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## Keeping up by working more: Evidence from a survey experiment on status-driven labor supply

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Daniel Obst

***Keeping Up by Working More:  
Evidence from a Survey  
Experiment on Status-Driven  
Labor Supply***

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# Keeping Up by Working More: Evidence from a Survey Experiment on Status-Driven Labor Supply

Daniel Obst\*

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## Abstract

Many employees work more than they would prefer. This paper examines whether social comparisons contribute to this mismatch by inducing individuals to prioritize income over leisure. I use a within-subject survey experiment with university students in which participants repeatedly choose between *higher income* and *reduced working hours* under two conditions: one where their choice affects relative income and one where it does not. When upward comparisons are present, the share choosing higher income rises from 36% to 47%, consistent with status concerns driving longer working hours. The design mirrors a prisoner's dilemma: individuals prefer shorter hours but work more to avoid falling behind in income. When the additional income is tied to specific spending categories, the strongest increases in choosing higher income occur for clothing and shoes, food, education, health, and private pension plans—indicating that status concerns extend beyond conspicuous consumption to include long-term investments. Consistent with an established measure of status sensitivity (Solnick & Hemenway, 1998), status-oriented individuals respond more strongly to relative income cues. These findings suggest that labor supply decisions can exhibit positional externalities, with implications for working-time coordination and employee well-being.

**Keywords:** social comparisons, labor supply, working time preferences, status competition, positional externalities, income inequality

**JEL Codes:** J22, D91, J31, D31, C83, C99

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# 1 Introduction

Employees often work longer hours than they would prefer, even when they would accept lower income to reduce them. In Germany, full-time employed women report wanting 6.2 fewer hours per week, and men 5.5 fewer (Wanger & Weber, 2023). This persistent mismatch affects employee well-being (Angrave & Charlwood, 2015; Mariappanadar & Aust, 2017; Otterbach et al., 2021; Reich, 2024). Standard explanations emphasize employer demands, performance pressure, financial needs, or job insecurity (Anger, 2006; Brauner et al., 2018; Stewart & Swaffield, 1997; Zimmermann & Weber, 2021), but overlook a force operating both within firms and in social life: status competition and social comparisons (Duesenberry, 1949; Veblen, 1899). If people care about relative income—at work and among friends—they may work longer than they prefer to avoid losing rank, creating a persistent gap between desired and actual working time (Frank, 1985; Schor, 1991). In this view, overwork becomes a positional prisoner’s dilemma.

This paper addresses the question: Do social comparisons in income and consumption lead people to choose more work over preferred leisure? I test this using a within-subject survey experiment with university students. The design resembles a prisoner’s dilemma, in which participants make repeated choices in a fictitious scenario between *higher income* and *reduced working time*. In the *individual condition*, participants decide on their own working time knowing that half of peers choose higher income and half choose fewer hours, creating a potential gain or loss in relative income. In the *collective condition*, participants decide on income and working time for themselves and all peers, eliminating relative differences. Across both conditions, I vary whether the additional income is tied to specific expenditure categories to test how spending motives influence positional labor supply. If positional concerns matter, choices should shift toward higher income when upward comparisons are at stake.

Results show that social comparisons increase the likelihood of choosing higher income over reduced working time. When higher income improves relative standing, 47% of participants choose it; when unfavorable comparisons are absent, only 36% do so. Positional overwork also varies by spending motive. The strongest effects appear for goods typically seen as status goods (clothing and shoes, food) and for goods that function more as

investments than conspicuous luxuries (education, health, private pension plans). This suggests that status concerns extend beyond “showing what you’ve got.”

Prior research on social comparisons and labor supply shows mixed results. Some studies find that social comparisons reduce labor supply because of fairness concerns in unequal environments (Bracha et al., 2015; Breza et al., 2018; Cullen & Perez-Truglia, 2022; Dube et al., 2019). Others support the view that status competition, driven by relative consumption, increases working hours under income inequality (Behringer, Endres, et al., 2024; Bowles & Park, 2005; Neumark & Postlewaite, 1998; Oh et al., 2012; Park, 2010; Pérez-Asenjo, 2011), but most of these studies lack clear causal identification, with few exceptions (Filippi et al., 2023). Survey experiments with hypothetical labor–leisure choices similar to this study also produce mixed findings: Eastman (1998) find that competitive MBA students increase preferred working time if others work longer, whereas data from Pingle and Mitchell (2002) suggest that individuals may simply follow the majority, whether it means working more or less.

A second literature analyzes the characteristics of status goods. Most studies find that they are easy to observe and therefore capable of creating envy through demonstration (Alpizar et al., 2005; Carlsson et al., 2007; Charles et al., 2009; Heffetz, 2011). In contrast, Hillesheim and Mechtel (2013) find that visibility matters less. They argue that positional goods may also derive value from expected disadvantages when having less than others—unrelated to envy—such as education. They term these effects non-psychological externalities.

This study extends the literature in three ways. First, it isolates the causal effect of social comparisons on labor supply, separating them from fairness and conformity effects. The results show that participants sacrifice leisure for higher relative income, and that this effect is stronger among status-sensitive individuals. Second, it demonstrates that positional overwork can arise from income comparisons alone, even without priming participants to think about consumption. Third, when consumption comparisons are made salient, there is no evidence that visible goods or goods with non-psychological externalities—based on participants’ own ratings—predict positional overwork. However, positional effects appear for categories such as education, health, and private pension plans, indicating that

status concerns extend beyond conspicuous display to include investments in long-term security and well-being.

To ensure robustness, I compare the results of the experimental design to an established method identifying positional behavior. Solnick and Hemenway (1998) introduced a survey method to detect positional concerns on relative income. In this method, status-sensitive individuals choose *lower absolute income* to gain higher relative status. Conversely, this paper identifies positional behavior through decisions favoring *higher absolute income*. Despite this difference, participants identified as positional in Solnick and Hemenway's (1998) approach react more strongly to social comparisons in this study, exhibiting a greater shift toward higher absolute incomes in individual decisions compared to collective ones.

Section 2 reviews related literature. Section 3 presents the theoretical framework, followed by the experimental design in Section 4. Section 6 reports the results, and Section 7 concludes with a broader discussion of the findings.

## 2 Related literature

### *Income inequality, Status Competitions, and Labor Supply*

A longstanding argument in economics is that rising income inequality shifts consumption norms, creating expenditure cascades through social comparisons (Duesenberry, 1949; Frank, 1985; Frank et al., 2014; Schor, 1991; Veblen, 1899). As people seek to match the consumption of their peers, they may increase labor supply to finance higher spending. Building on this idea, prior research has examined the link between inequality and working hours.

Macro panel studies find positive correlations between inequality and annual hours worked: Bowles and Park (2005) and Behringer, Gonzalez-Granda, et al. (2024) show that countries with greater inequality tend to work longer hours; Oh et al. (2012) estimate that a 10% increase in the top income share is associated with a 1.3% rise in average work hours. At the micro level, household data suggest that married women increase labor supply when their household income is low relative to others (Neumark & Postlewaite, 1998; Park, 2010). Pérez-Asenjo (2011) similarly argues that individuals work more to maintain relative standing. However, most of these studies are correlational and cannot isolate

causal effects. Experimental evidence is scarce. Survey experiments that manipulate inequality levels find that higher inequality can worsen work-life balance and increase working hours through status anxiety or competitiveness (Cheng et al., 2020; Filippi et al., 2023).

The present study extends this literature by providing causal evidence that relative income differences affect working hours. Furthermore, it links labor supply choices to specific expenditure categories, allowing an assessment of whether positional effects are tied to conspicuous consumption.

#### *Positional Goods*

Consumption of positional goods is central to status competition theory, which links income inequality to increased labor supply through social comparisons. The standard view is that visibility increases positionality: goods that are easily observed by others can signal status and trigger envy (Alpizar et al., 2005; Carlsson et al., 2007; Charles et al., 2009; Heffetz, 2011). An alternative view challenges the primacy of visibility. Hillesheim and Mechtel (2013) find no link between visibility and positional value. Instead, they argue that some goods create *non-psychological externalities*: competitive disadvantages that arise from having less of the good, even without social display. For example, lower education can reduce labor-market opportunities regardless of whether others observe it.

In the present study, neither visibility nor non-psychological externalities—based on participants' own ratings—predict positional overwork. This suggests that the mechanism driving increased labor supply in our experiment lies elsewhere, extending beyond both conspicuous consumption and competitive disadvantage explanations.

