B8).⁴¹

We can also use these data to assess whether our experimental approach to measuring the perceived relative deservingness of capital and labor successfully eliminated the influence of other potential differences in how individuals perceive the impacts of differentially taxing capital and labor. Appendix Table B10 presents results from regressions of our experimental measure of relative deservingness, d_i , on the set of 32 perception measures. None of the perception measures are statistically significant at the 5 percent level and only three are marginally significant at the 10 percent level; we cannot reject the joint null hypothesis that all coefficients are zero ($F_{32,604} = 1.28, p = 0.144$). These results confirm that, as we intended, our behavioral measure of perceived deservingness is orthogonal to other perceptions about capital and labor, those who provide them, and the impacts of differentially taxing them.⁴²

⁴¹ Appendix Table B9 reports the results of a dominance analysis, showing that relative deservingness accounts for a substantial share of the explained variation in the two outcome measures, ranking 7th out of 33 predictors for attitudes toward capital income taxation and 13th out of 33 for attitudes toward the initiative. We view this predictive power as striking, given that the relative deservingness measure is derived from abstract experimental choices with no direct reference to these specific policy issues, whereas the perception measures were explicitly designed to capture beliefs directly relevant for the taxation of capital and labor.

⁴² In the U.S. study, we can use support for taxing millionaires (*Attitude income tax*) as a rough proxy for perceptions of the general deservingness of wealthy individuals. As discussed in Section 3.2.4, this measure is not related to our behavioral measure of perceived deservingness, d_i , providing further evidence that our paradigm successfully prevents such beliefs from contaminating our deservingness measure.

For comparison, Appendix H also reports analogous analyses using the survey-based measure asking whether income from work or from investing is more deserved (see Figure 1). In that case, many of the same perception measures are significant predictors. This provides evidence that survey measures of the deservingness of capital and labor income, while correlated with our behavioral measure of relative deservingness, also capture beliefs about other factors that are orthogonal to fundamental perceptions of deservingness.

The above analysis has several important implications. First, by showing how other considerations—including personal and macroeconomic expectations and perceptions of the types of people affected—influence support for higher capital taxation, we provide a potential explanation for the observation that many people who perceive labor as more deserving than capital nevertheless vote against raising taxes on capital income. Second, the measure of perceived deservingness that is the primary focus of our study retains its explanatory power even when accounting for the influence of these other factors, further validating the role of deservingness perceptions in policy support. Finally, the fact that these other factors are not predictive of the behavioral measure of perceived deservingness indicates that our design was effective in stripping away such considerations for spectators making allocation decisions and that the fairness judgments we measure capture something fundamentally distinct.

6. Conclusion

This paper studies what people consider to be fair allocations of production rewards between labor and capital, a long-standing question of interest in economics and public policy. We also provide evidence that such perceptions of fairness directly influence support for policies that affect the distribution of wealth in societies, including consequential voting behavior, and that this influence is independent of other considerations regarding the impacts of differentially taxing capital and labor.

Using pre-registered experiments with representative samples from the U.S. and Switzerland, we develop a novel design that isolates fundamental deservingness views by holding constant factors that typically confound real-world comparisons between labor and capital—including personal characteristics of input providers, sources of wealth, productivity and costs of inputs, and perceptions of broader economic

consequences of differential taxation. We thus measure what can be plausibly interpreted as an inherent perception that the returns to one type of input are more “earned” than those of the other input.

In both countries, we find that most people perceive labor as more deserving than capital, though with substantial heterogeneity across individuals. In the U.S., spectators allocate 4 percentage points more to workers than investors on average; in Switzerland, this gap is 11 percentage points. Notably, these deservingness perceptions represent a distinct dimension of fairness judgment, separate from egalitarian, meritocratic, or market-libertarian views regarding input amounts and productivities.

These deservingness perceptions have meaningful political consequences. In both countries, individuals whose choices indicate that they view labor as more deserving express greater support for policies that tax capital income at higher rates than labor income. In Switzerland, our measure predicts support for a national referendum on capital taxation, campaign donations, and actual voting behavior. Regional analysis further confirms this pattern: areas where residents allocated more to workers in our experiment showed higher approval rates in the referendum.

Our additional survey with the Swiss sample reveals varied perceptions of the broader impacts of capital and labor and their taxation, including beliefs about personal financial impacts, beliefs about the characteristics of those who provide labor versus capital, perceptions of the productivity and risk of different inputs, and expected macroeconomic consequences from capital and labor taxation. We also find that our behaviorally measured deservingness perceptions retain explanatory power for policy preferences even when accounting for these broader perceptions. While the above factors influence policy support, fundamental views about which inputs deserve greater rewards constitute an independent driver of political preferences.

These findings have important implications for tax policy. Our results provide empirical support for the historical distinction between “earned” labor income and “unearned” capital income, which has long influenced taxation debates (Atkinson, 2009; Slemrod, 2007). While optimal tax theory emphasizes factors like productivity and elasticity (Saez, 2001; Mankiw, Weinzierl and Yagan, 2009), and recent work acknowledges that fairness concerns shape support for redistribution (Fisman et al., 2017; Fehr et al., 2024), we provide the first direct evidence that fundamental

deservingness perceptions about different income sources influence policy attitudes. Crucially, these perceptions remain significant even when accounting for self-interest, macroeconomic expectations, and other factors that also affect policy support. Policymakers seeking to design politically sustainable tax systems should account for these deeply held views about fairness and deservingness.

Looking forward, our framework can be extended to study perceptions of other production inputs. The growing importance of innovation, knowledge work, and artificial intelligence in modern economies raises new questions about deservingness and fair compensation. As wealth generation increasingly depends on ideas, algorithms, and automated systems, understanding societal attitudes toward the returns from these inputs becomes essential. Our experimental paradigm offers a tool for systematically investigating these emerging questions about economic fairness.

References

- Alesina, A., & Angeletos, G. M. (2005). Fairness and redistribution. *American economic review*, 95(4), 960-980.
- Alesina, A., & Giuliano, P. (2011). Preferences for redistribution. In *Handbook of social economics* (Vol. 1, pp. 93-131). North-Holland.
- Almås, I., Cappelen, A. W., and Tungodden, B. (2020). Cutthroat capitalism versus cuddly socialism: Are Americans more meritocratic and efficiency-seeking than Scandinavians?. *Journal of Political Economy*, 128(5), 1753-1788.
- Andre, P. (2024). Shallow meritocracy. *Review of Economic Studies*, forthcoming.
- Atkinson, A. B. (2009). Factor shares: the principal problem of political economy?. *Oxford Review of Economic Policy*, 25(1), 3-16.
- Autor, D., Dorn, D., Katz, L. F., Patterson, C., & Van Reenen, J. (2020). The fall of the labor share and the rise of superstar firms. *The Quarterly Journal of Economics*, 135(2), 645-709.
- Barkai, S. (2020). Declining labor and capital shares. *The Journal of Finance*, 75(5), 2421-2463.
- Cappelen, A. W., Hole, A. D., Sørensen, E. Ø., & Tungodden, B. (2007). The pluralism of fairness ideals: An experimental approach. *American Economic Review*, 97(3), 818-827.

- Cappelen, A. W., Konow, J., Sørensen, E. Ø., & Tungodden, B. (2013). Just luck: An experimental study of risk-taking and fairness. *American Economic Review*, 103(4), 1398-1413.
- CBS/NYT National Poll (2012). CBS News/60 Minutes/Vanity Fair National Poll, January #3, 2012 (ICPSR 34591).
- Chen, D. L., Schonger, M., & Wickens, C. (2016). oTree—An open-source platform for laboratory, online, and field experiments. *Journal of Behavioral and Experimental Finance*, 9, 88-97.
- Chapman, J., Ortoleva, P., Snowberg, E., Yariv, L., & Camerer, C. (2025). Reassessing qualitative self-assessments and experimental validation. Working paper.
- Daunton, M. (2002). *Just taxes: the politics of taxation in Britain, 1914–1979*. Cambridge University Press.
- Eisinger, J., Ernsthausen J., & Kiel, P. (2021, June 8). The Secret IRS Files: Trove of Never-Before-Seen Records Reveal How the Wealthiest Avoid Income Tax.
- Eugster, B., and Parchet, R. (2019). Culture and taxes. *Journal of Political Economy*, 127(1), 296-337.
- Falk, A., Becker, A., Dohmen, T., Enke, B., Huffman, D., & Sunde, U. (2018). Global evidence on economic preferences. *The Quarterly Journal of Economics*, 133(4), 1645-1692.
- Fehr, E., Epper, T., and Senn, J. (2024). Social preferences and redistributive politics. *Review of Economics and Statistics*, 1-45.
- Fischbacher, U., Kairies-Schwarz, N., & Stefani, U. (2017). Non-additivity and the Salience of Marginal Productivities: Experimental Evidence on Distributive Fairness. *Economica*, 84(336), 587-610.
- Fisman, R., Jakiela, P., & Kariv, S. (2017). Distributional preferences and political behavior. *Journal of Public Economics*, 155, 1-10.
- Fisman, R., Gladstone, K., Kuziemko, I., and Naidu, S. (2020). Do Americans want to tax wealth? Evidence from online surveys. *Journal of Public Economics*, 188.
- Fong, C. M. (2007). Evidence from an experiment on charity to welfare recipients: Reciprocity, altruism and the empathic responsiveness hypothesis. *The Economic Journal*, 117(522), 1008-1024.
- Friedman, M. (1962). *Capitalism and Freedom*. University of Chicago Press.

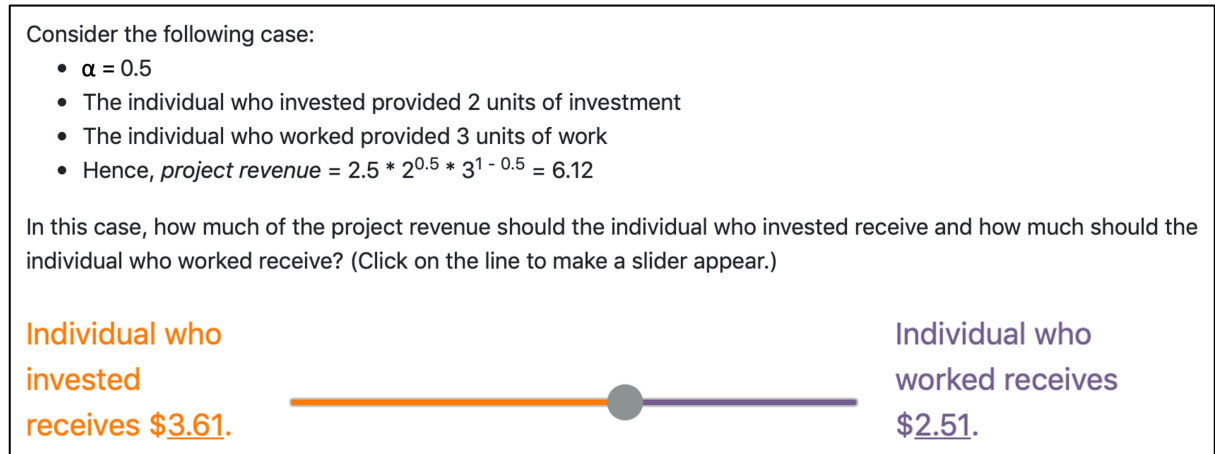
- Gill, D., & Prowse, V. (2012) A structural analysis of disappointment aversion in a real effort competition. *American Economic Review*, 102(1), 469-503.
- Gillen, B., Snowberg, E., & Yariv, L. (2019). Experimenting with measurement error: Techniques with applications to the caltech cohort study. *Journal of Political Economy*, 127(4), 1826-1863.
- Hayek, F.A. (1960) *The Constitution of Liberty*. Chicago: University of Chicago Press.
- Karabarbounis, L., & Neiman, B. (2014). The global decline of the labor share. *The Quarterly Journal of Economics*, 129(1), 61-103.
- Kehrig, M. & Vincent, N. (2021). The Micro-Level Anatomy of the Labor Share Decline. *The Quarterly Journal of Economics*, 136(2), 1031–1087.
- Kerschbamer, R., & Müller, D. (2020). Social preferences and political attitudes: An online experiment on a large heterogeneous sample. *Journal of Public Economics*, 182, 104076.
- Koh, D., Santaaulàlia-Llopis, R. & Zheng, Y. (2020), Labor Share Decline and Intellectual Property Products Capital. *Econometrica*, 88, 2609-2628.
- Konow, J. (2000). Fair shares: Accountability and cognitive dissonance in allocation decisions. *American economic review*, 90(4), 1072-1091.
- Konow, James. (2003). Which Is the Fairest One of All? A Positive Analysis of Justice Theories. *Journal of Economic Literature*, 41(4), 1188-1239.
- Kornhauser, M. E. (1994). The morality of money: American attitudes toward wealth and the income tax. *Indiana Law Journal*, 70, 119, 119-170
- Kuziemko, I., Norton, M. I., Saez, E., & Stantcheva, S. (2015). How elastic are preferences for redistribution? Evidence from randomized survey experiments. *American Economic Review*, 105(4), 1478-1508.
- Mankiw, N. G. (2010). Spreading the Wealth Around: Reflections Inspired by Joe the Plumber. *Eastern Economic Journal*, 285-298.
- Mankiw, N. G., Weinzierl, M., & Yagan, D. (2009). Optimal taxation in theory and practice. *Journal of Economic Perspectives*, 23(4), 147-174.
- Marx, K. (1867). The fetishism of commodities and the secret thereof. *Capital: A Critique of Political Economy*, 1, 71-83.
- Mellon, A. W. (1924). *Taxation: The People's Business*. New York: MacMillan.
- Mill, J. S. (1884). *Principles of political economy*. D. Appleton.