#### *Labor Supply as a Signal*

Longer working hours can also serve as a labor-market signal, independent of consumption motives. Employees may work more to demonstrate commitment, increase promotion prospects, or reduce layoff risk during downturns. Bell and Freeman (2001) show that individuals work more to climb the income distribution because promotions yield larger wage gains when inequality is high. Landers et al. (1996) document a similar rat race in large law firms, where billable hours act as a screening device for partnership. This leads

associates to work beyond the utility-maximizing level at prevailing wages. Because only a small fraction achieve promotion, expected future income gains often fail to materialize.

This signaling mechanism is conceptually distinct from competition for status goods: working longer can be rational to strive for a higher income, even if consumption preferences are unrelated to status competition. The two mechanisms can, however, reinforce each other. Greater hours today can raise future income, which in turn expands capacity to purchase positional goods.

The experimental design in this study cannot fully rule out signaling as a driver of higher labor supply when relative income is at stake. Yet the fact that willingness to work longer changes systematically when the additional income is linked to specific consumption categories suggests that consumption-based comparisons play a role, alongside any signaling incentives.

#### *Fairness and Labor Supply*

A separate strand of literature shows that perceived unfairness in pay can reduce labor supply. Bracha et al. (2015) and Breza et al. (2018) find that unjustified wage differences lower effort and attendance. Card et al. (2012) and Dube et al. (2019) report that unequal pay reduces job satisfaction and raises quitting rates. Cullen and Perez-Truglia (2022) show that learning about peer wage differences lowers work hours, while upward comparisons with managers increase effort.

These fairness effects differ from the mechanism studied here. In the present experiment, income differences arise endogenously from participants' own working-time choices, not from arbitrary or externally imposed wage gaps. This design removes the fairness-confound and isolates the role of status-driven social comparisons in shaping labor supply.

#### *Survey Experiments on Status Sensitivity and Leisure-Income Comparisons*

Survey experiments are widely used to measure status sensitivity. Solnick and Hemenway (1998) developed a framework in which participants choose between options that trade off absolute and relative advantages; preferring the latter reveals status concerns. Alongside income comparisons, their study includes comparisons involving personal characteristics, leisure, and other domains. Variants of this approach have been used to compare status



preferences across groups or to identify which goods are more positional than others (Alpizar et al., 2005; Behringer, Endres, et al., 2024; Carlsson et al., 2007; Celse, 2012; Hillesheim & Mechtel, 2013; Solnick & Hemenway, 2005).

Another survey-experiment approach uses a within-subject design similar to this study. Participants first choose their preferred working time independently of others. They then learn how much others work and earn, and adjust their working time accordingly. Pingle and Mitchell (2002) show that participants adjust hypothetical work–leisure choices in response to relative income information, but some of this adjustment appears to reflect follower behavior, with participants increasing or decreasing work in line with peers. Eastman (1998) finds that MBA students increase their preferred hours when others work longer, consistent with positional effects. However, this behavior may also reflect beliefs among competitive MBA students that small increases in working hours will yield larger future income gains by signaling determination and ambition for promotion.

This study applies the same general logic. Participants choose between reduced working time and higher income in settings with and without social comparisons. Unlike the MBA student samples in earlier work, this study examines students in social science education, where competitive norms are less uniform. It further contributes by examining the role of status-driven consumption. By testing whether these choices depend on relative differences across a variety of spending categories, the study shows that the strength of positional behavior depends on the consumption domain.

While the work-leisure choices are hypothetical, evidence from Mas and Pallais (2019) show that similar survey measures of working-time preferences without monetary incentives closely align with real-world behavior, supporting the validity of this approach.

### **3 Theoretical Framework: Relative Income and Leisure Decisions**

This paper analyzes labor-leisure choices in which individuals value not only absolute income and leisure, but also income relative to others in a reference group. Let absolute income be  $Y$ , leisure be  $T - l$  where  $T$  is total time and  $l$  the number of hours worked, and

$\bar{Y}$  the peers' average income. Utility is

$$U = U(u_1(Y), u_2(T - l), u_3(Y/\bar{Y})), \quad (1)$$

where  $u_1$ ,  $u_2$ , and  $u_3$  are increasing in their arguments. Income is positional (an increase in  $Y$  relative to  $\bar{Y}$  raises  $u_3$ ), while leisure is not.

In the experiment, participants start with a given bundle of leisure ( $T - l$ ) and income ( $Y$ ). From that starting point, they face two conditions involving trade-offs between increased absolute income  $Y_{\text{higher}}$  (holding initial working hours constant) and increased leisure  $T - l_{\text{lower}}$  (holding initial income constant).

**Individual condition:** Participants choose for themselves, while their peers face the exact same trade-off. Participants know that half of their peers choose higher income and half choose fewer hours. Selecting higher income raises  $Y$  above  $\bar{Y}$ , generating a positive  $u_3$  term; selecting fewer hours lowers  $Y$  below  $\bar{Y}$ , reducing  $u_3$ .

**Collective condition:** Participants choose for the whole group. All incomes and hours change proportionally, so  $Y/\bar{Y}$  is equal for both options and  $u_3$  drops out.

In the individual condition, a participant chooses higher income if the sum of the increases in utility from higher absolute and relative income exceeds the increase in utility from more leisure:

$$[u_1(Y_{\text{higher}}) - u_1(Y)] + [u_3(Y_{\text{higher}}/\bar{Y}) - u_3(Y/\bar{Y})] > u_2(T - l_{\text{lower}}) - u_2(T - l). \quad (2)$$

In the collective condition, the  $[u_3(Y_{\text{higher}}/\bar{Y}) - u_3(Y/\bar{Y})]$  term is zero because an individual's income equals the average income of others. The trade-off then reduces to the standard labor-leisure model:

$$u_1(Y_{\text{higher}}) - u_1(Y) > u_2(T - l_{\text{lower}}) - u_2(T - l). \quad (3)$$

The same individual will switch from choosing higher income in the individual condition to higher leisure in the collective condition if the gain from more leisure  $u_2(T - l_{\text{lower}}) - u_2(T - l)$  is greater than the gain from more absolute income  $u_1(Y_{\text{higher}}) - u_1(Y)$ , but the gain from relative income  $[u_3(Y_{\text{higher}}/\bar{Y}) - u_3(Y/\bar{Y})]$  is large enough to reverse this preference in the

individual condition.

## 4 Experimental Design

The experiment consists of two parts, conducted in separate sessions. Part 1 contains the main decision tasks between higher income and more leisure. Part 2 includes the Solnick and Hemenway (1998) positionality measure, ratings of expenditure categories, and sociodemographic questions.

### 4.1 Part 1: Main Decision Tasks

Participants make hypothetical choices on behalf of a future relative. This framing removes them from their own circumstances while preserving the assumption that they act in the relative's best interest (Alpizar et al., 2005; Johansson–Stenman et al., 2002). They are told that the relative and his peers work for the same employer, earning on average a net annual income of €26,000 (in today's prices) and working 35 hours per week. These values approximate the German average in 2019 according to the EU-SILC and ECHP surveys.

The employer offers two options: (i) an income increase of €4,000 or (ii) a reduction of five working hours per week. Participants make the following individual decision under conditions of social comparison:

Your relative knows that half of his peers decided to increase income.

Which option do you choose for your future relative?

- higher income (like one half of his peers)
- fewer working hours (like the other half of his peers)
- no preference

This individual decision is repeated after introducing how the additional income would be spent. Participants choose between the same two options, but the income is now linked to a specific expenditure category.

Which option do you choose for your future relative?

- additional money for housing expenses (rent or credit payments) (like one half of his peers)

- fewer working hours (like the other half of his peers)
- no preference

The spending motive is varied across 19 categories: housing; furnishing; car; restaurant visits; clothing and shoes; food; travel and vacation; jewelry and watches; consumer electronics and services; hairdresser, wellness and cosmetics; books, newspapers, and magazines; art; private pension plans; education; education of one's own children; health services and sports activities; saving for one's own children; donations; and insurance. These categories, partly derived from the German consumer price index, cover more than half of the average consumer basket.

In the collective condition, participants choose between two worlds for their relative and his peers. Prices are equal in both worlds and correspond to today's prices.

- World A: Your future relative and his peers have an average annual net income of €26,000 with a weekly working time of 30 hours.
- World B: Your future relative and his peers have an average annual net income of €30,000 with a weekly working time of 35 hours
- no preference

These decisions are repeated with information on what the future relative and his peers would mainly use the additional income for if they worked longer in World B (compared to World A), for example:

The additional income in World B (compared to World A) would be used by your future relative and his peers mainly for housing expenses (rent or credit payments).

Which world would you choose for your future relative?

- World A: weekly working time of 30 hours
- World B: additional money for housing expenses (rent or loan payments) and a weekly working time of 35 hours
- no preference

Differences between individual and collective decisions isolate the behavioral effect of relative income. Differences between individual decisions *with* and *without* spending motives capture two effects: (i) variation in positionality across expenditure categories, and (ii) changes in willingness to work due to category-specific preferences.

Table 1: Outcome matrix for individual and collective decisions

Decision Type	Choice	Future Relative	Peers avg.	Relative Position
Individual	Fewer hours	€26k / 30h	€28k / 32.5h	Below average
	Higher income	€30k / 35h	€28k / 32.5h	Above average
Collective	Fewer hours	€26k / 30h	€26k / 30h	Equal
	Higher income	€30k / 35h	€30k / 35h	Equal
<i>Comparison with Solnick and Hemenway's (1998) approach to measure positional behavior</i>				
<i>Robustness check</i>	Higher relative	€26k / 35h	€22k / 35h	Above average
	Higher absolute	€30k / 35h	€34k / 35h	Below average

Table 1 summarizes the outcomes associated with each choice. In individual decisions, participants can change the future relative's position. In collective decisions, all peers receive the same outcome.

## 4.2 Part 2: Positionality Measure and Ratings

At least seven days after Part 1, participants complete a follow-up survey. The survey begins with a positionality measure adapted from Solnick and Hemenway (1998). Participants choose between two hypothetical worlds for their future relative. Prices are equal in both worlds and correspond to today's prices.

The weekly working time of your future relative is 35 hours in both worlds. This corresponds to the average weekly working hours in society in both worlds.

Which world do you choose for your future relative?

- A: Your relative has a net annual income of €26,000, others €22,000.
- B: Your relative has a net annual income of €30,000, others €34,000.
- no preference

Choosing World A indicates a preference for higher relative income over higher absolute income. Compared to the individual decision in Part 1, the Solnick and Hemenway (1998) approach flips the choice: status-sensitive individuals now prefer a *lower* absolute income (€26,000 instead of €30,000) to gain relative rank, while they prefer a *higher* absolute income (€30,000 instead of €26,000) in Part 1 to improve their relative standing. The Solnick and Hemenway (1998) measure is used to classify status-sensitive individuals and

to test, as a robustness check, whether they also display positional behavior despite the flipped decision. Table 1 summarizes the differences in absolute and relative outcomes.

After the decision task, participants rate the 19 expenditure categories on two dimensions, each using a four-point Likert scale: (i) observability to others (Charles et al., 2009; Heffetz, 2011) and (ii) non-psychological externalities (Hillesheim & Mechtel, 2013). Finally, participants report demographic and background characteristics: age, gender, number of children, car ownership, Abitur grade, and whether they live with their parents.

## 5 Hypotheses

Based on the formal model and previous literature on positional goods, I derive the following experimental hypotheses. These hypotheses assume that, for some individuals sensitive to relative income, the gain from more leisure is greater than the gain from more absolute income, but the gain from relative income is large enough to shift choices between the individual and collective condition.

**H1: Relative income comparisons increase labor supply.** Participants are more likely to choose higher income (rather than reduced working hours) in the individual decision (where relative income differences exist) than in the collective decision (where such differences disappear).

**H2: Status-related labor supply varies between people with and without positional concerns.** The difference in preference for higher income between individual and collective decisions is larger among participants classified as status-sensitive (i.e., those choosing higher relative income in the Solnick and Hemenway's (1998) trade-off) than among status-neutral individuals.

**H3: Status-related labor supply depends on spending motives with different importance for status.** The difference in preference for higher income between individual and collective decisions depends on information about how the additional money would be spent.

**H4: Status-related labor supply varies by the visibility of spending motives.** Participants are more likely to choose higher income in the individual decision than in the collective decision when told that the additional money would be spent on items rated

high in observability to others.

**H5: Status-related labor supply varies by the non-psychological externalities of spending motives.** Participants are more likely to choose higher income in the individual decision than in the collective decision when told that the additional money would be spent on items rated high in competitive advantage from having more than others (unrelated to psychological motives such as envy).

## 6 Results

The study took place at the University of Duisburg-Essen in June 2021. A total of 167 students participated; 154 completed both parts of the survey and met the required minimum interval of seven days between both parts. Table 2 reports their socio-demographic characteristics.

Table 2: Descriptive Statistics of Survey Participants

	Mean	SD
Age (years)	23.66	4.01
Female (1 = yes)	0.57	0.50
Has children (1 = yes)	0.05	0.21
Has car (1 = yes)	0.54	0.50
Abitur grade (mean)	2.28	0.51
Lives with parents (1 = yes)	0.49	0.50
Observations	154	

All variables are proportions unless otherwise noted. The Abitur grade refers to the German qualification that entitles the holder to study, with 1 being the highest grade and 6 the lowest.

### 6.1 Income comparison

Table 3 shows that 47% of participants choose higher income over reduced working hours when doing so increases their relative income (individual condition). In the collective condition—where relative standing is unaffected—only 36% choose higher income. The 11.4 percentage point difference ( $p < .01$ , Wilcoxon signed-rank test) indicates that participants are willing to work more to avoid losing relative position. A logistic regression

yields the same conclusion (Appendix C). This supports H1: relative income comparisons increase labor supply.

Table 3: Effect of Relative Income on Choice of Higher Income over Leisure

	<i>share answer higher income</i>		Difference	N
	Individual	Collective		
Full sample	47.1%	35.7%	11.4**	140
Status-sensitive	50.0%	29.2%	20.8**	48
Status-neutral	47.6%	40.2%	7.3	82

Share of participants choosing *higher income* over *more leisure* in individual and collective condition, and the percentage-point difference between the two. Differences are tested using the Wilcoxon signed-rank test, excluding cases where participants select *no preference* at least once. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

To test H2—whether status-sensitive individuals respond more strongly to relative income incentives—participants complete a positionality task adapted from Solnick and Hemenway (1998). In this task, 37% choose a lower absolute income to gain a higher relative position, classifying them as status-sensitive. For this group, the share choosing higher income drops from 50% (individual) to 29% (collective), a 20.8 percentage point decrease ( $p < .01$ ). Among status-neutral participants, the drop is 7.3 percentage points and not statistically significant. Logistic regression confirms these subgroup differences (Appendix C).

The classification methods in this study and Solnick and Hemenway (1998) differ in direction: here, status-sensitive individuals choose €30,000 over €26,000 when it improves their relative standing; in the adapted Solnick and Hemenway (1998) design, they choose €26,000 (when others earn €22,000) over €30,000 (when others earn €34,000). Despite this inversion, both approaches yield consistent results in identifying individuals who place high value on relative position.

## 6.2 Social Comparisons and Spending Motives

The effect of social comparisons on labor supply varies with how the additional income is spent. Table 4 reports the share of participants choosing higher income in the individual and collective conditions when participants know the intended use of the additional



income. The difference between these conditions isolates the effect of status concerns for each spending motive. Significant effects occur for clothing and shoes (9.0pp), education of one's own children (8.4pp), food (7.7pp), saving for one's own children (7.4pp), education (7.1pp), health expenditures (7.1pp), and private pension plans (6.4pp). Logistic regressions confirm these patterns (Appendix D). These results support H3: status-related labor supply depends on spending motives with different importance for status.<sup>1</sup>

Table 5 compares individual decisions with and without information about how the money would be spent. Higher shares choosing higher income in the individual condition indicate that some spending motives carry greater importance—whether for status or for intrinsic value. The largest increases occur for education of one's own children (46.6pp), saving for one's own children (41.8pp), private pension plans (39.3pp), education (35.0pp), health expenditures (23.6pp), and food (20.0pp). These categories substantially overlap with those showing the largest status effects in the previous comparison.

The two measures are positively correlated ( $r = 0.58$ ,  $p = .01$ ). Figure 1 illustrates this relationship. Spending motives in the upper-right quadrant are linked to both strong status effects and high willingness to work. Others diverge from this pattern: travel increases labor supply but shows no status effect, whereas clothing and shoes exhibit a clear status effect but low willingness to work.

### 6.3 Characteristics of spending motives

The data provide no evidence that the visibility or non-psychological externalities (NPE) of a spending motive explain differences in positional labor supply. Table 6 reports logistic regressions predicting whether participants choose higher income, comparing the individual condition (where relative income matters) with the collective condition (where it does not), with interactions for observability and NPE ratings. Both variables are measured on a four-point scale. Interaction terms are small and statistically insignificant in all specifications, offering no support for H4 or H5.