- Oster, E. (2019). Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business & Economic Statistics*, 37(2), 187-204.
- Pew Research (2019). Two-thirds of Americans favor raising federal minimum wage to \$15 an hour.
- Piketty, T., & Saez, E. (2014). Inequality in the long run. *Science*, 344(6186), 838-843.
- Ricardo, D. (1817). *On the Principles of Political Economy and Taxation*: London.
- Saez, E. (2001). Using elasticities to derive optimal income tax rates. *The review of economic studies*, 68(1), 205-229.
- Sen, A. (1999). *Development as freedom*. Oxford University Press.
- Seligman, E. R. A. (1921). *The Income Tax; a Study of the History, Theory, and Practice of Income Taxation at Home and Abroad*. New York: Macmillan.
- Scheuer, F., & Wolitzky, A. (2016). Capital taxation under political constraints. *American Economic Review*, 106(8), 2304-28.
- Scheuer, F., & Slemrod, J. (2021). Taxing our wealth. *Journal of Economic Perspectives*, 35(1), 207-30.
- Sheffrin, S. M. (2017). What Role Can Desert Play in Designing Tax Policies. *Pittsburgh Tax Review*, 15(1), 137-162.
- Slemrod, J. (2007). Does the United States Tax Capital Income?. in *Taxing Capital Income*, ed. Henry Aaron et al., Washington, DC: Urban Institute Press, 3-31.
- Smith, A. (1776) *An Inquiry into the Nature and Causes of the Wealth of Nations*. In *Foundations of Monetary Economics*, Vol. 1 (pp. 223-295). Routledge.
- SRG (2021). Sympathien für «99-Prozent-Initiative» – aber mässige Aussichten.
- Stantcheva, S. (2021). Understanding tax policy: How do people reason?. *The Quarterly Journal of Economics*, 136(4), 2309-2369.
- Tankersley, J. (2021, April 22). Biden will seek tax increase on rich to fund child care and education. *The New York Times*.
- Thorndike, J. J. (2007). Comment. in *Taxing Capital Income*, ed. Henry Aaron, Leonard Burman, and Eugene Steuerle, Washington, DC: Urban Institute Press, 3-31.
- Vimentis (2019). *Umfrage Mindestlohn*.
- Von Mises, L. (1949). *Human Action: A treatise on economics*. Yale University Press.

Supplemental Appendix

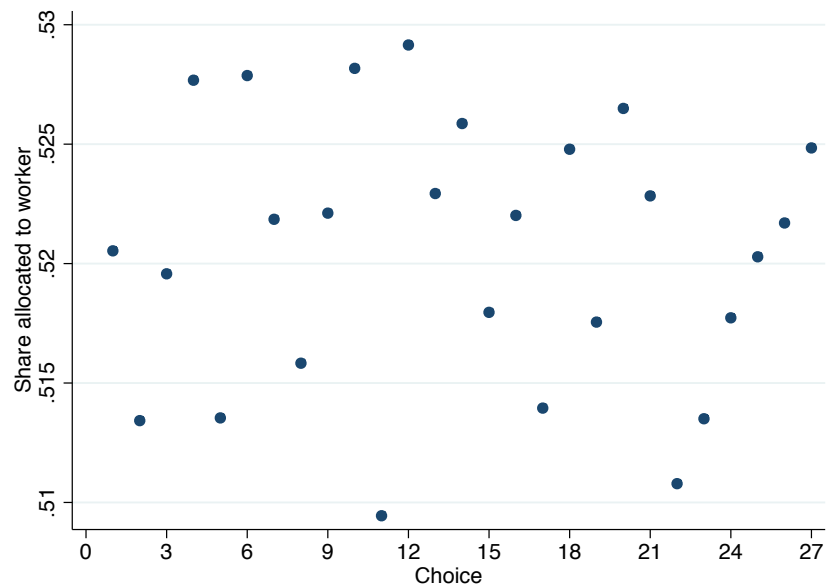
Appendix A – Additional Analysis for the U.S. study

Figure A1. Interface Spectator decision



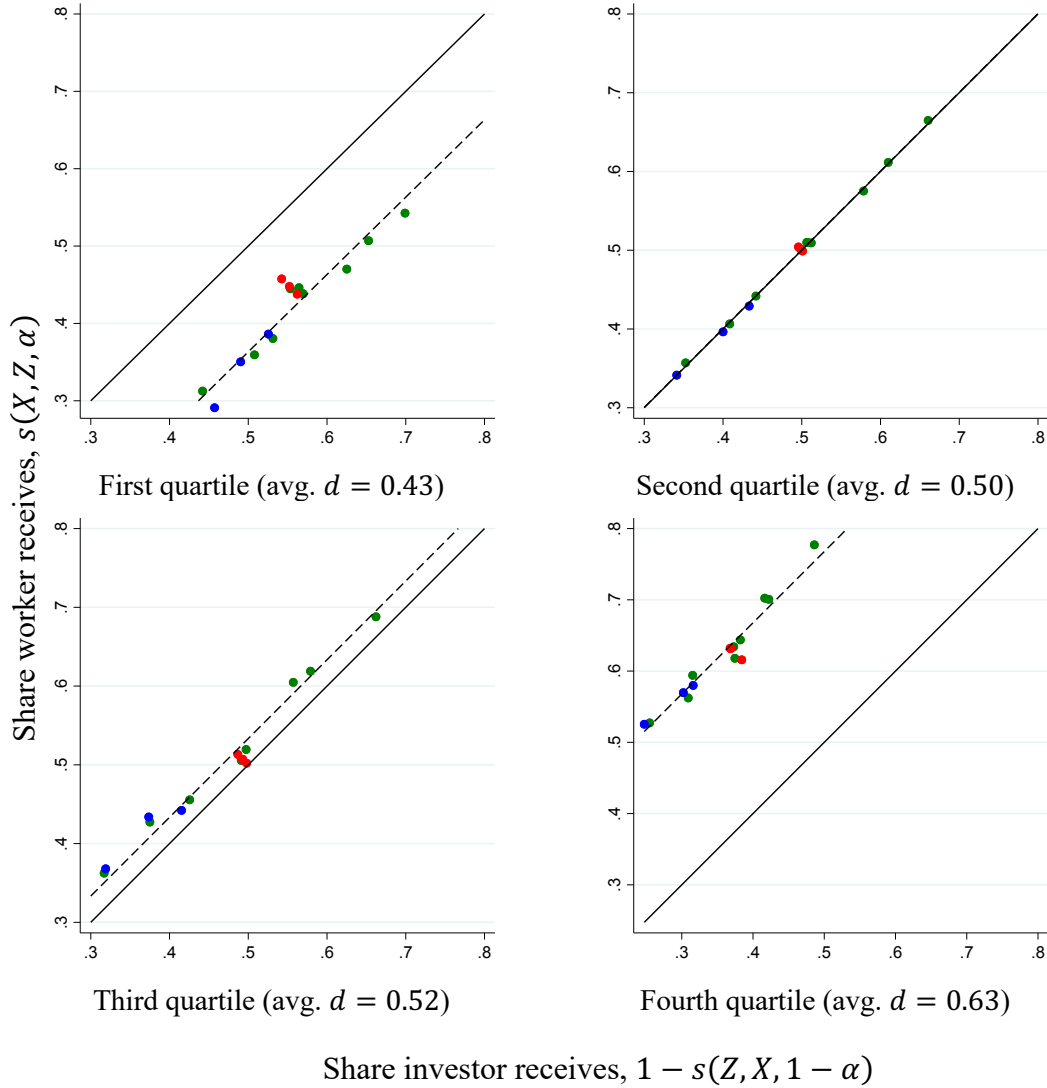
Notes: This figure shows the interface through which spectators allocated the project revenue between the worker and the investor.

Figure A2. No time trend in allocation choices



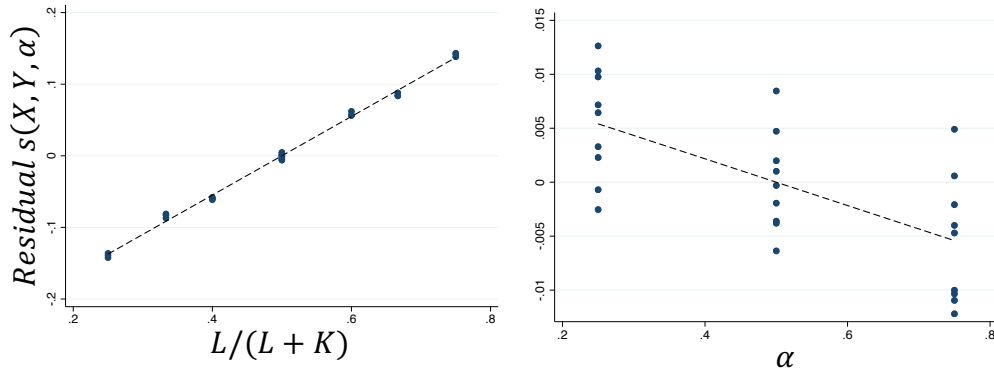
Notes: Spectators make a total of 27 allocation choices. We randomize the order in which they face the different choice scenarios (L , K and α). The figure shows the average share allocated to the worker for the 1st scenario spectators face, for the 2nd scenario they face, . . . , and the 27th scenario they face. Results are based on the U.S. sample.

Figure A3. Tests of an equal tendency to reward capital and labor for subgroups with different levels of d



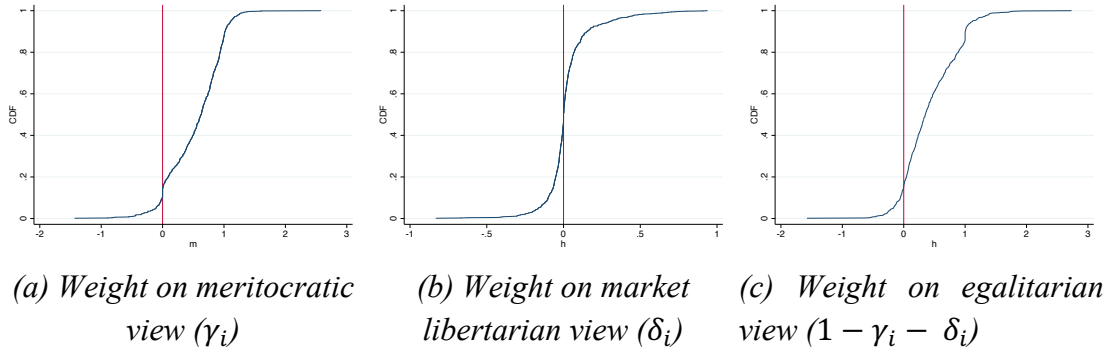
Notes: This figure plots the shares allocated to the workers against the shares allocated to the investors when they provide the same relative amount of the respective inputs and have the same productivity *for subgroups with different levels of d* . Participants are divided into quartiles based on d , with about 200 participants per group. Red points correspond to equations i) ($X = Z$, $\alpha = 0.5$); blue points correspond to equations ii) ((X, Z) in $\{(1,2), (1,3), (2,3)\}$, $\alpha = 0.5$); green points correspond to equations iii) ((X, Z) in $\{1,2,3\}$, $\alpha = 0.25$). Equal deservingness implies that all points must be on the solid line (45-degree line). For the first and fourth quartile group, we can reject equal deservingness for all 15 tests (at 5% level). For the third quartile, we can reject equal deservingness for 12 out of 15 tests. Finally, for the second quartile, we cannot reject equal deservingness for any of the 15 tests; note that this finding also supports additively separable fairness views because this group has no tendency to favor work or investment, that is, $d = 0.50$. If, instead, fairness views are characterized by $s(L, K, \alpha) = g(L, K, \alpha) + (d - 0.5)$, where the function $g(\cdot)$ satisfies Equal deservingness, then all points must lie on the dashed line. We cannot reject the null hypothesis that the point is on the dashed line for 52 out of 60 tests. Results are based on the U.S. sample.