Across models, participants remain more likely to choose higher income in the

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<sup>1</sup>Appendix E reports a short exploratory comparison of individual and collective decisions for spending motives related to public goods. Motives that could plausibly be provided by the state exhibit positional effects and, in the collective decision without status comparisons, a strong preference for higher income—sacrificing leisure—when additional earnings are allocated to these goods.

Table 4: Effect of Relative Income on Labor Supply by Spending Motive

Category	<i>share answer higher income</i>		Difference	N
	Individual	Collective		
clothing	36.8%	27.8%	9.0*	133
educationchildren	93.7%	85.3%	8.4**	143
food	67.1%	59.4%	7.7*	143
savingschildren	89.0%	81.6%	7.4*	136
education	82.1%	75.0%	7.1*	140
health	70.7%	63.6%	7.1*	140
housing	57.1%	50.3%	6.8	147
privatepensionplan	86.4%	80.0%	6.4*	140
charity	48.4%	43.4%	4.9	122
restaurant	33.1%	29.3%	3.8	133
consumerelectronics	32.1%	28.4%	3.7	134
art	14.6%	11.5%	3.1	130
car	27.8%	25.6%	2.3	133
furnishing	39.3%	37.1%	2.1	140
hairstressorwellness	25.0%	23.4%	1.6	128
books	37.5%	36.0%	1.5	136
insurance	54.0%	52.6%	1.5	137
jewelery	14.8%	15.6%	-0.8	128
travel	68.9%	70.4%	-1.5	135

Share of participants choosing *higher income* over *more leisure* in individual and collective condition, by category of intended expenditure. Differences are tested using the Wilcoxon signed-rank test, excluding cases where participants select *no preference* at least once. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

individual condition compared to the collective decision, consistent with earlier results. Within the collective condition, higher NPE ratings correlate with a general tendency to work more, while higher visibility ratings are associated with working less. These patterns reflect baseline preferences for certain expenditure categories and are unrelated to positional behavior.

Table 5: Effect of Spending Motives on Labor Supply in the Individual Condition

Expenditure Category	<i>share answer higher income</i>		Difference	N
	with information	no information		
educationchildren	93.7%	47.1%	46.6***	136
savingschildren	89.0%	47.1%	41.8***	129
privatepensionplan	86.4%	47.1%	39.3***	134
education	82.1%	47.1%	35.0***	132
health	70.7%	47.1%	23.6***	132
travel	68.9%	47.1%	21.7***	128
food	67.1%	47.1%	20.0***	136
housing	57.1%	47.1%	10.0*	140
insurance	54.0%	47.1%	6.9	129
charity	48.4%	47.1%	1.2	115
<i>no information</i>	47.1%	47.1%	0.0	140
furnishing	39.3%	47.1%	-7.9	133
books	37.5%	47.1%	-9.6	129
clothing	36.8%	47.1%	-10.3	125
restaurant	33.1%	47.1%	-14.1	126
consumerelectronics	32.1%	47.1%	-15.1*	126
car	27.8%	47.1%	-19.3***	127
hairdresserwellness	25.0%	47.1%	-22.1**	121
jewelery	14.8%	47.1%	-32.3***	120
art	14.6%	47.1%	-32.5***	123

Share of participants choosing *higher income* over *more leisure* in individual condition with and without information on intended expenditures. Differences are tested using the Wilcoxon signed-rank test, excluding cases where participants select *no preference* at least once. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

#### 6.4 Characteristics of participants

Participant characteristics may influence positional labor supply if they interact with the decision condition. To test this, I estimate logistic regressions predicting the probability of choosing higher income, with interaction terms between participant traits and decision type (individual vs. collective). I first analyze decisions without spending information to capture pure income-leisure trade-offs.

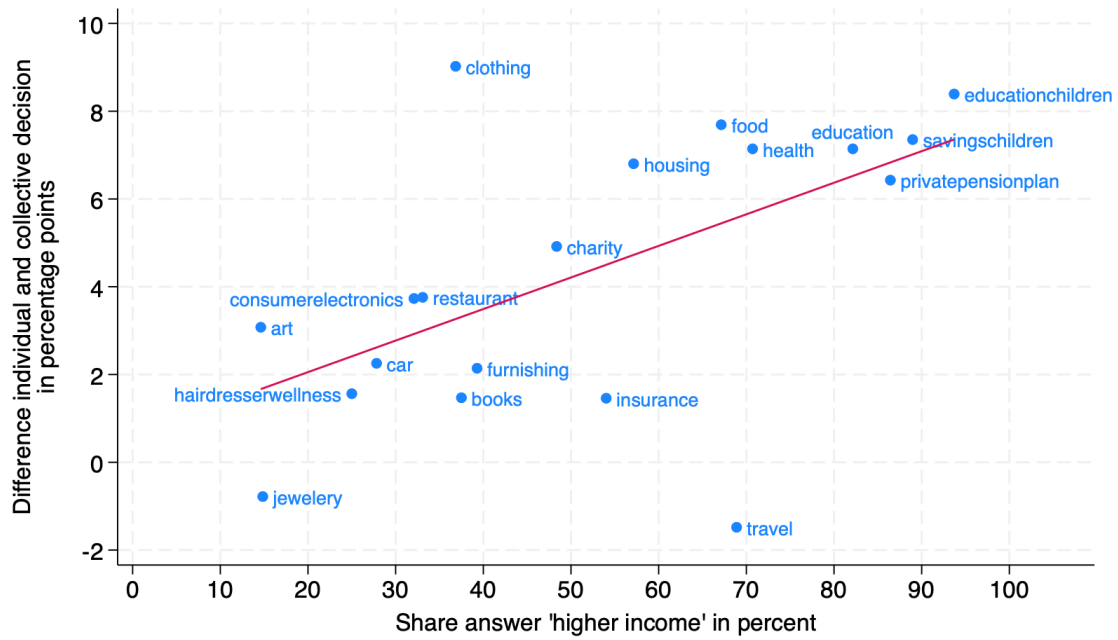


Figure 1: Status effect (individual–collective difference) vs. willingness to work (share choosing higher income in individual condition)

Table 6: Logistic Regression of Higher Income Choice on Decision Type, Observability, and Non-Psychological Externalities

	(1) RE Logit	(2) RE Logit	(3) Logit	(4) Logit	(5) FE Logit
Individual Decision	0.510** (0.172)	0.493** (0.164)	0.418** (0.139)	0.389** (0.128)	0.486* (0.214)
NPE	0.453*** (0.074)	0.458*** (0.070)	0.331*** (0.062)	0.354*** (0.061)	0.450*** (0.048)
Individual Decision × NPE	−0.031 (0.050)	−0.025 (0.047)	−0.026 (0.040)	−0.019 (0.036)	−0.024 (0.064)
Observability	−0.405** (0.058)	−0.416** (0.057)	−0.230** (0.054)	−0.225** (0.053)	−0.426** (0.048)
Individual Decision × Observability	−0.075 (0.044)	−0.078 (0.042)	−0.063 (0.035)	−0.064* (0.032)	−0.076 (0.064)
Constant	0.459 (1.250)	−0.226 (0.239)	0.386 (0.796)	−0.449* (0.197)	
Observations	4834	5156	4834	5156	4742
Controls	Yes	No	Yes	No	
Log-Likelihood	−2807.8	−2991.8	−3189.7	−3464.5	−2454.5

Notes: Logistic regressions predicting the probability of choosing higher income (as opposed to reduced working time). The baseline is the collective decision. Observability and non-psychological externalities (NPE) are rated from 1 (low) to 4 (high). Standard errors (in parentheses) are clustered at the participant level in models (1)–(4). RE: random effects; FE: fixed effects. Controls include sex, age, car ownership, Abitur grade, and whether the participant lives with their parents. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

In Table 7, Model 1 shows that, without sociodemographic controls, the individual condition increases the likelihood of choosing higher income. Once controls and their interactions are added (Models 2–7), the effect becomes statistically insignificant, suggesting that background characteristics explain part of the variance.

Only one interaction is statistically significant: participants living with their parents are more likely to choose higher income in the individual condition (Models 6 and 7,  $p < 0.05$ ). A possible interpretation is that co-residing with parents is a voluntary strategy to lower living costs and preserve disposable income relative to peers.