Figure A4. Residual analysis by relative input amount and productivity parameter



Notes: The figure plots the average residual for each of the 27 choice situations against $L/(L+K)$ and α . The residual is calculated by regressing $s(X, Z, \alpha)$ on only α for the left figure and only $L/(L+K)$ for the right figure.

Figure A5. Distribution of weight on fairness views

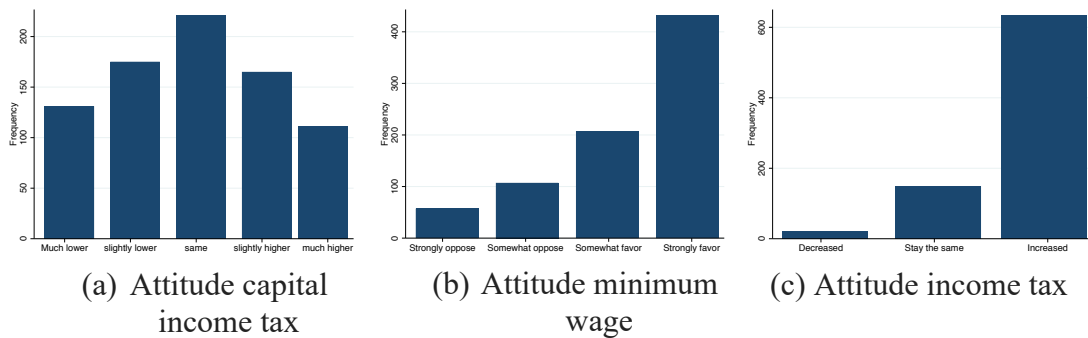


(a) Weight on meritocratic view (γ_i)

(b) Weight on market libertarian view (δ_i)

(c) Weight on egalitarian view ($1 - \gamma_i - \delta_i$)

Figure A6. Distribution policy preferences



Notes: *Attitude capital income tax* captures participants' views on how investment income (capital gains and dividends) should be taxed relative to labor income, *Attitude minimum wage* captures support for raising the federal minimum wage to \$15.00 an hour and *Attitude income tax* captures whether income taxes on millionaires should be increased, remain the same, or be decreased. Results are based on the U.S. sample.

Table A1. Description of variables elicited

Variable	Description
Age	<i>Please indicate your age (in years)</i>
Female	<i>Do you identify yourself as a woman or a man?</i>
Ethnicity	<i>How would you describe your ethnicity/race? (European American/White, African American/Black, Hispanic/Latino, Asian/Asian American, Other)</i>
Children	<i>Do you have children living with you? 0- No; 1- Yes</i>
Marital status	<i>Please indicate your marital status 0- Single; 1- Married</i>
Total Household Income	<i>What was your TOTAL household income, before taxes, last year (2020)? (\$0 - \$9,999, \$10,000 - \$14,999, \$15,000-\$19,999, \$20,000 - \$29,999, \$30,000 - \$39,999, \$40,000 - \$49,999, \$50,000 - \$74,999, \$75,000 - \$99,999, \$100,000 - \$124,999, \$125,000 - \$149,999, \$150,001 - \$199,999, \$200,000+)</i>
Owns stock	<i>Do you own stock in a publicly-traded company? 0- No; 1- Yes</i>
Has retirement account	<i>Do you have a retirement account? 0- No; 1- Yes</i>
Homeowner	<i>Are you a homeowner? 0- No; 1- Yes</i>
Education	<i>Which category best describes your highest level of education? (Eighth Grade or less, Some High School, High School degree/ GED, Some College, 2-year College Degree, 4-year College Degree, Master's Degree, Doctoral Degree, Professional Degree (JD, MD, MBA))</i>
Employment status	<i>What is your current employment status? (Full-time employee, Part-time employee, Self-employed or business owner, Unemployed and looking for work, Student, Not in labor force (for example: retired, or full-time parent)</i>
Republican	<i>Which of these political labels would you most consider yourself? 0- if Democrat or Neither; 1- Republican</i>
Attitude capital income tax	<i>Federal tax policy allows investment income (capital gains and dividends) to be taxed at a lower rate than income from work. How do you think capital gains and dividends should be taxed? 0- at a much lower rate than income from work, 0.25- at a slightly lower rate than income from work, 0.5- at the same rate as income from work, 0.75- at a slightly higher rate than income from work, 1- at a much higher rate than income from work</i>
Attitude minimum wage	<i>Do you favor or oppose raising the federal minimum wage to \$15.00 an hour? 0- Strongly oppose, 1/3- Somewhat oppose, 2/3-Somewhat favor, 1- Strongly favor)</i>
Attitude income tax	<i>As you may know, there have been proposals recently to decrease the federal deficit by raising income taxes on millionaires. Do you think income taxes on millionaires should be increased, stay the same or decreased? (Increased, Stay the same, Decreased)</i>
Risk-affinity	<i>Please tell me, in general, how willing or unwilling you are to take risks. Please use a scale from 0 to 10, where 0 means you are “completely unwilling to take risks” and a 10 means you are “very willing to take risks”. You can also use any numbers between 0 and 10 to indicate where you fall on the scale, like 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.</i>
Altruism	<i>How willing are you to give to good causes without expecting anything in return? Please indicate your answer on a scale from 0 to 10. A 0 means “completely unwilling to do so,” and a 10 means “very willing to do so.” You can also use any number between 0 and 10 to indicate where you fall on the scale, using 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10.</i>
Patience	<i>How willing are you to give up something that is beneficial for you today in order to benefit more from that in the future? Please indicate your answer on a scale from 0 to 10. A 0 means “completely unwilling to do so,” and a 10 means “very willing to do so.” You can also use any number between 0 and 10 to indicate where you fall on the scale, using 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10.</i>

Table A2. Summary Statistics

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Sociodemographics				
Age	44.3	15.8	18	79
Female	0.499	0.500	0	1
Ethnicity				
European American / White	0.668			
African American / Black	0.142			
Hispanic / Latino	0.072			
Asian / Asian American	0.080			
Other	0.039			
Children	0.326	.469	0	1
Marital status: Married	0.456	.498	0	1
Total Household Income				
\$0 - \$9,999	0.044			
\$10,000 - \$14,999	0.040			
\$15,000 - \$19,999	0.049			
\$20,000 - \$29,999	0.086			
\$30,000 - \$39,999	0.108			
\$40,000 - \$49,999	0.112			
\$50,000 - \$74,999	0.183			
\$75,000 - \$99,999	0.145			
\$100,000 - \$124,999	0.100			
\$125,000 - \$149,999	0.049			
\$150,000 - \$199,999	0.050			
\$200,000+	0.036			
Owns stock	0.488	0.500	0	1
Has retirement account	0.564	0.496	0	1
Homeowner	0.484	0.500	0	1
Wealth (average own stock, retirement account and homeowner)	0.512	0.370	0	1
Education				
Some High School	0.005			
High School degree / GED	0.083			
Some College	0.201			
2-year College Degree	0.097			
4-year College Degree	0.372			
Master's Degree	0.183			
Doctoral Degree	0.031			
Professional Degree (JD, MD, MBA)	0.027			
Employment status				
Full-time employee	0.391			
Part-time employee	0.095			
Self-employed or small business owner	0.148			
Unemployed and looking for work	0.113			
Student	0.066			
Not in labor force (for example: retired, or full-time parent)	0.187			
Political position and policy preferences				
Republican	0.182	0.386	0	1
Attitude capital income tax	0.484	0.319	0	1
Attitude minimum wage	0.754	0.314	0	1
Attitude income tax	0.882	0.240	0	1

Table A3. Fairness views and political position / socio-economic status

Independent var.	(1)	(2)	(3)	(4)	(5)	(6)
Republican	-0.054 (0.039)					
Income		-0.010 (0.035)			-0.018 (0.039)	
Wealth			0.008 (0.039)		0.017 (0.046)	
Education				0.001 (0.047)	0.000 (0.048)	
Socio-economic status (PCA)						-0.001 (0.041)
Controls:						
Age and gender	Yes	Yes	Yes	Yes	Yes	Yes
N	803	803	803	803	803	803

Notes: We regress d_i on political position and socio-economic status (OLS), controlling for age and gender. *Republican* has a value of 1 if the individual considers him/herself republican, and 0 otherwise. *Income* is the 2020 household income, before taxes. *Wealth* is the average of three dummy variables: own stock, have a retirement account, homeowner. *Education* is coded as follows: 1 = no high school; 2 = High School degree / GED; 3 = some college; 4 = bachelor's degree or higher). *Socio-economic status* is first principal component from a principal component analysis of Income, Wealth and Education. Results are based on the U.S. sample.

Table A4. Tendency to favor work predicts attitudes towards minimum wage

Dependent variable:					
<i>Attitude minimum wage</i>	(1)	(2)	(3)	(4)	(5)
<i>Deservingness of labor</i> ($= d_i$)	0.091*** (0.035)	0.088** (0.036)	0.065** (0.030)	0.059** (0.028)	0.059** (0.029)
<i>Meritocratic view</i> ($= \gamma_i$)		-0.082** (0.035)	-0.062* (0.034)	-0.051 (0.034)	-0.057* (0.034)
<i>Market libertarian view</i> ($= \delta_i$)		-0.004 (0.037)	0.013 (0.034)	0.027 (0.033)	0.024 (0.033)
Controls:					
Age, gender (pre-reg.)	Yes	Yes	Yes	Yes	Yes
Income, wealth, political position			Yes	Yes	Yes
Other sociodemographics				Yes	Yes
Time, risk and social preferences					Yes
N	803	803	803	803	803

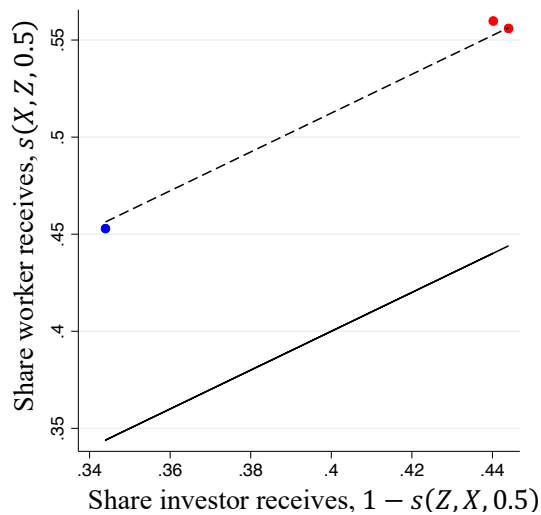
Notes: The table shows coefficient estimates from linear regressions of attitudes towards the minimum wage on d_i . Heteroscedasticity robust standard errors are shown in parentheses. γ_i and δ_i are individual-level parameter estimates capturing the weight each individual places on the meritocratic and market-libertarian views, respectively. We standardize *Attitude minimum wage*, d_i , γ_i and δ_i . Other sociodemographics include education, ethnicity, employment status, having children, marital status, and state fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A5. Tendency to favor work does not predict attitudes towards income tax

Dependent variable: <i>Attitude income tax</i>	(1)	(2)	(3)	(4)	(5)
<i>Deservingness of labor</i> ($= d_i$)	0.051 (0.032)	0.051 (0.033)	0.034 (0.029)	0.038 (0.033)	0.037 (0.032)
<i>Meritocratic view</i> ($= \gamma_i$)		-0.004 (0.041)	0.015 (0.040)	0.014 (0.040)	0.008 (0.040)
<i>Market libertarian view</i> ($= \delta_i$)		-0.041 (0.037)	-0.027 (0.034)	-0.015 (0.036)	-0.020 (0.036)
Controls:					
Age, gender (pre-reg.)	Yes	Yes	Yes	Yes	Yes
Income, wealth, political position			Yes	Yes	Yes
Other sociodemographics				Yes	Yes
Time, risk and social preferences					Yes
N	803	803	803	803	803

Notes: The table shows coefficient estimates from linear regressions of attitudes towards the income tax on d_i . Heteroscedasticity robust standard errors are shown in parentheses. We pre-registered that we expect d_i to *not* predict *Attitude income tax*. γ_i and δ_i are individual-level parameter estimates capturing the weight each individual places on the meritocratic and market-libertarian views, respectively (see Sections 3.2.2 and 3.2.3 for details). We standardize *Attitude income tax*, d_i , γ_i and δ_i . Other sociodemographics include education, ethnicity, employment status, having children, marital status, and state fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Results are based on the U.S. sample.