Table 7: Moderating Effects of Sociodemographic Characteristics on the Choice of Higher Income under Relative Income Comparisons

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Individual Decision	0.473** (0.175)	0.563 (0.308)	0.483 (1.368)	0.282 (0.282)	0.653 (0.720)	0.115 (0.231)	−0.843 (1.528)
Female=1		1.078** (0.381)					0.996* (0.436)
Individual Decision × Female=1		−0.099 (0.387)					−0.219 (0.425)
Age (years)			−0.146 (0.077)				−0.146 (0.095)
Individual Decision × Age (years)			0.001 (0.059)				0.058 (0.062)
Has car=1				0.272 (0.359)			0.464 (0.411)
Individual Decision × Has car=1				0.342 (0.361)			0.321 (0.397)
Abitur grade					0.097 (0.361)		0.378 (0.406)
Individual Decision × Abitur grade					−0.052 (0.318)		−0.151 (0.373)
Lives w/parents=1						0.359 (0.356)	0.022 (0.421)
Individual Decision × Lives w/parents=1						0.805* (0.364)	0.861* (0.419)
Constant	−0.588*** (0.177)	−1.232*** (0.305)	2.837 (1.763)	−0.742** (0.273)	−0.847 (0.847)	−0.751** (0.243)	1.052 (2.189)
Observations	280	280	280	280	264	280	264
Log-Likelihood	−188.1	−179.8	−179.3	−186.2	−176.7	−181.9	−158.0

Notes: Logistic regressions predicting the probability of choosing higher income (as opposed to reduced working time). The baseline is the collective decision. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 8 extends the analysis to decisions with spending information. The main effect of the individual condition remains positive but is not consistently significant once interactions are included. In this specification, car ownership emerges as a significant moderator: participants with a car are more likely to choose higher income in the individual

condition when the spending motive is specified (Models 4–7,  $p < 0.05$ ). This may reflect that car ownership carries heightened status relevance in this life stage.

Table 8: Moderating Effects of Sociodemographic Characteristics on the Choice of Higher Income under Relative Income Comparisons with Spending Motives

	(1)	(2)	(3)	(4)	(5)	(6)
Individual Decision	0.230** (0.086)	0.150 (0.241)	0.078 (0.049)	0.254 (0.210)	0.217** (0.073)	0.182 (0.285)
Female=1	0.348* (0.168)					0.268 (0.180)
Individual Decision $\times$ Female=1	-0.068 (0.109)					-0.105 (0.114)
Age (years)		-0.069** (0.027)				-0.060 (0.033)
Individual Decision $\times$ Age (years)		0.002 (0.010)				-0.001 (0.013)
Has car=1			0.033 (0.169)			0.145 (0.174)
Individual Decision $\times$ Has car=1			0.206* (0.099)			0.225* (0.114)
Abitur grade				-0.055 (0.176)		0.071 (0.176)
Individual Decision $\times$ Abitur grade				-0.023 (0.097)		0.013 (0.125)
Lives w/parents=1					0.538** (0.166)	0.369* (0.182)
Individual Decision $\times$ Lives w/parents=1					-0.052 (0.108)	-0.074 (0.117)
Constant	-0.311** (0.120)	1.517* (0.625)	-0.131 (0.118)	-0.010 (0.410)	-0.364** (0.120)	0.722 (0.762)
Observations	5436	5436	5436	5098	5436	5098
Log-Likelihood	-3745.1	-3715.3	-3756.7	-3525.7	-3717.7	-3441.8

Notes: Logistic regressions predicting the probability of choosing higher income (as opposed to reduced working time). The baseline is the collective decision. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

## 7 Concluding Discussion

This study shows that social comparisons can increase labor supply even when individuals would otherwise prefer more leisure. In a survey experiment, participants chose between higher income and reduced working time under two conditions: one where the choice altered relative income and one where it did not. When relative standing was at stake, the share choosing higher income rose by 11 percentage points. This pattern is consistent with employees sacrificing leisure to avoid losing income rank.

The results are reinforced by their consistency with an established measure of positional preferences from Solnick and Hemenway (1998). In that framework, status-oriented individuals accept lower absolute income to gain higher relative rank. In the present design, the same individuals are more likely to choose higher absolute income to avoid a rank loss, despite the reversed direction of the monetary trade-off. This convergence across distinct choice framings strengthens the robustness of the findings.

The design mirrors a positional prisoner's dilemma: individually, higher income is attractive, but collectively, shorter hours would be preferred by most. This helps reconcile conflicting results in the literature. Macro-level studies often find a positive correlation between inequality and hours worked (Behringer, Gonzalez-Granda, et al., 2024; Bowles & Park, 2005; Oh et al., 2012), while causal experiments and micro-level studies show that inequality can reduce labor supply via fairness concerns (Bracha et al., 2015; Breza et al., 2018; Cullen & Perez-Truglia, 2022; Dube et al., 2019). The present design removes fairness concerns and conformity effects: participants know that others are evenly split in their decisions, so there is no majority to follow. This isolates social comparisons as a mechanism that can independently push hours upward.

Results further suggest that both income comparisons and specific spending motives contribute to longer working hours. Positional effects are strongest for (i) income, (ii) goods typically associated with social display (clothing, shoes, food), and (iii) long-term investment categories (education, health, pensions, child-related spending). This indicates that status competition extends beyond conspicuous consumption to include positional investments—goods that secure future opportunities. This interpretation goes beyond the theory of conspicuous consumption (Veblen, 1899) or the view that overwork signals

determination to employers in the hope of future income gains (Bell & Freeman, 2001). In practice, status-driven labor supply may also be motivated by the desire to make positional investments. At the same time, the study finds no moderating role for the visibility of goods (expected under a conspicuous consumption interpretation) or for non-psychological externalities (expected under a positional investment interpretation). This interpretation therefore remains speculative.

Additional limitations qualify these conclusions. The sample consists of social science education students, who may differ from broader working populations in competitive norms, preferences, resources, or career expectations. These students may place particularly high value on social comparisons related to educational spending motives. Moreover, the choices are hypothetical and without financial incentives, which can limit external validity. However, prior work finds that stated working-time preferences in similar designs track actual behavior closely (Mas & Pallais, 2019), suggesting that the observed patterns are meaningful as a proof of concept.

For organizations, the results highlight a mechanism by which employees' working hours can deviate from their preferred work-life balance: status-driven overwork. Even in the absence of explicit managerial pressure, employees may work more to keep up with peers. This dynamic can erode well-being, distort labor allocation, and create inefficiencies.

Further research is needed to test these results with broader samples and in contexts involving real-life decisions. Solid policy advice based solely on the current evidence would be premature. If the patterns hold, they would support interventions that coordinate working hours and limit positional escalation, such as restricting overtime culture or implementing initiatives like the four-day work week. At a societal level, the results raise a broader normative question: which life domains should be governed by the market? Reducing the need for private expenditures in education, health, and pensions could lower the positional stakes in these domains, ease overwork pressures, and increase overall welfare.



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## A Appendix: Survey

### A.1 Part One

#### Individual Decision

In the following questions, you will make decisions for a future relative (e.g., grandchild or great-grandchild). The questions are independent of each other.

**For all of the following questions, the initial situation is as follows:**

Your future relative and his peers all work for the same employer and have an average annual net income of EUR 26,000 (in today's prices) with a weekly working time of 35 hours.

The employer now offers all employees the choice to **either increase their salary to EUR 30,000 or reduce their weekly working time to 30 hours.**

Your relative knows that half of his peers decided to increase income.

*Question 1:*

Which option do you choose for your future relative?

- higher income (like one half of his peers)
- fewer working hours (like the other half of his peers)
- no preference

*Questions 2–20:*

**In the following, you will receive information about what your future relative and his peers would primarily use the additional income for if they chose to increase their salary. The questions are independent of each other.**

Your relative knows that half of his peers have chosen to increase their salary and intend to use the additional money primarily **for clothing and shoes**. Your relative would also primarily use the additional money for such expenses.

Which option do you choose for your future relative?

- additional money for clothing and shoes (like one half of his peers)
- fewer working hours (like the other half of his peers)
- no preference

#### Collective Decision

In the following questions, you will make decisions for a future relative. The questions are independent of each other.

**For all of the following questions, the initial situation is as follows:**

Assume you could choose in which world your relative should live. Goods and services cost the same in both worlds and correspond to today's prices.

World A: Your future relative and his peers have an **average annual net income of EUR 26,000 with a weekly working time of 30 hours.**

World B: Your future relative and his peers have an **average annual net income of EUR 30,000 with a weekly working time of 35 hours.**

*Question 21:*

Which world would you choose for your future relative?

- World A (EUR 26,000 per year with a weekly working time of 30 hours)
- World B (EUR 30,000 per year with a weekly working time of 35 hours)
- no preference

*Questions 22–40:*

**In the following, you will receive information about what your future relative and his peers would primarily use the additional income for in World B (compared to World A), which requires longer working hours. The questions are independent of each other.**

The additional income in World B (compared to World A) would be used by your future relative and his peers mainly **for housing expenses (rent or loan payments).**

Which world would you choose for your future relative?

- World A: weekly working time of 30 hours
- World B: additional money for housing expenses (rent or loan payments) and a weekly working time of 35 hours
- no preference

## **A.2 Part Two (conducted at least 7 days later)**

In the following questions, you will make a decision for a future relative (e.g., grandchild or great-grandchild).

Assume you could choose in which world your relative should live. Goods and services cost the same in both worlds and correspond to today's prices.

*Question 1:*

Your future relative's weekly working time is 35 hours in both worlds. This corresponds to the average weekly working time in society in both worlds.

Which world do you choose for your future relative?

- World A: Your relative has an annual net income of EUR 26,000, others EUR 22,000.
- World B: Your relative has an annual net income of EUR 30,000, others EUR 34,000.
- no preference

*Question 2:*

One's own consumption or spending on certain goods and services, or savings, can be easy or difficult for others to observe.

Please rate the following goods, services, or savings according to how easy or difficult they are for others to observe.

1 = very easy to observe

2 = easy to observe

3 = difficult to observe

4 = very difficult to observe

	1	2	3	4
Housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home furnishings and household goods, excluding consumer electronics and artworks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restaurant visits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clothing and shoes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel and vacations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jewelry and watches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumer electronics and services (mobile phone, computer, apps, streaming subscriptions, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hairdresser visits, wellness and cosmetic products and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Books, newspapers, and magazines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artworks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private retirement savings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education (e.g., training, further education, stays abroad, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children's education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health services and sports activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Savings for children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insurance (e.g., private liability, car, legal expenses, occupational disability, household contents, building insurance, excluding health and retirement)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Question 3:*

There are various channels through which one's own consumption or spending on certain goods and services, or savings, can negatively affect the utility of another person.

On the one hand, individuals may compare their own consumption with that of others and may not want to fall behind (envy).

On the other hand, person A's consumption may reduce person B's utility because it creates a competitive disadvantage for person B.

Please rate the following goods, services, or savings according to whether others would face a strong or weak competitive disadvantage if they had less (or the same amount but of lower quality) than you.

1 = very strong competitive disadvantage for others

2 = strong competitive disadvantage for others

3 = weak competitive disadvantage for others

4 = very weak competitive disadvantage for others



	1	2	3	4
Housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home furnishings and household goods, excluding consumer electronics and artworks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restaurant visits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clothing and shoes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel and vacations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jewelry and watches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumer electronics and services (mobile phone, computer, apps, streaming subscriptions, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hairdresser visits, wellness and cosmetic products and services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Books, newspapers, and magazines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artworks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private retirement savings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education (e.g., training, further education, stays abroad, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children's education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health services and sports activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Savings for children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Donations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insurance (e.g., private liability, car, legal expenses, occupational disability, household contents, building insurance, excluding health and retirement)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## B Appendix: Survey

### B.1 Part One

#### Individual Decision

In den nachfolgenden Fragen sollen Sie Entscheidungen für einen zukünftigen Verwandten (z. B. Enkelkind oder Urenkel) treffen. Die Fragen sind voneinander unabhängig.

**Für alle nachfolgenden Fragen gilt diese Ausgangssituation:**

Ihr zukünftiger Verwandter und sein soziales Umfeld arbeiten alle beim gleichen Arbeitgeber und haben ein durchschnittliches Jahresnettoeinkommen in Höhe von 26.000 EUR im Jahr (in heutigen Preisen) bei einer wöchentlichen Arbeitszeit von 35 Stunden.

Der Arbeitgeber bietet nun allen Mitarbeiterinnen und Mitarbeitern an, **entweder ihr Gehalt auf 30.000 EUR zu erhöhen oder ihre wöchentliche Arbeitszeit auf 30 Stunden zu senken.**

Ihr Verwandter weiß, dass sich die Hälfte seines sozialen Umfelds für eine Erhöhung des Gehalts entschieden hat.

*Frage 1:*

Welche Option wählen Sie für Ihren zukünftigen Verwandten?

- mehr Gehalt (wie die eine Hälfte des sozialen Umfelds)
- weniger Arbeitsstunden (wie die andere Hälfte des sozialen Umfelds)
- keine Präferenz

*Frage 2-20:*

**Im Folgenden erhalten Sie Informationen darüber, wofür Ihr zukünftiger Verwandter und sein soziales Umfeld das zusätzliche Einkommen überwiegend verwenden würden, wenn sie sich für eine Gehaltserhöhung entscheiden. Die Fragen sind voneinander unabhängig.**

Ihr Verwandter weiß, dass sich die Hälfte seines sozialen Umfelds für eine Erhöhung des Gehalts entschieden hat und das zusätzliche Geld überwiegend **für Bekleidung und Schuhe** verwenden möchte. Ihr Verwandter würde das zusätzliche Geld ebenfalls überwiegend für solche Ausgaben verwenden.

Welche Option wählen Sie für Ihren zukünftigen Verwandten?

- zusätzliches Geld für Bekleidung und Schuhe (wie die eine Hälfte des sozialen Umfelds)

- weniger Arbeitsstunden (wie die andere Hälfte des sozialen Umfelds)
- keine Präferenz

### Collective Decision

In den nachfolgenden Fragen sollen Sie Entscheidungen für einen zukünftigen Verwandten treffen. Die Fragen sind voneinander unabhängig.

#### Für alle nachfolgenden Fragen gilt diese Ausgangssituation:

Nehmen Sie an, Sie könnten auswählen in welcher Welt ihr Verwandter leben soll. Güter und Dienstleistungen sind in beiden Welten gleich teuer und entsprechen den heutigen Preisen.

Welt A: Ihr zukünftiger Verwandter und sein soziales Umfeld haben ein **durchschnittliches Jahresnettoeinkommen in Höhe von 26.000 EUR im Jahr bei einer wöchentlichen Arbeitszeit von 30 Stunden.**

Welt B: Ihr zukünftiger Verwandter und sein soziales Umfeld haben ein **durchschnittliches Jahresnettoeinkommen in Höhe von 30.000 EUR im Jahr bei einer wöchentlichen Arbeitszeit von 35 Stunden.**

*Frage 21:*

Welche Welt würden Sie für Ihren zukünftigen Verwandten wählen?

- Welt A (26.000 EUR pro Jahr bei einer wöchentlichen Arbeitszeit von 30 Stunden)
- Welt B (30.000 EUR pro Jahr bei einer wöchentlichen Arbeitszeit von 35 Stunden)
- keine Präferenz

*Frage 22-40:*

**Im Folgenden erhalten Sie Informationen darüber, wofür Ihr zukünftiger Verwandter und sein soziales Umfeld das zusätzliche Einkommen bei längerer Arbeitszeit in Welt B (im Vergleich zu Welt A) überwiegend verwenden würden. Die Fragen sind voneinander unabhängig.**

Das zusätzliche Einkommen in Welt B (im Vergleich zu Welt A) würde Ihr zukünftiger Verwandter und sein soziales Umfeld überwiegend **für Wohnausgaben (Miet-, oder Kreditausgaben)** verwenden.

Welche Welt würden Sie für Ihren zukünftigen Verwandten wählen?

- Welt A – wöchentliche Arbeitszeit von 30 Stunden
- Welt B – mehr Geld für Wohnausgaben (Miet-, oder Kreditausgaben) und eine wöchentliche Arbeitszeit von 35 Stunden
- keine Präferenz

## **B.2 Part Two (conducted at least 7 days later)**

In den nachfolgenden Frage sollen Sie eine Entscheidung für einen zukünftigen Verwandten (z. B. Enkelkind oder Urenkel) treffen.

Nehmen Sie an, Sie könnten auswählen in welcher Welt Ihr Verwandter leben soll. Güter und Dienstleistungen sind in beiden Welten gleich teuer und entsprechen den heutigen Preisen.

*Frage 1:*

Die wöchentliche Arbeitszeit Ihres zukünftigen Verwandten ist in beiden Welten 35 Stunden. Das entspricht in beiden Welten der durchschnittlichen Wochenarbeitszeit in der Gesellschaft.

Welche Welt wählen Sie für Ihren zukünftigen Verwandten?

- Welt A: Ihr Verwandter hat ein Jahresnettoeinkommen von 26.000 Euro, andere 22.000 Euro.
- Welt B: Ihr Verwandter hat ein Jahresnettoeinkommen von 30.000 Euro, andere 34.000 Euro.
- keine Präferenz

*Frage 2:*

Der eigene Konsum oder die eigenen Ausgaben für bestimmte Güter und Dienstleistungen bzw. Ersparnisse können für andere leicht oder schwer zu beobachten sein.