Appendix B – Additional Analysis for the Swiss studies

Figure B1. Tests of an equal tendency to reward capital and labor

Notes: This figure plots the actual shares allocated to the workers against the actual shares allocated to the investors when they provide the same relative amount of the respective inputs and have the same productivity. Red points correspond to equations $X = Z = 1$ and $X = Z = 2$; blue point correspond to equation $(X, Z) = (1, 2)$. Results are based on the Swiss sample.

Figure B2. Distribution of tendencies to reward labor, Switzerland and U.S.

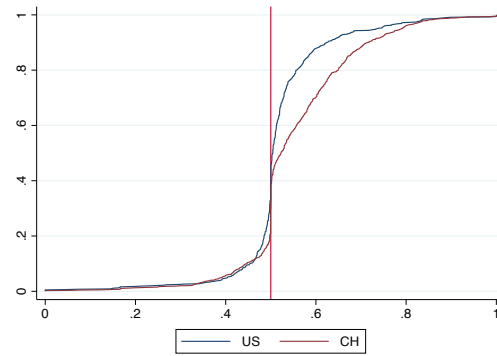


Figure B3. Distribution of individual-level tendencies to reward labor, French and German speaking participants

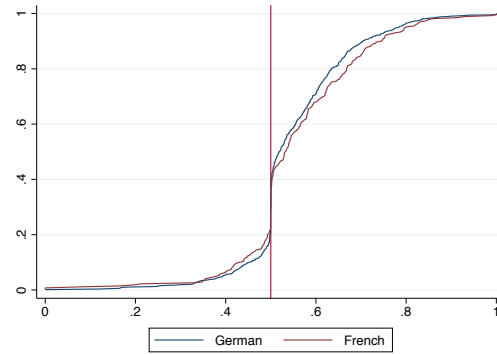
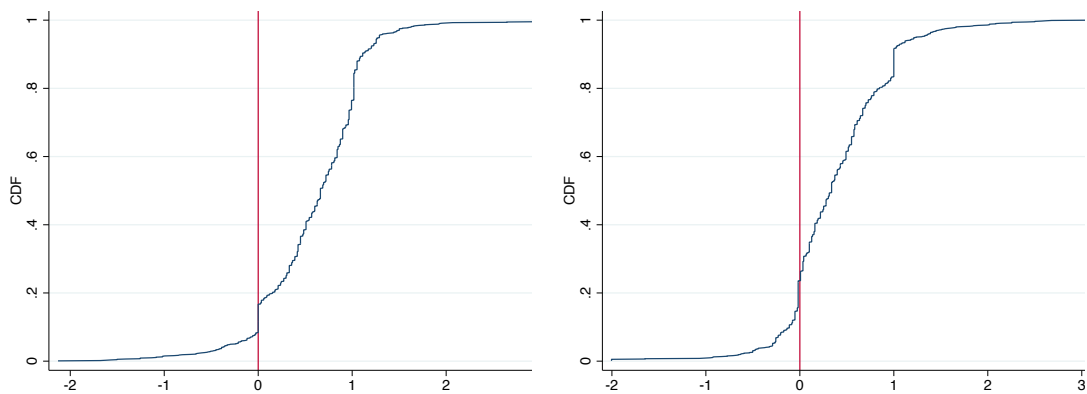


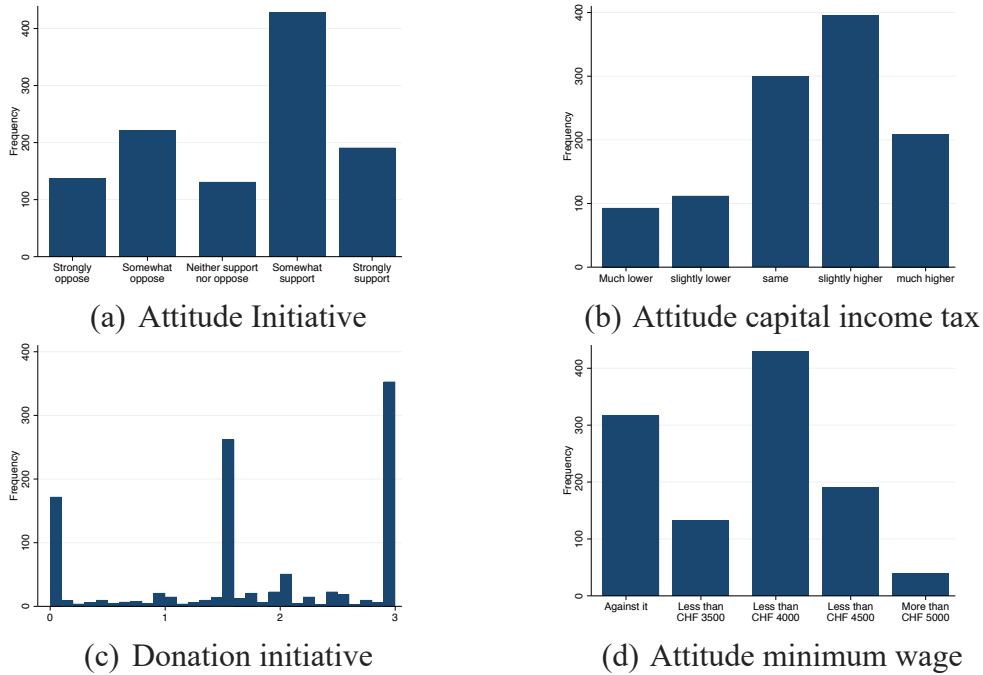
Figure B4. Distribution of meritocratic and egalitarian fairness views



(a) Weight on meritocratic view ($\hat{\gamma}_i$)

(b) Weight on egalitarian view ($1 - \hat{\gamma}_i$)

Figure B5. Distribution policy preferences



Notes: Attitude initiative captures support for the Swiss referendum, Attitude capital income tax captures participants' views on how investment income should be taxed relative to labor income, Donation initiative is the amount (up to CHF 3) allocated to the committee supporting the initiative, Attitude minimum wage captures support for introducing a minimum wage in Switzerland.

Table B1. Detailed description of the variables elicited

Variable	Description
Total Household Income	<i>What is the total monthly income of your household, taking all sources into account? (Salary, state pension, disability insurance, unemployment insurance, interests or dividends from your wealth, bursary, etc.)</i>
Has retirement account	<i>Do you save in a "3rd pillar" pension fund? (For example, a private pension fund, life insurance.) 0- No; 1- Yes</i>
Homeowner	<i>Are you, or another person living in your household, a tenant or owner of the accommodation you currently live in? 0- tenant; 1- owner/co-owner</i>
Education	<i>What is your highest education level?</i>
Political position	<i>"LEFT", "CENTER" and "RIGHT" are three terms that are often used to characterize political views. Can you tell me where you stand on a scale, where 0 is far left, 5 is center and 10 is far right?</i>
Attitude capital income tax	<i>How do you think capital gains and dividends should be taxed? 0- at a much lower rate than income from work, 0.25- at a slightly lower rate than income from work, 0.5- at the same rate as income from work, 0.75- at a slightly higher rate than income from work, 1- at a much higher rate than income from work</i>
Attitude initiative	<i>"The initiative "Löhne entlasten, Kapital gerecht besteuern" requires that capital income exceeding a certain threshold amount to be taxed at a rate 1.5 times higher than labor income. The threshold amount would be determined by the legislature; the initiators suggest about CHF 100'000. * The additional tax revenues generated by the initiative would be used to lower</i>

	<i>the taxes of people with low and medium wages. Do you support or oppose this initiative?" 0- Strongly oppose, 0.25- Somewhat oppose, 0.5- Neither support nor oppose, 0.75- Somewhat support, 1- Strongly support)</i>
Donation initiative	<i>Various political and social groups support or oppose the initiative "Löhne entlasten, Kapital gerecht besteuern." Both a support committee and an opposition committee have been formed. Currently, the committees collect donations to support or fight the initiative. Donations are used to print flyers and posters and to employ people to organize their respective campaigns. In the following, you can donate to the committee that supports and the committee that opposes the initiative. You receive CHF 3 from us that you have to divide between the committee that supports and the committee that opposes the initiative. Your decision will be implemented. This means that the committees will really receive your chosen donation. We will transfer your donation to the committees shortly after the end of the survey. How much should the committee supporting the initiative and how much should the committee opposing the initiative receive?</i>
Attitude minimum wage	<i>Are you in favor of introducing a statutory minimum wage throughout Switzerland and, if so, how high should this minimum wage be? (0- I am against it, 0.25- less than CHF 3500, 0.5- CHF 4000, 0.75- CHF 4500, 1- more than CHF 5000)</i>

Note: * We took this description of the initiative from the website of the initiators of the initiative.

Table B2. Summary Statistics

<i>Variable</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Sociodemographics				
Age	44.1	15.1	18	80
Female	0.493	0.500	0	1
Children	0.313	0.464	0	1
Marital status: Married	0.482	0.500	0	1
Total Monthly Household Income				
< 2'000 CHF	0.028			
2'001 – 3'000 CHF	0.044			
3'001 – 4'000 CHF	0.039			
4'001 – 5'000 CHF	0.090			
5'001 – 6'000 CHF	0.086			
6'001 – 7'000 CHF	0.090			
7'001 – 8'000 CHF	0.088			
8'001 – 9'000 CHF	0.093			
9'001 – 10'000 CHF	0.106			
10'001 – 11'000 CHF	0.068			
11'001 – 12'000 CHF	0.051			
12'001 – 13'000 CHF	0.055			
13'001 – 14'000 CHF	0.029			
14'001 – 15'000 CHF	0.050			
> 15'000 CHF	0.085			
Owns stock	0.351	0.477	0	1
Has voluntary retirement account	0.686	0.464	0	1
Homeowner	0.485	0.500	0	1
Education				
Incomplete compulsory school	0.005			
Compulsory school, elementary vocational training	0.025			
Domestic science course, 1 year school of commerce	0.001			
General training school	0.009			
Apprenticeship	0.261			
Full-time vocational school	0.014			

Maturity	0.133			
Vocational high school with master certificate, federal certificate	0.089			
Technical or vocational school	0.042			
Vocational high school	0.107			
University, academic high school	0.313			
Employment status				
Employee full-time	0.415			
Employee part-time	0.262			
Self-employed full-time	0.033			
Self-employed part-time	0.027			
Unemployed	0.021			
Retired	0.112			
Student	0.072			
At home (domestic work, children)	0.031			
Other inactive	0.027			
Political position and policy preferences				
Political position (right-wing)	4.98	2.04	0	10
Attitude capital income tax	0.612	0.289	0	1
Attitude initiative	0.571	0.325	0	1
Donation initiative	1.79	1.07	0	3
Attitude minimum wage	0.388	0.294	0	1

Table B3. Fairness views and political position and socio-economic status

Independent variables	(1)	(2)	(3)	(4)	(5)
Political position (right-wing)	-0.165*** (0.035)				
Income		0.009 (0.031)			
Wealth			0.015 (0.035)		
Education				0.091*** (0.033)	
Socio-economic status (PCA)					0.050 (0.036)
Controls:					
Age and gender	Yes	Yes	Yes	Yes	Yes
N	1109	1109	1109	1109	1109

Notes: We regress d_i on political position and socio-economic status (OLS). *Political position:* we ask participants to rate themselves from 0 = left-wing to 10 = right-wing. *Income:* the 2020 monthly household income, before taxes. *Wealth:* average of three dummy variables: own stock, have a voluntary retirement account, homeowner. *Education:* 1=incomplete compulsory school, 2=compulsory school, elementary vocational training, 3=domestic science course, 1 year school of commerce, 4=general training school, 5=apprenticeship, 6=full-time vocational school, 7= maturity, 8=vocational high school with master certificate, federal certificate, 9=technical or vocational school, 10=vocational high school, 11=university, academic high school. *Socio-economic status:* first principal component from a principal component analysis of Income, Wealth and Education. We standardized all variables. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B4. Fairness views and actual voting