Bewerten Sie die folgenden Güter und Dienstleistungen bzw. Ersparnisse danach, wie leicht oder schwer sie für andere zu beobachten sind.

1 = sehr leicht zu beobachten

2 = leicht zu beobachten

3 = schwer zu beobachten

4 = sehr schwer zu beobachten

	1	2	3	4
Wohnraum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wohneinrichtung und Hausrat, ohne Unterhaltungselektronik und ohne Kunstgegenstände	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restaurantbesuche	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bekleidung und Schuhe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nahrungsmittel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reisen und Urlaub	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schmuck und Uhren	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unterhaltungselektronik und -dienstleistungen (Handy, Computer, Apps, Streamingabos etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friseurbesuche, Wellness- und Kosmetikprodukte und -dienstleistungen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bücher, Zeitungen und Magazine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kunstgegenstände	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private Altersvorsorge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bildung (z.B. Fort- und Weiterbildung, Auslandsaufenthalte, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bildung der Kinder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gesundheitsdienstleistungen und sportliche Aktivitäten	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sparen für Kinder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spenden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Versicherungen (z.B. Private Haftpflicht-, Kfz-, Rechtsschutz-, Berufsunfähigkeits-, Hausrat-, Wohngebäudeversicherung etc., ohne Gesundheits- und Altersvorsorge)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Frage 3:*

Es gibt verschiedene Kanäle, über die der eigene Konsum oder die eigenen Ausgaben für bestimmte Güter und Dienstleistungen bzw. Ersparnisse den Nutzen einer anderen Person negativ beeinflussen können.

Einerseits könnten Individuen ihren eigenen Konsum mit dem anderer vergleichen und nicht hinter den Konsum anderer zurückfallen wollen (Neid).

Andererseits könnte der Konsum von Person A den Nutzen von Person B verringern, weil er einen Wettbewerbsnachteil für Person B darstellt.

Bewerten Sie die folgenden Güter und Dienstleistungen bzw. Ersparnisse danach, ob andere einen starken oder schwachen Wettbewerbsnachteil haben, wenn sie davon weniger (oder gleich viel, aber in schlechterer Qualität) haben als Sie selbst.

1 = sehr starke Wettbewerbsnachteile für andere

2 = starke Wettbewerbsnachteile für andere

3 = schwache Wettbewerbsnachteile für andere

4 = sehr schwache Wettbewerbsnachteile für andere

	1	2	3	4
Wohnraum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wohneinrichtung und Hausrat, ohne Unterhaltungselektronik und ohne Kunstgegenstände	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restaurantbesuche	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bekleidung und Schuhe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nahrungsmittel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reisen und Urlaub	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schmuck und Uhren	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unterhaltungselektronik und -dienstleistungen (Handy, Computer, Apps, Streamingabos etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friseurbesuche, Wellness- und Kosmetikprodukte und -dienstleistungen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bücher, Zeitungen und Magazine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kunstgegenstände	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private Altersvorsorge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bildung (z.B. Fort- und Weiterbildung, Auslandsaufenthalte, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bildung der Kinder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gesundheitsdienstleistungen und sportliche Aktivitäten	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sparen für Kinder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spenden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Versicherungen (z.B. Private Haftpflicht-, Kfz-, Rechtsschutz-, Berufsunfähigkeits-, Hausrat-, Wohngebäudeversicherung etc., ohne Gesundheits- und Altersvorsorge)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## C Appendix: Income Comparison

Table 9 presents a series of marginal effects of logistic regression models estimating the probability of choosing the higher income option (as opposed to reduced working time), conditional on whether the decision was made individually or collectively. All models use only the individual and collective decisions without information on how the additional income is spent. The first 4 models cluster standard errors at the participant level, model 1 and 2 uses random effects (with and without controls), model 3 and 4 are logistic models (model 3 and 4, with and without controls), model 5 is a fixed effects logistic model.

Table 9: Average Marginal Effects of Individual (vs. Collective) Decision-Making on the Choice of Higher Income

	(1) RE Logit	(2) RE Logit	(3) Logit	(4) Logit	(5) FE Logit
Individual Decision	0.128** (0.042)	0.114** (0.042)	0.129** (0.042)	0.114** (0.042)	0.222** (0.075)
Observations	264	280	264	280	72
Controls	Yes	No	Yes	No	
Log-Likelihood	-146.7	-170.4	-159.5	-188.1	-21.3

*Notes:* Average marginal effects from logistic regressions predicting the probability of choosing higher income (as opposed to reduced working time). The reference category is the collective decision. Standard errors (in parentheses) are clustered at the participant level in models (1)–(4). RE: random effects; FE: fixed effects. Controls include sex, age, car ownership, Abitur grade, and whether the participant lives with their parents. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Table 10 presents a subgroup analysis, comparing status-sensitive and status-neutral individuals according to the approach by Solnick and Hemenway (1998).

Column 1, 2, and 3 show marginal effects of a single logistic regression model estimating the probability of choosing the higher income option (as opposed to reduced working time), conditional on whether the decision was made individually or collectively, and the interaction with a dummy variable for status-sensitive individuals. Column 1 shows the marginal effect across both groups, column 2 for status-sensitive individuals, and column 3 for status-neutral individuals. All models use only the individual and collective decisions without information on how the additional income is spent.

The difference of marginal effects between status-sensitive and status-neutral participants (column 4) is not statistically significant ( $p = 0.216$ ). The wide confidence interval



(95% CI: [-6.5 pp, +29.2 pp]) may reflect small cell counts: only 12-13 participants per group choose the positional combination. I interpret the lack of a statistical significant difference as a power issue rather than a contradiction.

Table 10: Subgroup Analysis: Average Marginal Effects of Individual (vs. Collective) Decision-Making on the Choice of Higher Income

	(1) Full Sample	(2) Status-sensitive	(3) Status-neutral	(4) difference
Individual Decision	0.145*** (0.043)	0.213** (0.073)	0.104 (0.054)	0.113 (0.091)
Observations	248	94	154	248
Model	Logit	Logit	Logit	
Controls	Yes	Yes	Yes	
Log-Likelihood	-148.1	-148.1	-148.1	

*Notes:* Average marginal effects from logistic regressions predicting the probability of choosing higher income (as opposed to reduced working time). The reference category is the collective decision. Subgroups classified by positionality measure adapted from Solnick and Hemenway (1998). Standard errors (in parentheses) are clustered at the participant level. Controls include sex, age, car ownership, Abitur grade, and whether the participant lives with their parents. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

## D Appendix: Expenditure Comparison

Table 11 presents a series of marginal effects of logistic regression models estimating the probability of choosing the higher income option (as opposed to reduced working time), conditional on whether the decision was made individually or collectively. All models use the individual and collective decisions of both with and without information on how the additional income is spent. The category which compares income only without information on what the additional income is spent is called *income*. The first 4 models cluster standard errors at the participant level, model 1 and 2 uses random effects (with and without controls), model 3 and 4 are logistic models (with and without controls), model 5 is a fixed effects logistic model. Figure 2 illustrates the marginal effects of model 1 with 95% confidence intervals.