	(1)	(2)	(3)	(4)	(5)
Dependent variable: <i>vote initiative</i>					
<i>Deservingness of labor</i> ($= d_i$)	0.148*** (0.037)	0.147*** (0.037)	0.075*** (0.029)	0.072** (0.030)	0.065** (0.030)
<i>Meritocratic view</i> ($= \hat{\gamma}_i$)		-0.026 (0.034)	-0.020 (0.032)	-0.019 (0.033)	-0.015 (0.033)
Controls:					
Age, gender (pre-reg.)	Yes	Yes	Yes	Yes	Yes
Income, wealth, political position			Yes	Yes	Yes
Other sociodemographics				Yes	Yes
Time, risk and social preferences					Yes
<i>N</i>	799	799	799	799	799

Notes: The table shows coefficient estimates from linear regressions of vote initiative on d_i . The sample is restricted to participants who cast a non-empty vote ($N=799$). Heteroscedasticity robust standard errors are shown in parentheses. The coefficients for γ_i are individual-level parameter estimates capturing the weight each individual places on the meritocratic fairness view (see Sections 3.2.2 and 3.2.3 for details). We standardize vote initiative, d_i , and γ_i . Other sociodemographics include education, employment status, having children, marital status, and canton fixed effects. Appendix Table B2 provides summary statistics for all control variables. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table B5. Variables perceptions survey (Section 5)

Variable name	Description
<i>i) Perceived impact of taxation on individual tax burden</i>	
<i>Impact_self_now_{c,i}</i>	How do you think an increase in the tax on income from [investing/working] by 5 percentage points would impact you financially now? (Scale from 1 = “It would have a large negative financial impact” to 7 = “It would have a large positive financial impact”)
<i>Impact_self_10years_{c,i}</i>	How do you think an increase in the tax on income from [investing/working] by 5 percentage points would impact you financially in 10 years? (Scale from 1 = “It would have a large negative financial impact” to 7 = “It would have a large positive financial impact”)
<i>ii) Perceived impact of taxation on economy and society</i>	
How do you think an increase in the tax on income from [investing/working] by 5 percentage points would impact the following (holding the tax on income from working constant at the current level) over the next 10 years:	
<i>Impact_savings_{c,i}</i>	Savings in Switzerland: Scale from 1 = “People would save a lot less” to 7 = “People would save a lot more”
<i>Impact_capitalflight_{c,i}</i>	Capital flight from Switzerland: Scale from 1 = “Substantial amounts of assets and money would flow into Switzerland” to 7 = “Substantial amounts of assets and money would flow out of Switzerland”
<i>Impact_investments_{c,i}</i>	Investments in Switzerland: Scale from 1 = “Investments in Swiss companies would decrease by a lot” to 7 = “Investments in Swiss companies would increase by a lot”

<i>Impact_growth_{c,i}</i>	Economic growth in Switzerland: Scale from 1 = “Economic growth would slow down by a lot” to 7 = “Economic growth would increase by a lot”
<i>Impact_unemployment_{c,i}</i>	Unemployment in Switzerland: Scale from 1 = “Unemployment would decrease substantially” to 7 = “Unemployment would increase substantially”
<i>Impact_inequality_{c,i}</i>	Inequality in Switzerland: Scale from 1 = “Inequality would decrease substantially” to 7 = “Inequality would increase substantially”
<i>Impact_revenue_{c,i}</i>	Revenue of the Swiss government: Scale from 1 = “Government revenue would decrease substantially” to 7 = “Government revenue would increase substantially”
<i>Impact_humancapital_{c,i}</i>	Human capital flight from Switzerland: Scale from 1 = “Many skilled workers would leave Switzerland” to 7 = “Many skilled workers would move to Switzerland”
<i>iii) Perceptions of investing versus working</i>	
<i>Risk_{c,i}</i>	To what extent do you think the following activities involve risks (such as financial or health risks)? • Working for a wage: Scale from 1 = “Not risky at all” to 7 = “Very risky” • Investing money: Scale from 1 = “Not risky at all” to 7 = “Very risky”
<i>Productivity_{c,i}</i>	How important do you think work and investment are for the success of the Swiss economy? • Working for a wage: Scale from 1 = “Not important at all” to 7 = “Very important” • Investing money: Scale from 1 = “Not important at all” to 7 = “Very important”
<i>Wealth_{c,b}</i> <i>Honesty_{c,b}</i> <i>Prosociality_{c,i}</i>	In general, how would you describe a person who generates a larger share of his/her income from investing money than from working for a wage [from working for a wage than from investing money]? • Wealth: Scale from 1 = “Very poor” to 7 = “Very rich” • Honesty: Scale from 1 = “Very dishonest” to 7 = “Very honest” • Prosociality: Scale from 1 = “Very greedy” to 7 = “Very generous”
<i>Source_Wealth_i</i>	In your opinion, which generally has more to do with why a person is rich? (1 = This person has worked harder than most other people, 2 = Both hard work and advantages in life are equally important, 3 = This person had more advantages in life than most other people)
<i>Cost_taxation_i</i>	What do you think, is it relatively easier to enforce taxes on income from investing or to enforce taxes on income from working? Consider both administrative costs for the government and compliance costs for the taxpayers. (1 = It is relatively more costly to enforce taxes on income from investing, 2 = Both taxes are equally costly to enforce, 3 = It is relatively more costly to enforce taxes on income from working)

Notes: The subscript “c” refers to whether the variable concerns labor income taxation/working ($c=L$) or capital income taxation/investing ($c=C$); the subscript “i” refers to the individual.

Table B6. Summary statistics variables perceptions survey (Section 5)

Variable	Scale	Labor Mean (SD)	Capital Mean (SD)	Difference (t ₆₃₆)
<i>Impact_self_now_{c,i}</i>	1 = "It would have a large negative financial impact" to 7 = "It would have a large positive financial impact"	2.83 (1.24)	3.68 (1.10)	-0.85*** (-13.75)
<i>Impact_self_10years_{c,i}</i>	1 = "It would have a large negative financial impact" to 7 = "It would have a large positive financial impact"	2.89 (1.25)	3.59 (1.11)	-0.70*** (-13.21)
<i>Impact_savings_{c,i}</i>	1 = "People would save a lot less" to 7 = "People would save a lot more"	3.48 (1.43)	3.84 (1.14)	-0.36*** (-5.13)
<i>Impact_capitalflight_{c,i}</i>	1 = "Substantial amounts of assets and money would flow into Switzerland" to 7 = "Substantial amounts of assets and money would flow out of Switzerland"	4.22 (1.09)	4.70 (1.26)	-0.48*** (-8.33)
<i>Impact_investments_{c,i}</i>	1 = "Investments in Swiss companies would decrease by a lot" to 7 = "Investments in Swiss companies would increase by a lot"	3.86 (1.10)	3.53 (1.20)	0.33*** (5.62)
<i>Impact_growth_{c,i}</i>	1 = "Economic growth would slow down by a lot" to 7 = "Economic growth would increase by a lot"	3.47 (1.11)	3.78 (1.06)	-0.31*** (-5.90)
<i>Impact_unemployment_{c,i}</i>	1 = "Unemployment would decrease substantially" to 7 = "Unemployment would increase substantially"	4.37 (1.00)	4.10 (1.00)	0.28*** (5.30)
<i>Impact_inequality_{c,i}</i>	1 = "Inequality would decrease substantially" to 7 = "Inequality would increase substantially"	4.81 (1.36)	3.79 (1.23)	1.02*** (14.87)
<i>Impact_revenue_{c,i}</i>	1 = "Government revenue would decrease substantially" to 7 = "Government revenue would increase substantially"	4.58 (1.17)	4.37 (1.28)	0.21*** (3.72)
<i>Impact_humancapital_{c,i}</i>	1 = "Many skilled workers would leave Switzerland" to 7 = "Many skilled workers would move to Switzerland"	3.36 (1.19)	3.91 (1.05)	-0.54*** (-9.97)
<i>Risk_{c,i}</i>	1 = "Not risky at all" to 7 = "Very risky"	2.86 (1.35)	4.74 (1.20)	-1.88*** (-27.19)
<i>Productivity_{c,i}</i>	Scale from 1 = "Not important at all" to 7 = "Very important"	6.10 (1.26)	4.66 (1.36)	1.43*** (22.67)
<i>Wealth_{c,i}</i>	1 = "Very poor" to 7 = "Very rich"	4.11 (0.99)	5.50 (1.12)	-1.40*** (-21.74)
<i>Honesty_{c,i}</i>	1 = "Very dishonest" to 7 = "Very honest"	5.22 (1.19)	4.01 (1.11)	1.21*** (18.68)
<i>Prosociality_{c,i}</i>	1 = "Very greedy" to 7 = "Very generous"	4.33 (0.85)	3.40 (1.20)	0.92*** (15.24)
<i>Source_Wealth_i</i>	1 = This person has worked harder than most other people, 2 = Both hard work and advantages in life are equally important, 3 = This person had more advantages in life than most other people	2.37 (0.63)		
<i>Cost_taxation_i</i>	1 = It is relatively more costly to enforce taxes on income from investing, 2 = Both taxes are equally costly to enforce, 3 = It is relatively more costly to enforce taxes on income from working	1.91 (0.84)		

Table B7. Tradeoffs in support for the capital income tax

Dependent variable: <i>Attitude capital income tax</i>	(1)	(2)	(3)	(4)	(5)
<i>Deservingness of labor, standardized (= std(d_i))</i>	0.143*** (0.040)	0.146*** (0.038)	0.120*** (0.038)	0.101*** (0.037)	0.105*** (0.036)
<i>Impact_self_now_{C,i}</i>	0.059 (0.055)			0.060 (0.05)	0.054 (0.048)
<i>Impact_self_now_{L,i}</i>	-0.054 (0.076)			-0.069 (0.059)	
<i>Impact_self_10years_{C,i}</i>	0.184*** (0.054)			0.087* (0.05)	0.097** (0.048)
<i>Impact_self_10years_{L,i}</i>	0.021 (0.082)			0.058 (0.063)	
<i>Impact_savings_{C,i}</i>		0.055 (0.044)		0.039 (0.04)	0.044 (0.04)
<i>Impact_capitalflight_{C,i}</i>		-0.041 (0.05)		-0.033 (0.046)	
<i>Impact_investments_{C,i}</i>		0.158*** (0.054)		0.126*** (0.048)	0.131*** (0.042)
<i>Impact_growth_{C,i}</i>		0.015 (0.051)		-0.028 (0.047)	
<i>Impact_unemployment_{C,i}</i>		-0.114** (0.045)		-0.119*** (0.041)	-0.119*** (0.039)
<i>Impact_inequality_{C,i}</i>		-0.093** (0.045)		-0.023 (0.044)	
<i>Impact_revenue_{C,i}</i>		0.075* (0.044)		0.052 (0.041)	0.050 (0.037)
<i>Impact_humancapital_{C,i}</i>		-0.062 (0.05)		-0.101** (0.048)	-0.095** (0.046)
<i>Impact_savings_{L,i}</i>		-0.006 (0.04)		0.001 (0.04)	
<i>Impact_capitalflight_{L,i}</i>		-0.01 (0.045)		0.006 (0.044)	
<i>Impact_investments_{L,i}</i>		0.028 (0.05)		0.044 (0.047)	
<i>Impact_growth_{L,i}</i>		-0.076 (0.053)		-0.074 (0.051)	-0.058 (0.045)
<i>Impact_unemployment_{L,i}</i>		-0.079* (0.047)		-0.073* (0.042)	-0.079* (0.040)
<i>Impact_inequality_{L,i}</i>		0.093 (0.046)		0.064 (0.043)	0.060 (0.038)
<i>Impact_revenue_{L,i}</i>		-0.001 (0.045)		-0.002 (0.043)	
<i>Impact_humancapital_{L,i}</i>		-0.009 (0.049)		0.011 (0.046)	
<i>Risk_{L,i}</i>			0.016 (0.037)	0.024 (0.036)	
<i>Risk_{C,i}</i>			0.013 (0.038)	0.016 (0.038)	
<i>Productivity_{L,i}</i>			0.032 (0.04)	0.032 (0.038)	
<i>Productivity_{C,i}</i>			-0.104** (0.043)	-0.079* (0.042)	-0.070* (0.041)
<i>Wealth_{C,i}</i>			0.059 (0.041)	0.058 (0.041)	0.060 (0.039)
<i>Honesty_{C,i}</i>			-0.154*** (0.048)	-0.146*** (0.045)	-0.140*** (0.043)
<i>Prosociality_{C,i}</i>			-0.090** (0.047)	-0.063 (0.046)	-0.075* (0.044)
<i>Wealth_{L,i}</i>			0.022 (0.039)	0.010 (0.039)	
<i>Honesty_{L,i}</i>			-0.023 (0.043)	0.001 (0.044)	
<i>Prosociality_{L,i}</i>			0.073 (0.046)	0.066 (0.046)	0.066 (0.041)
<i>Source_Wealth_i</i>			0.182*** (0.04)	0.147*** (0.041)	0.144*** (0.039)
<i>Cost_taxation_i</i>			-0.034 (0.037)	-0.032 (0.037)	
N	637	637	637	637	637

Notes: The table shows coefficient estimates from linear regressions of *Attitude capital income tax* on $std(d_i)$ on several perceptions of the impacts of capital and labor taxation and perceptions of the provision of capital and labor inputs. The independent variables in Column (5) were selected among all 33 measures presented in the Table (including $std(d_i)$) using adaptive LASSO; LASSO with cross-validation also selects $std(d_i)$, but yields a less parsimonious model. Heteroscedasticity robust standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B8. Tradeoffs in support for the initiative

Dependent variable: <i>attitude initiative</i>	(1)	(2)	(3)	(4)	(5)
<i>Deservingness of labor, standardized (= std(d_i))</i>	0.099** (0.041)	0.105*** (0.039)	0.084** (0.038)	0.066* (0.038)	0.075** (0.037)
<i>Impact_self_now_{C,i}</i>	0.118** (0.055)			0.101** (0.049)	0.095** (0.047)
<i>Impact_self_now_{L,i}</i>	-0.139** (0.07)			-0.161** (0.064)	
<i>Impact_self_10years_{C,i}</i>	0.181*** (0.054)			0.050 (0.05)	0.061 (0.049)
<i>Impact_self_10years_{L,i}</i>	0.145** (0.07)			0.146** (0.065)	
<i>Impact_savings_{C,i}</i>		-0.015 (0.038)		-0.020 (0.035)	
<i>Impact_capitalflight_{C,i}</i>		-0.059 (0.051)		-0.038 (0.047)	
<i>Impact_investments_{C,i}</i>		0.109** (0.052)		0.086* (0.047)	0.094** (0.044)
<i>Impact_growth_{C,i}</i>		0.181*** (0.051)		0.141*** (0.048)	0.149*** (0.043)
<i>Impact_unemployment_{C,i}</i>		-0.026 (0.043)		-0.024 (0.042)	
<i>Impact_inequality_{C,i}</i>		-0.104** (0.044)		-0.062 (0.046)	-0.058 (0.042)
<i>Impact_revenue_{C,i}</i>		0.04 (0.044)		0.023 (0.041)	
<i>Impact_humancapital_{C,i}</i>		0.002 (0.047)		-0.049 (0.045)	
<i>Impact_savings_{L,i}</i>		-0.059 (0.038)		-0.053 (0.038)	-0.068* (0.037)
<i>Impact_capitalflight_{L,i}</i>		0.009 (0.044)		0.021 (0.044)	
<i>Impact_investments_{L,i}</i>		0 (0.047)		0.018 (0.045)	
<i>Impact_growth_{L,i}</i>		0.031 (0.05)		0.013 (0.05)	
<i>Impact_unemployment_{L,i}</i>		-0.116*** (0.044)		-0.110*** (0.041)	-0.119*** (0.036)
<i>Impact_inequality_{L,i}</i>		0.059 (0.044)		0.034 (0.041)	
<i>Impact_revenue_{L,i}</i>		-0.031 (0.042)		-0.018 (0.04)	
<i>Impact_humancapital_{L,i}</i>		-0.007 (0.043)		0.011 (0.043)	
<i>Risk_{L,i}</i>			0.055 (0.037)	0.068** (0.034)	0.068** (0.033)
<i>Risk_{C,i}</i>			0.058 (0.039)	0.052 (0.037)	
<i>Productivity_{L,i}</i>			-0.074** (0.037)	-0.064* (0.037)	-0.056 (0.035)
<i>Productivity_{C,i}</i>			-0.130*** (0.043)	-0.075* (0.042)	-0.076* (0.041)
<i>Wealth_{C,i}</i>			0.064 (0.041)	0.057 (0.04)	
<i>Honesty_{C,i}</i>			-0.070 (0.049)	-0.061 (0.044)	-0.055 (0.043)
<i>Prosociality_{C,i}</i>			-0.094* (0.048)	-0.074 (0.048)	-0.081* (0.046)
<i>Wealth_{L,i}</i>			0.055 (0.039)	0.025 (0.039)	
<i>Honesty_{L,i}</i>			-0.075 (0.046)	-0.028 (0.044)	
<i>Prosociality_{L,i}</i>			0.108** (0.044)	0.090** (0.041)	0.090** (0.037)
<i>Source_Wealth_i</i>			0.171*** (0.041)	0.134*** (0.039)	0.140*** (0.039)
<i>Cost_taxation_i</i>			-0.030 (0.039)	-0.040 (0.037)	
N	637	637	637	637	637

Notes: The table shows coefficient estimates from linear regressions of *attitude initiative* on $\text{std}(d_i)$ on several perceptions of the impacts of capital and labor taxation and perceptions of the provision of capital and labor inputs. The independent variables in Column (5) were selected among all 33 measures presented in the Table (including $\text{std}(d_i)$) using adaptive LASSO; LASSO with cross-validation also selects $\text{std}(d_i)$, but yields a less parsimonious model. Heteroscedasticity robust standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B9. Dominance analysis

Dependent variable:	<i>Attitude capital income tax</i>		<i>Attitude initiative</i>	
	Standardized Domin. Stat.	Ranking	Standardized Domin. Stat.	Ranking
<i>Deservingness of labor, standardized (= std(d_i))</i>	0.0656	7	0.0303	13
<i>Impact_self_now_{C,i}</i>	0.0447	9	0.0734	4
<i>Impact_self_now_{L,i}</i>	0.0032	27	0.0131	21
<i>Impact_self_10years_{C,i}</i>	0.0656	6	0.0638	5
<i>Impact_self_10years_{L,i}</i>	0.0032	26	0.0175	19
<i>Impact_savings_{C,i}</i>	0.0114	18	0.0019	33
<i>Impact_capitalflight_{C,i}</i>	0.0197	14	0.04	9
<i>Impact_investments_{C,i}</i>	0.0688	5	0.0778	3
<i>Impact_growth_{C,i}</i>	0.0181	15	0.1088	1
<i>Impact_unemployment_{C,i}</i>	0.0812	4	0.026	14
<i>Impact_inequality_{C,i}</i>	0.0326	10	0.037	11
<i>Impact_revenue_{C,i}</i>	0.0262	12	0.0205	17
<i>Impact_humancapital_{C,i}</i>	0.0077	21	0.0128	22
<i>Impact_savings_{L,i}</i>	0.0008	33	0.0094	23
<i>Impact_capitalflight_{L,i}</i>	0.0017	31	0.0022	30
<i>Impact_investments_{L,i}</i>	0.0051	22	0.0069	25
<i>Impact_growth_{L,i}</i>	0.0086	20	0.0092	24
<i>Impact_unemployment_{L,i}</i>	0.0171	16	0.0385	10
<i>Impact_inequality_{L,i}</i>	0.0168	17	0.0041	27
<i>Impact_revenue_{L,i}</i>	0.0012	32	0.0021	31
<i>Impact_humancapital_{L,i}</i>	0.0021	30	0.0039	28
<i>Risk_{L,i}</i>	0.0023	29	0.0182	18
<i>Risk_{C,i}</i>	0.0096	19	0.0217	16
<i>Productivity_{L,i}</i>	0.0031	28	0.0247	15
<i>Productivity_{C,i}</i>	0.0515	8	0.0595	6
<i>Wealth_{C,i}</i>	0.0289	11	0.017	20
<i>Honesty_{C,i}</i>	0.1423	1	0.0533	8
<i>Prosociality_{C,i}</i>	0.0896	3	0.0573	7
<i>Wealth_{L,i}</i>	0.0032	25	0.0019	32
<i>Honesty_{L,i}</i>	0.0035	24	0.0031	29
<i>Prosociality_{L,i}</i>	0.0201	13	0.0323	12
<i>Source_Wealth_i</i>	0.1399	2	0.107	2
<i>Cost_taxation_i</i>	0.0046	23	0.0044	26
N	637	637	637	637

Notes: The table shows results from a dominance analysis (Luchman, 2021) using linear models with R^2 . Due to the large number of measures, we used the epsilon method. The table gives Standardized general dominance statistics by variable

Table B10. Perceptions of labor/capital do not predict deservingness

Dependent variable: <i>std(d_i)</i>	(1)	(2)	(3)	(4)
<i>Impact_self_now_{C,i}</i>	0.071 (0.051)			0.058 (0.052)
<i>Impact_self_now_{L,i}</i>	0.034 (0.066)			0.025 (0.067)
<i>Impact_self_10years_{C,i}</i>	0.065 (0.053)			0.048 (0.056)
<i>Impact_self_10years_{L,i}</i>	-0.051 (0.066)			-0.02 (0.07)
<i>Impact_savings_{C,i}</i>		-0.034 (0.039)		-0.056 (0.037)
<i>Impact_capitalflight_{C,i}</i>		0.009 (0.05)		0.018 (0.049)
<i>Impact_investments_{C,i}</i>		-0.004 (0.052)		-0.012 (0.054)
<i>Impact_growth_{C,i}</i>		0.003 (0.055)		-0.022 (0.055)
<i>Impact_unemployment_{C,i}</i>		-0.032 (0.05)		-0.044 (0.048)
<i>Impact_inequality_{C,i}</i>		-0.053 (0.046)		-0.02 (0.048)
<i>Impact_revenue_{C,i}</i>		0.059 (0.044)		0.038 (0.044)
<i>Impact_humancapital_{C,i}</i>		0.021 (0.05)		-0.006 (0.049)
<i>Impact_savings_{L,i}</i>		0.029 (0.043)		0.032 (0.043)
<i>Impact_capitalflight_{L,i}</i>		-0.042 (0.041)		-0.049 (0.042)
<i>Impact_investments_{L,i}</i>		-0.009 (0.046)		-0.014 (0.045)
<i>Impact_growth_{L,i}</i>		0.019 (0.053)		0.015 (0.052)
<i>Impact_unemployment_{L,i}</i>		-0.02 (0.046)		-0.019 (0.047)
<i>Impact_inequality_{L,i}</i>		0.047 (0.048)		0.038 (0.047)
<i>Impact_revenue_{L,i}</i>		-0.041 (0.04)		-0.044 (0.04)
<i>Impact_humancapital_{L,i}</i>		-0.048 (0.045)		-0.038 (0.045)
<i>Risk_{L,i}</i>			0.046 (0.043)	0.046 (0.044)
<i>Risk_{C,i}</i>			0.020 (0.047)	0.028 (0.05)
<i>Productivity_{L,i}</i>			0.025 (0.039)	0.030 (0.038)
<i>Productivity_{C,i}</i>			-0.066 (0.044)	-0.055 (0.045)
<i>Wealth_{C,i}</i>			0.088* (0.046)	0.091* (0.048)
<i>Honesty_{C,i}</i>			-0.016 (0.045)	-0.018 (0.048)
<i>Prosociality_{C,i}</i>			-0.084 (0.051)	-0.071 (0.053)
<i>Wealth_{L,i}</i>			0.066 (0.042)	0.071 (0.045)
<i>Honesty_{L,i}</i>			0.000 (0.047)	0.001 (0.047)
<i>Prosociality_{L,i}</i>			-0.073 (0.046)	-0.076* (0.045)
<i>Source_Wealth_i</i>			0.030 (0.043)	0.020 (0.044)
<i>Cost_taxation_i</i>			-0.072* (0.037)	-0.074* (0.039)
N	637	637	637	637

Notes: The table shows coefficient estimates from linear regressions of *attitude initiative* on *std(d_i)* on several perceptions of the impacts of capital and labor taxation and perceptions of the provision of capital and labor inputs. Heteroscedasticity robust standard errors are shown in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

Appendix C – Worker and investor behavior

The U.S. study

Table C1 shows the work and investment choices of workers and investors for each level of α in the U.S. study. The table shows that all possible options are chosen frequently. Moreover, investors and workers make similar choices. On average, workers provide 2.22 units of labor while investors provide 2.17 units of investment. Hence, workers provide 0.05 more units, which is not statistically significantly different from zero (ttest, $t=0.99$, $p=0.32$). However, we find some weak evidence for differences in behaviors when comparing the entire distribution (Wilcoxon rank-sum test, $p=0.07$).

Table C1. Worker and investor choices, U.S.