Table 11: Marginal Effects Comparison Expenditure Categories

	(1) RE Logit	(2) RE Logit	(3) Logit	(4) Logit	(5) FE Logit
Art	0.038 (0.032)	0.034 (0.029)	0.034 (0.029)	0.031 (0.027)	0.088 (0.103)
Books	0.007 (0.026)	0.013 (0.025)	0.008 (0.029)	0.015 (0.028)	0.010 (0.034)
Car	0.032 (0.030)	0.022 (0.028)	0.032 (0.030)	0.023 (0.029)	0.027 (0.057)
Charity	0.050 (0.028)	0.046 (0.026)	0.053 (0.030)	0.049 (0.028)	0.021 (0.024)
Clothing	0.092** (0.035)	0.084** (0.033)	0.097** (0.037)	0.090** (0.034)	0.078 (0.047)
Consumer Electronics	0.038 (0.030)	0.036 (0.027)	0.040 (0.031)	0.037 (0.029)	0.038 (0.050)
Education	0.081* (0.037)	0.077* (0.036)	0.077* (0.036)	0.071* (0.033)	0.009 (0.006)
Education Children	0.103** (0.033)	0.098** (0.031)	0.090** (0.029)	0.084** (0.027)	0.005* (0.003)
Food	0.080* (0.034)	0.075* (0.034)	0.082* (0.035)	0.077* (0.034)	0.017 (0.012)
Furnishing	0.014 (0.036)	0.020 (0.034)	0.015 (0.039)	0.021 (0.037)	0.014 (0.033)
Hairdresser, Wellness	0.017 (0.031)	0.015 (0.028)	0.017 (0.032)	0.016 (0.029)	0.018 (0.057)
Health	0.083* (0.036)	0.071* (0.034)	0.084* (0.036)	0.071* (0.035)	0.014 (0.010)
Housing	0.061 (0.037)	0.064 (0.035)	0.065 (0.039)	0.068 (0.037)	0.023 (0.018)
Income	0.121** (0.040)	0.106** (0.039)	0.129** (0.042)	0.114** (0.042)	0.070 (0.036)
Insurance	0.014 (0.031)	0.014 (0.029)	0.015 (0.033)	0.015 (0.031)	0.005 (0.018)
Jewellery	-0.009 (0.030)	-0.009 (0.029)	-0.008 (0.028)	-0.008 (0.026)	-0.018 (0.091)
Private Pension Plan	0.076* (0.036)	0.073* (0.034)	0.069* (0.033)	0.064* (0.031)	0.006 (0.004)
Restaurant	0.030 (0.032)	0.035 (0.032)	0.032 (0.034)	0.038 (0.034)	0.031 (0.043)
Savings Children	0.089* (0.036)	0.085* (0.035)	0.080* (0.033)	0.074* (0.031)	0.006 (0.004)
Travel	-0.016 (0.034)	-0.015 (0.032)	-0.016 (0.034)	-0.015 (0.032)	-0.003 (0.008)
Observations	5098	5436	5098	5436	4996
Controls	Yes	No	Yes	No	
Log-Likelihood	-2360.9	-2536.4	-2821.5	-3118.2	-2003.8

Notes: Average marginal effects from logistic regressions predicting the probability of choosing higher income (as opposed to reduced working time). The reference category is the collective decision. Standard errors (in parentheses) are clustered at the participant level in models (1)–(4). RE: random effects; FE: fixed effects. Controls include sex, age, car ownership, Abitur grade, and whether the participant lives with their parents. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

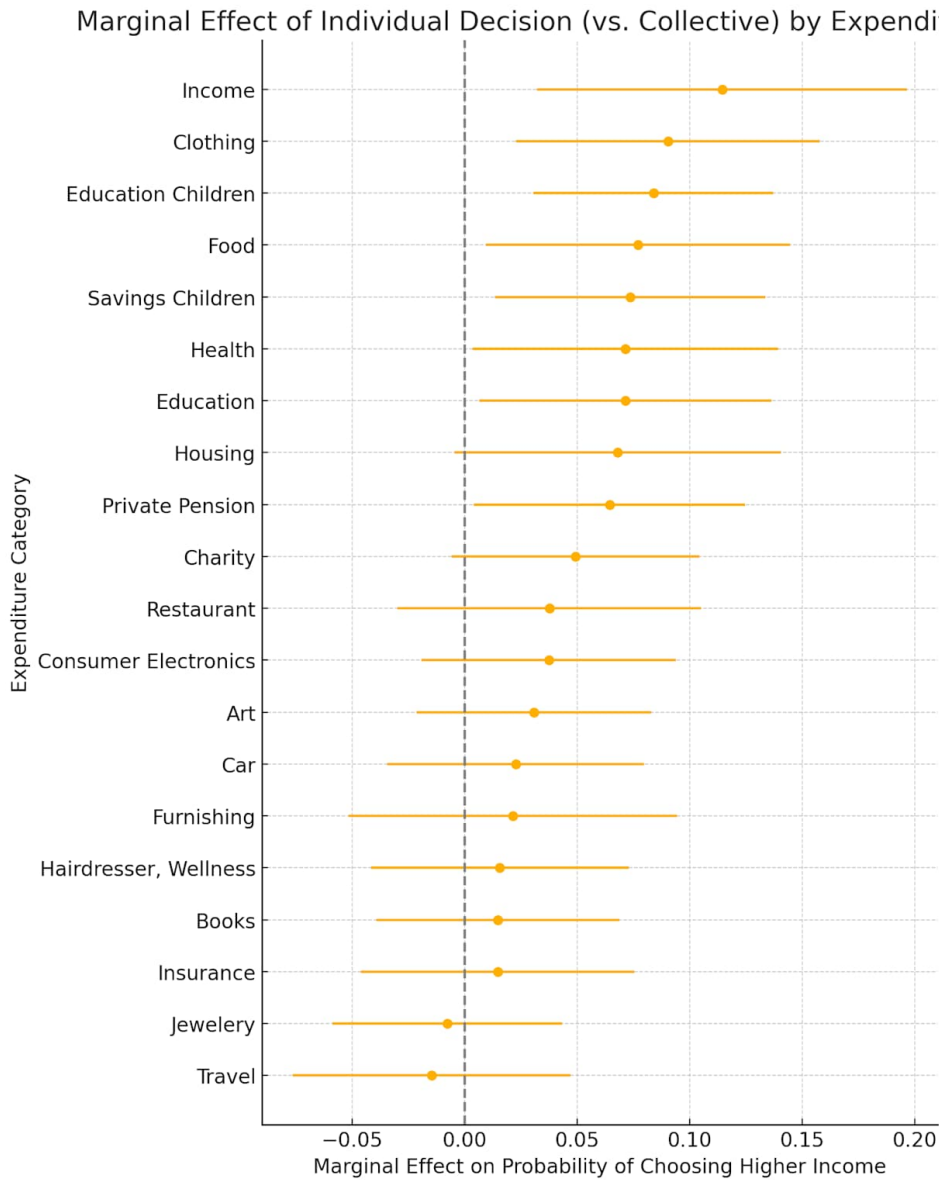


Figure 2: Marginal Effects Comparison Expenditure Categories

## E Appendix: Public Goods

Figure 3 illustrates the estimated probabilities of choosing higher income in both decision conditions using a logistic regression model which uses decisions without information on spending motives and with information on spending motives related to public goods. *Income* refers to decisions without information on spending motives. *Public Goods* groups spending motives that could potentially be provided by the state – namely, private pension plans, education, education of one’s own children, and health services.

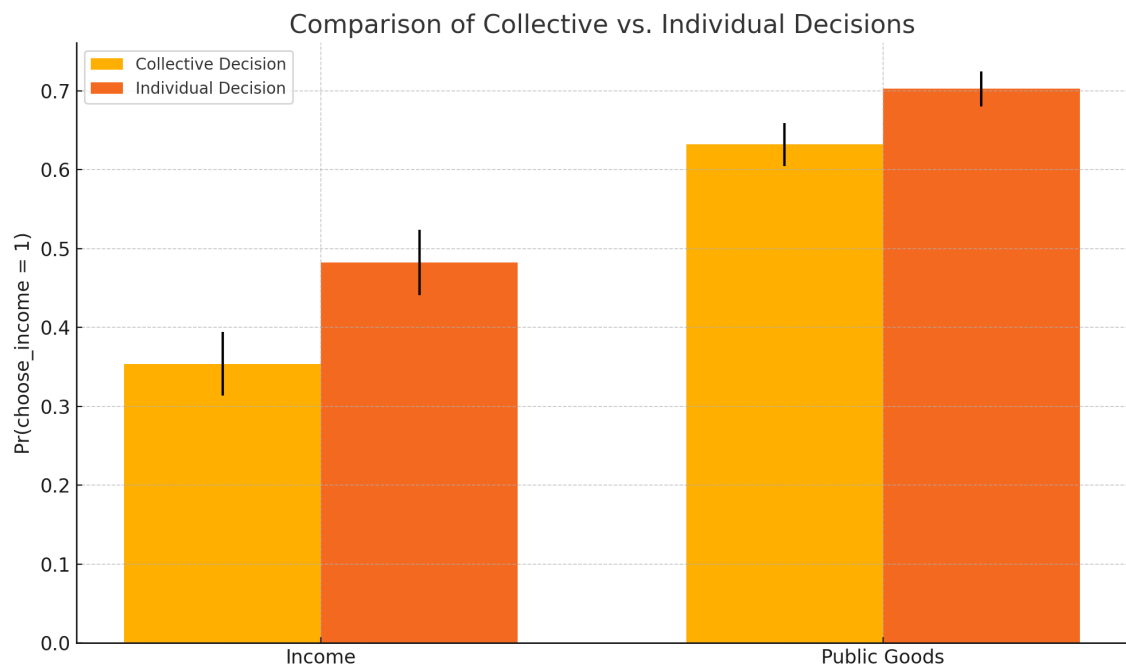


Figure 3: Probability of Choosing Higher Income (vs. Working Time Reduction)



# ifso working paper

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