	α			α		
	0.25	0.5	0.75	0.25	0.5	0.75
	<i>i) Work</i>			<i>ii) Investment</i>		
0	8.6%	10.8%	8.2%	6.0%	6.0%	5.6%
1	18.3%	12.7%	16.9%	26.5%	20.2%	14.6%
2	17.2%	19.0%	20.2%	25.8%	23.9%	24.7%
3	56.0%	57.5%	54.7%	41.8%	50.0%	55.1%

Table C2. Worker and investor beliefs, U.S.

<i>Situation</i>			<i>Actual</i>	<i>Fair share worker</i>			<i>Guessed share worker</i>		
L	K	α	<i>share worker</i>	Worker	Investor	p-value	Worker	Investor	p-value
2	2	0.5	0.53	0.58	0.5	<0.001	0.51	0.53	0.009
2	3	0.5	0.46	0.55	0.46	<0.001	0.49	0.5	0.280
3	2	0.5	0.58	0.6	0.53	<0.001	0.54	0.56	0.028
2	2	0.25	0.52	0.57	0.5	<0.001	0.52	0.52	0.657
2	2	0.75	0.52	0.57	0.49	<0.001	0.51	0.52	0.588

Notes: Actual share worker gives the average the spectators allocate the worker for each choice situation. We elicit these beliefs for the five choice scenarios. Fair share worker provides workers' and investors' perceptions of what share the workers would deserve. Guessed share worker provides workers' and investors' perceptions of what share the workers will receive. P-value provides the p-value of a t-test that compares the worker and investor perceptions.

We also elicited workers and investors beliefs about the spectators' behavior and their fairness perceptions about the allocation of Y . We elicit these beliefs for the five choice scenarios. Table C2 provides the results. The table shows that workers and investors have largely similar beliefs about spectators' behavior. They anticipate that the spectators tend to allocate a larger share to the worker and that they will also consider relative factor inputs. However, the worker and investor disagree about what

they think would be a fair distribution, in line with a self-serving bias in the perception of fairness (Konow, 2000).

The Swiss study

Table C3 shows the work and investment choices of workers and investors in the Swiss study. Recall that in this study, α was 0.5. The table shows that both options that produce a strictly positive production output are chosen frequently. Moreover, investors and workers make largely similar choices. On average, workers provide 1.62 units of labor while investors provide 1.55 units of investment. The difference between work and investment is small, although statistically significantly different ($t=2.82$, $p=0.005$).

Table C3. Worker and investor choices, Switzerland

	<i>i) Work</i>	<i>ii) Investment</i>
0	5.9%	4.5%
1	26.4%	36.2%
2	67.7%	59.3%

We also elicited workers and investors beliefs about the spectators' behavior and their fairness perceptions about the allocation of Y . We elicit these beliefs for all four choice scenarios. Table C4 provides the results. We replicate the finding of the first study. Workers and investors have largely similar beliefs about spectators' behavior. They anticipate that the spectators tend to allocate a larger share to the worker and that they will also consider relative factor inputs. However, the worker and investor disagree about what they think would be a fair distribution, in line with a self-serving bias in the perception of fairness.

Table C4. Worker and investor beliefs, Switzerland

<i>Situation</i>		<i>Actual</i>	<i>Fair share worker</i>			<i>Guessed share worker</i>		
L	K	<i>share worker</i>	Worker	Investor	p-value	Worker	Investor	p-value
1	1	0.56	0.60	0.48	<0.001	0.54	0.52	0.003
1	2	0.45	0.56	0.43	<0.001	0.51	0.48	<0.001
2	1	0.66	0.63	0.54	<0.001	0.57	0.56	0.426
2	2	0.56	0.60	0.48	<0.001	0.54	0.51	<0.001

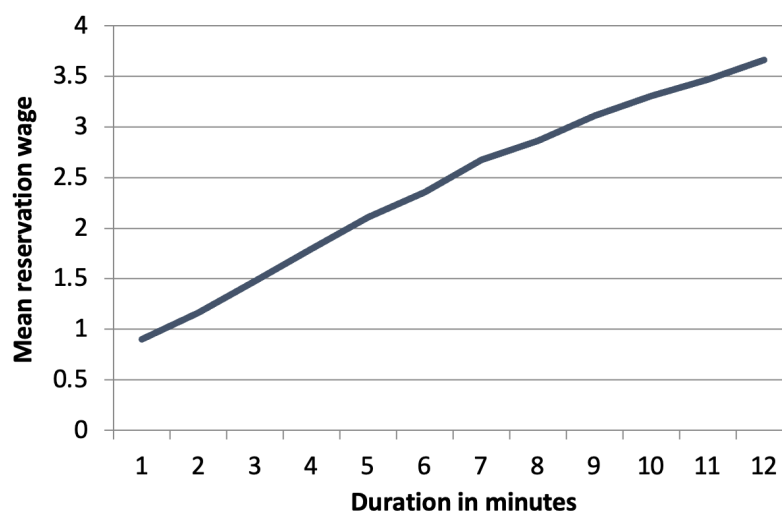
Notes: Actual share worker gives the average the spectators allocate the worker for each choice situation. Fair share worker provides workers' and investors' perceptions of what share the workers would deserve. Guessed share worker provides workers' and investors' perceptions of what share the workers will receive. P-value provides the p-value of a t-test that compares the worker and investor perceptions.

Appendix D – Shape of the cost function

One potential concern is that effort costs for doing the slider task are convex. Hence, the six minutes of work in part one, in which the investor earns her wealth, might require less effort than doing the additional work in the second part. Such convex costs could result in spectators allocating a larger share of production to the worker. We address this concern in two ways.

First, we recruited 100 participants on Amazon Mechanical Turk, on the same platform where we recruit our workers and investors. These participants had to work on the same slider tasks that we use in our experiment: they had to position on-screen sliders at value position 50 for a specific time period, during which they were presented with a new slider every ten seconds and they had to try to correctly position each slider within ten seconds. Participants first had to work on the slider task for 1 minute. Only the participants who correctly position all the sliders within the provided time were then allowed to proceed with the study. Next, we elicited participants' reservation wages for working another 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 minutes on the slider task, incentivized by the Becker–DeGroot–Marschak method. Figure D1 shows the average reservation wages for all durations. The figure shows that effort costs are approximately linear.

Figure D1. Effort costs are linear



Second, while the actual effort costs are approximately linear, spectators might have wrong beliefs. To address this concern, in both studies we elicit spectators' beliefs

about the shape of the cost function. Specifically, we asked them the following questions in the U.S. study:

“Suppose you participate in a study that consists of three parts, A, B and C:

- ***Part A:** You work on the slider task for six minutes.*
- ***Part B:** You read instructions and answer some questions for five minutes.*
- ***Part C:** You work on the slider task for six minutes.*

Working on the slider task consists of moving sliders to position 50 every ten seconds. Each slider can be positioned at any value from 0 to 100 and initially appears on position 0. Here is an example of a slider whose current position is 30: [SLIDER]

To what extent do you think doing Part [A/B/C] requires effort? (from 1=no effort at all to 7=a great deal of effort)”

We asked the same question in the Swiss study, but this time referring to working on the slider task for four minutes.

In the U.S., most spectators (85.8%) believe that effort costs are linear, that is, doing Part A and Part C require the same effort. However, there is also a share of spectators who believe that effort costs are convex (Part C requires more effort; 10.6%) and who believe that effort costs are concave (Part A requires more effort; 3.6%). Controlling for these beliefs does not change our findings. For example, when we restrict our analysis to the 689 spectators that believe that effort costs are linear, we find also strong evidence against Equal deservingness: The share of spectators that allocate more to the worker ($d_i > 0.5$; 63.7%) is statistically significantly larger than the share of spectators that allocate more to the investor ($t = 7.48$, $p < 0.001$). On average, spectators give 4.2 percentage points more to the worker ($t = 5.32$, $p < 0.001$).

In Switzerland, most spectators (74.75%) believe that effort costs are linear, that is, doing Part A and Part C require the same effort. Controlling for beliefs does not change our findings. When we restrict our analysis to the 829 spectators that believe that effort costs are linear, we also find strong evidence against Equal deservingness: The share of spectators who allocate more to the worker ($d_i > 0.5$; 69.6%) is statistically significantly larger than the share of spectators who allocate more to the investor ($t = 12.26$, $p < 0.001$). On average, spectators give 11.59 percentage points more to the worker ($t = 13.05$, $p < 0.001$).

Appendix E – Spectator beliefs

We implemented a pilot with 85 spectators on Prolific. The main purpose of this pilot was to test the program before we started data collection for our main study. The experimental protocol was the same as for our main study, with one exception: we elicited spectators' beliefs about workers and investors choices. Specifically, for each value of α , we asked participants to guess the percentage of workers and investors who chose to contribute 0, 1, 2 and 3 input units. We paid participants for the accuracy of their guesses.¹ The pilot revealed that it takes spectators too much time to provide all 24 guesses. Hence, we decided to not collect these beliefs in the main study and rely on the beliefs collected in the pilot instead.

In the pilot, we found that spectators put substantial weight on each possible choice of workers and investors, as shown in Table E1. Hence, spectators believe that each of their 27 choices could impact the worker and the investor. Moreover, the table also shows that the spectators believe that investors and workers make similar choices.² For example, when we compare the beliefs for $\alpha = 0.5$, that is, when workers and investors have the same marginal productivity, we cannot reject the hypothesis that spectators think that workers and investors make similar choices for all input levels (p-values of t-tests for inputs of 0, 1, 2 and 3 are 0.99, 0.62, 0.08 and 0.23, respectively).

Table E1. Spectators beliefs about worker and investor choices

	α			α		
	0.25	0.5	0.75	0.25	0.5	0.75
<i>i) Work</i>				<i>ii) Investment</i>		
0	11.8%	10.2%	17.0%	15.8%	10.3%	13.2%
1	24.2%	22.5%	23.4%	26.8%	23.3%	17.9%
2	33.0%	33.8%	30.2%	28.9%	30.6%	27.9%
3	30.9%	33.5%	29.4%	28.5%	35.8%	41.0%

¹ We first randomly draw one possible value of α to count for this question. For each amount of work, we then calculate the difference between the participant's answer and the actual share of individuals that chose this amount of work. We then add up these four differences, which gives us the total difference. The payment is then calculated according to the following formula: Payment = £0.50 * (1 - (total difference / 400)). We did the same for the investor guesses.

² In the pilot, we also replicate all findings from the main paper. The share of spectators that allocate more to the worker (72.9%) is statistically significantly larger than the share of spectators that allocate more to the investor (t = 4.73, p < 0.001). Moreover, we find that spectators who perceive labor as more deserving than capital are more in support of increasing the capital income tax (t = 2.34, p = 0.022).

Appendix F – Sensitivity and bounds of effect sizes given potential selection on unobservables

Coefficient estimates can be bound using the reaction of the estimate to the inclusion of controls and fixed effects—if the controls are informative about unobservables (Oster, 2019). This seems reasonable in our setting because measures such as political position and preferences are most likely correlated with unobservables that we would measure using different measures. If the effect size does not vary much with the inclusion of controls compared to the increase in the variation explained, the R^2 , it is unlikely that the bias caused by unobservables is large (Oster, 2019). We have to make an assumption on the attainable R^2 in our setting to apply the method. We follow the proposition by Oster to assume an attainable R^2 of 1.3 times the R^2 of the specification with all the controls. In our case, this corresponds to 1.3 times the R^2 in specifications (5) of Table 2 and Table 3 for the pre-registered primary dependent variables *Attitude capital income tax* (U.S. and Swiss study) and *Attitude initiative* (Swiss study). On the basis of this assumption, we estimate two parameters: δ and β^* . Parameter δ indicates how much larger the selection on unobservables would have to be, compared to the selection on observables, for the true causal effect to be zero. Parameter β^* gives the lower bound estimate of the causal effect assuming that the selection on unobservables is weakly smaller than the selection on observables ($\delta \leq 1$). In Table F1 we show δ and β^* for comparing more rich specifications with the specification including only age and gender. The lower bound estimates are all much larger than 0. The smallest δ of our key results is 2.95, which means that the selection on unobservables would have to be more than 2.95 times larger than what we capture with the observables for any of the causal effects to be zero. Given these results and since we include controls for other key determinants of policy preferences, selection on unobservables seems unlikely to explain the effect of fairness views on policy preferences.

Table F1. Sensitivity of effect sizes to unobservables

	δ	β^*
<i>U.S. study</i>		
Attitude capital income tax	14.97	0.112
<i>Swiss study</i>		
Attitude capital income tax	4.52	0.140
Attitude initiative	2.95	0.056

Appendix G – Results ORIV

In this section, we account for measurement error in relative deservingness views when relating them to policy attitudes using ORIV (Gillen, Snowberg & Yariv, 2019). ORIV requires multiple measures of the same underlying construct. In the U.S. study, each participant makes 27 spectator choices, resulting in 15 unique tests of Equal Deservingness (see Figure 3). We construct the following 15 measures:

- i. $s(X, X, 0.5) - 0.5$ for all X in $\{1, 2, 3\}$
- ii. $(s(X, Z, 0.5) - (1 - s(Z, X, 0.5)))/2$ for all (X, Z) in $\{(1, 2), (1, 3), (2, 3)\}$
- iii. $(s(X, Z, 0.25) - (1 - s(Z, X, 0.75)))/2$ for all X, Z in $\{1, 2, 3\}$.

For a spectator who satisfies Equal Deservingness, each of these 15 measures equals zero. For a spectator who consistently views the worker as more deserving, all measures are positive, whereas they are negative for a spectator who views the investor as more deserving.³ We therefore obtain 15 repeated measures of the same underlying construct. Similarly, in the Swiss study, we have three repeated measures. Table G1 reports the ORIV results, replicating Tables 2 and 3, showing that accounting for measurement error increases the estimated coefficient sizes by 10% to 30%.

Table G1. ORIV regression of attitudes towards capital income tax

	(1)	(2)	(3)	(4)	(5)
i) Results U.S.					
Dependent variable:	0.146***	0.143***	0.132***	0.136***	0.129***
<i>attitude capital income tax</i>	(0.039)	(0.039)	(0.036)	(0.035)	(0.034)
ii) Results Switzerland					
Dependent variable:	0.185***	0.183***	0.114***	0.110***	0.102***
<i>attitude initiative</i>	(0.038)	(0.038)	(0.031)	(0.032)	(0.031)
Dependent variable:	0.276***	0.279***	0.224***	0.215***	0.203***
<i>attitude capital income tax</i>	(0.040)	(0.040)	(0.037)	(0.037)	(0.036)
Controls:					
Age, gender (pre-reg.)	Yes	Yes	Yes	Yes	Yes
Meritocratic & market-libertarian view		Yes	Yes	Yes	Yes
Income, wealth, political orientation			Yes	Yes	Yes
Other sociodemographics				Yes	Yes
Time, risk and social preferences					Yes

Notes: The table shows coefficient estimates for d_i from ORIV regressions of the main policy attitudes measures (*attitude capital income tax*, *attitude initiative*) on deservingness of labor, d_i for both the U.S. and the Swiss sample. Bootstrap standard errors are shown in parentheses (500 Replications). We standardize policy attitudes and d_i . N=803 for the U.S sample and 1109 for the Swiss sample. * p<0.1, ** p<0.05, *** p<0.01.

³ We can further assume the following functional form, which we show fits the data well in the paper: $s_i(L, K, \alpha) = g_i(L, K, \alpha) + (d_i - 0.5)$, where the function $g_i(\cdot)$ satisfies Equal Deservingness and $(d_i - 0.5)$, when positive, captures a general tendency to allocate a larger share to labor. Under this specification, each of the 15 measures defined above corresponds to $(d_i - 0.5)$.

Appendix H – Survey measures of relative deservingness

In exploratory analysis, we include survey measures intended to capture general views on the deservingness of different types of income. This allows us to assess whether such survey measures can identify fundamental deservingness views.

U.S. Study: We elicited respondents' views on the relative deservingness of capital and labor income, *Deservingness of Labor – Survey*, by asking them to compare \$1 in income from working with \$1 in income from investing. Respondents indicated whether they think that both types of income are equally “earned” or “deserved,” or that one of them more “earned” or “deserved” (see Figure 1). We collected this measure in the follow-up study.

We find that our behavioral measure of perceptions of the relative deservingness of capital and labor (elicited in the first survey of the U.S. study), d_i , is significantly correlated with the survey measure of the perceived relative deservingness of the two factor inputs, *Deservingness of Labor – Survey* ($t = 2.72, p = 0.007$), though the correlation (0.125) is low. Spectators who report the belief that income from investing is more deserving than income from working in the second survey give 46.4% of the production reward to the worker in the initial study, spectators who perceive both types of income as equally deserving give 50.8%, and spectators who perceive income from working as more deserving give 52.9%. However, the two measures do not capture the same construct. For example, among the 203 spectators who allocate more to the investor ($d_i < 0.5$), 45.3% report that \$1 of income from working is more deserving than \$1 from investing, and 53.7% report that the two sources are equally deserving.

Swiss Study: In this study, we also added a second survey measure of deservingness (*Deservingness of Hard Work*), which is taken from Stantcheva (2021) and is not specific to capital and labor, but focuses on “hard work” more generally.⁴ Table H1 analyzes whether the two survey questions correlate with spectators'

⁴ We ask participants which statement most closely reflects their view: “People with the same income should pay the same level of income taxes, regardless of how they earned their income and whether they worked hard for it” or “People who have worked hard for their income should be taxed less than those who have not worked hard for it, even if that means that people with the same income will end up paying different taxes.”

allocation choices, d_i . Similar to the findings of the U.S. study, the survey measures are correlated with our behavioral measure.

Table H1. Validation survey measures of relative deservingness of capital and labor (Switzerland)

Independent variables	(1)	(2)	(3)	(4)
Deservingness of Labor – Survey	0.257*** (0.029)		0.240*** (0.032)	0.221*** (0.032)
Deservingness of Hard Work		0.128*** (0.031)	0.063* (0.033)	0.052 (0.031)
Controls:				
Age and gender	Yes	Yes	Yes	Yes
Sociodemographics				Yes
Time, risk and social preferences				Yes
N	1109	1109	1109	1109

Notes: We regress d_i on Deservingness of Labor – Survey and Deservingness of Hard Work. Sociodemographics include political position, wealth, income, education, employment status, having children, marital status, and canton fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

It is important to emphasize—both empirically and theoretically—that these measures are not equivalent. The behavioral measures are specifically designed to eliminate key confounds unrelated to fundamental perceptions of relative deservingness but responses to the survey measures may include beliefs about these dimensions.

Indeed, Appendix Table B6, based on data from the additional survey conducted in Switzerland, shows that working for a wage is perceived as less risky but more productive than investing money ($Risk_{c,i}$, $Productivity_{c,i}$). Furthermore, individuals who derive a larger share of their income from investing rather than working are perceived as wealthier, less honest, and less prosocial ($Wealth_{c,i}$, $Honesty_{c,i}$ and $Prosociality_{c,i}$). Finally, respondents tend to believe that wealth results more from advantages in life than from hard work ($Source_Wealth_i$).

Table H2 presents regression results using these perception measures as predictors of our behavioral measure of relative deservingness and the survey-based measures. The results indicate that these perception measures have little explanatory power for the behavioral measure (see also Appendix Table B10), but many are statistically significantly associated with the survey-based measure.

These findings highlight that the survey-based measure captures a broader range of perceptions about capital and labor—not just views about their fundamental deservingness. As a result, interpreting the survey measure is challenging. The design of our experiments is important for isolating fundamental perception of relative deservingness, uncontaminated by other factors.

We conclude that, while the survey measure may be useful in contexts where a broad proxy suffices, the experimental approach is better suited for characterizing and more fundamentally understanding and measuring precise views about the relative deservingness of inputs.

Table H2. Perceptions of investing and working (Switzerland)

Independent variable:	Deservingness of Labor – Experimental ($std(d_i)$)	Deservingness of Labor – Survey, standardized
$Risk_{L,i}$	0.046 (0.043)	-0.017 (0.039)
$Risk_{C,i}$	0.020 (0.047)	0.119*** (0.039)
$Productivity_{L,i}$	0.025 (0.039)	0.112*** (0.041)
$Productivity_{C,i}$	-0.066 (0.044)	-0.150*** (0.039)
$Wealth_{C,i}$	0.088* (0.046)	0.125*** (0.042)
$Honesty_{C,i}$	-0.016 (0.045)	-0.044 (0.049)
$Prosociality_{C,i}$	-0.084 (0.051)	-0.127*** (0.046)
$Wealth_{L,i}$	0.066 (0.042)	0.032 (0.047)
$Honesty_{L,i}$	0.000 (0.047)	0.03 (0.043)
$Prosociality_{L,i}$	-0.073 (0.046)	0.007 (0.045)
$Source_Wealth_i$	0.030 (0.043)	0.150*** (0.039)
$Cost_taxation_i$	-0.072* (0.037)	-0.087** (0.037)
N	637	637

Notes: The table shows coefficient estimates from linear regressions of $std(d_i)$ (column (1)) and $std(Deservingness\ of\ Labor - Survey_i)$ (column (2)) on several perceptions of the provision of capital and labor inputs. The perception measures are standardized. Heteroscedasticity robust standard errors are shown in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix I – Alternative method for identifying egalitarian, meritocratic, and market libertarian fairness views

To identify egalitarian, meritocratic, and market libertarian fairness views at the individual level in Section 3.2.3, we model allocation choices as linear combinations of the three fairness views. Alternatively, we can assign the fairness view to each spectator that explains her allocation choices best (Andreoni and Miller, 2002).⁵ We do so by selecting the fairness view $s(L, K, \alpha)$ that minimizes the squared distance to the allocation choices, $s_i(L, K, \alpha)$: $\min_{s \in \{0.5, \frac{L}{L+K}, 1-\alpha\}} \sum_L \sum_K \sum_\alpha (s_i(L, K, \alpha) - s(L, K, \alpha))^2$. Based on this procedure, we classify 39.5% of the spectators as egalitarians, 59.0% as meritocrats and 1.5% as market libertarians. We confirm earlier findings that meritocrats are the most frequent fairness types (Almås et al., 2020).

This classification also allows us to uncover correlation patterns in the parameter estimates of the structural analysis of Section 3.2.3.⁶ Table I1 provides the average estimates of γ_i , δ_i and d_i for egalitarians, meritocrats and market libertarians. Figure I1 provides the full distribution of γ_i , δ_i , $1 - \gamma_i - \delta_i$ and d_i for all three types.

We find that egalitarians are characterized by a low γ_i and a low δ_i , meritocrats by a high γ_i and a low δ_i and market libertarians by a low γ_i and a high δ_i . Hence, egalitarians, meritocrats and market libertarians put most weight on their respective fairness views. These findings provide further evidence that the structural form assumptions that we use to estimate γ_i and δ_i are reasonable. Table I1 also shows that all three types tend to allocate a greater share to the worker, that is, they see work as more deserving than investment. We again find that deservingness of labor, d_i , is neither statistically significantly different between meritocrats and market libertarians ($t = 0.63$, $p = 0.529$), nor between meritocrats and egalitarians ($t = 1.24$, $p = 0.214$) nor between market libertarians and egalitarians ($t = 0.13$, $p = 0.893$). Hence, views on the

⁵ We also consider other fairness views than the meritocratic, market libertarian and egalitarian view. Spectators might want to compensate the investor for her investment ($= 0.4\$ * K$) and give the rest to the worker or compensate the worker for his labor ($= 0.4\$ * L$) and give the rest to the investor. We find that only five and two spectators, respectively, apply these rules.

⁶ We find similar results when we participants do a cluster analysis (k-means) based on the individual estimates of γ and δ . We detect two clusters, a cluster of meritocrats and a cluster of egalitarians. However, we do not identify a market libertarian cluster. The meritocrat and egalitarian clusters largely overlap with the minimal distance approach; 97.7% of the meritocrats and egalitarian also fall into the corresponding clusters.

relative deservingness of labor do not stand in a systematic relationship with fairness views regarding the relative amounts and productivities of factor inputs.

Table I1. Parameters for egalitarians, meritocrats and market libertarians

Parameter	Meritocrats	Market libertarians	Egalitarians
<i>Meritocratic view</i> ($= \gamma_i$)	0.848*** (0.010)	0.265** (0.112)	0.113*** (0.015)
<i>Market libertarian view</i> ($= \delta_i$)	0.010* (0.006)	0.716*** (0.035)	0.013 (0.008)
<i>Egalitarian view</i> ($= 1 - \gamma_i - \delta_i$)	0.142*** (0.011)	0.020 (0.140)	0.874*** (0.017)
<i>Deservingness of labor</i> -0.5 ($= d_i - 0.5$)	0.016*** (0.002)	0.030 (0.024)	0.027*** (0.009)
N	12'798	324	8'559
Share	59.0%	1.5%	39.5%

Figure I1: Distributions of γ , δ , $1 - \gamma - \delta$ and d for egalitarians, meritocrats and market libertarians

