Pre-Analysis Plan:

Technological Change and Preferences for Redistribution

"Vignettes Study"

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1. Background

The existing evidence in this project shows that impartial spectators choose to redistribute less from top earners when they receive their income from performing complex tasks than when they receive their income from performing routine tasks. This evidence is based on small groups carrying out tasks in an online laboratory experiment. Redistributive decisions are then made by both workers and impartial spectators.

To further probe the external validity of this finding, we will run a vignettes study to test whether individuals' preferences for taxing hypothetical high-income citizens differ when they have earned their (identical) incomes through an office job focused on routine tasks (e.g., data input, basic customer service etc.) or an office job focused on complex tasks (e.g., data analysis, strategic decision-making, managing others etc.).

2. Experimental Design

Respondents each receive two vignettes. The order of the vignettes is randomised across respondents. Each vignette sets out how a hypothetical high-income individual earns their annual income. We use two annual incomes: $100,000 and $500,000. Respondents either see the two vignettes with the $100,000 annual income or with the $500,000 annual income. The two vignettes describe: 1) an office job focused on routine tasks; or 2) an office job focused on complex tasks. The typical daily time spent in the office is kept the same in both vignettes, so the only difference between the scenarios is the complexity of the tasks the workers undertake.

V1. Routine work   Consider a person working in an office. Their job mainly involves performing simple repetitive tasks. A typical day in the office involves inputting data into spreadsheets, filing expense reports, and providing basic customer service. They do not manage other colleagues. They typically work from 9am to 6pm. Their annual income last year was $100,000/$500,000.

V2. Complex work   Consider a person working in an office. Their job mainly involves performing abstract problem solving and complex communications tasks. A typical day in the office involves analyzing sales and performance data, making strategic decisions about the business, and handling important client relationships. They manage several other colleagues. They typically work from 9am to 6pm. Their annual income last year was $100,000/$500,000.

We use a within-subjects design for our main analysis.[1] After respondents have read each vignette, they are asked about their preferred income tax rate for the hypothetical individual in the vignette. This aims to mirror the redistributive decisions we elicit from the workers and impartial spectators in the main experiment. For each vignette, respondents are then asked to justify their chosen tax rate, before being asked a series of questions about their beliefs and preferences that can help point to the underlying drivers for their tax rate decision. Lastly, we ask a set of questions on demographics and political preferences.[2]

3. Research Questions and Hypotheses

As outlined above, we are primarily interested in whether preferences for taxing high-income earners differ when their incomes have been earned through routine work or complex work. More specifically, we are interested in whether individuals are less inclined to tax high-income earners when they have earned their income in a job focused on abstract problem solving and complex communications tasks rather than in a job focused on simple repetitive tasks. Our potential explanation for this is the role of other regarding fairness preferences in this process. Therefore, our two central research questions for this vignettes study are the following:

RQ1. Does the task complexity of high-income workers' jobs affect the perceived fairness of their earnings?

RQ2: Does the task complexity of high-income workers' jobs affect the preferences of other citizens to tax them?

If task complexity does indeed affect preferences for taxing high-income earners by altering fairness perceptions, we would expect to see a difference within individuals in chosen tax rates for routine and complex work. Hence, this vignettes study allows us to isolate other-regarding fairness perceptions regarding high incomes earned through different types of work. Based on our main expectation that jobs involving more complex, skill-intensive tasks put downward pressure on redistributive demands as economic success is perceived as more deserved, our central hypotheses for this vignettes study is as follows.

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[1] We also test the robustness of our results to a between-subjects design by just using the first vignette seen by each respondent.

[2] Detailed experimental instructions are in the appendix.

H1. The earnings of high-income workers are perceived as fairer when their jobs have a higher task complexity.

H2. Preferred tax rates on high-income workers are lower when their jobs have a higher task complexity.

4. Sampling

To identify the minimum required sample size for our experiment, we conducted a power analysis. To do this, we used the results of a pilot study that we conducted in August 2022. Although results were statistically insignificant, the coefficient for the complex work treatment compared to the routine work treatment was around 1.7 and the standard variation was 11.9. Using this information, we conduct a power analysis assuming a conservative treatment effect size of 1.5 as well as an alpha of 0.05 and a power target of 0.8. Based on these assumptions, we would need around 1,000 observations per treatment group. To insure our study against potential margins of error of the power calculation, we aim to recruit around 2,500 participants in total.

We will recruit participants using via Prolific Academic. Coding and randomization will be implemented via Qualtrics.

5. Empirical Strategy

The outcome variable in our empirical analysis is the preferred tax rate on high-income earners. This is elicited directly from respondents after they have read each vignette (see Section 2). We now describe our modelling specification. To test H1 and H2, we calculate the following model:

(1) $Y_i = \beta_0 + \beta_1 C_i + \varepsilon_i$

Y_i denotes our outcome variables (fairness perceptions of earnings for H1 and preferred tax rate for H2) for each respondent i. C_i is the binary treatment variable for those who receive the complex work vignette and β_1 is its coefficient. The indicator takes the value '1' for the complex work treatment and '0' for the routine work treatment. β_0 denotes the intercept. ε_i denotes the error term.

We also check for heterogenous treatment effects by analysing whether effects vary by major socio-economic characteristics (e.g., age, income, gender, partisanship etc.).

6. Ethics

Our study has received ethical approval from King's College London. The reference number is MRSP-21/22-29830. We are neither using deception nor collecting any information that would allow us to identify subjects personally.

Appendix: Experimental Instructions

Introduction – All

Thank you for participating in this study.

In the following, you will be given two scenarios in which individuals gain their incomes in different ways. You will then be asked to decide on the amount of money you think each of these individuals should pay in taxes on this income. Please consider each scenario individually and think about what you consider to be an appropriate amount of money to pay in income taxes in each case. Please keep in mind that we are interested in your personal opinion and not in what the actual current tax rate in your country is.

Your answers will be used solely for academic research. The study is being carried out by non-partisan academic researchers seeking to advance our knowledge of society. It is important for the research that you answer as accurately as you can, so please read each of the statements and questions carefully.

Please click on the arrow below to proceed to the first scenario.

Vignettes

V1. Routine work   Consider a person working in an office. Their job mainly involves performing simple repetitive tasks. A typical day in the office involves inputting data into spreadsheets, filing expense reports, and providing basic customer service. They do not manage other colleagues. They typically work from 9am to 6pm. Their annual income last year was $100,000/$500,000.

V2. Complex work   Consider a person working in an office. Their job mainly involves performing abstract problem solving and complex communications tasks. A typical day in the

office involves analyzing sales and performance data, making strategic decisions about the business, and handling important client relationships. They manage several other colleagues. They typically work from 9am to 6pm. Their annual income last year was $100,000/$500,000.

B1. What proportion of their income do you think this person should pay in taxes for the year? (e.g., a tax rate of 40% would equate to paying $40,000/$200,000 in taxes.)
[0-100%.]

B2. Why did you choose the tax rate that you did?
[Free text.]

B3. How deserving do you think this person was of their $100,000/$500,000 annual income?
[Scale.]

B4. To what extent do you think effort was required for this person to earn their $100,000/$500,000 annual income?
[Scale.]

B5. To what extent do you think skill was required for this person to earn their $100,000/$500,000 annual income?
[Scale.]

B6. To what extent do you think luck was required for this person to earn their $100,000/$500,000 annual income?
[Scale.]

B7. Why do you think this person received their annual income of $100,000/$500,000? Please allocate a total of 100 points across the below four options. Please ensure that the more points you allocate to an option, the more important you consider it be. Please allocate all 100 points before proceeding.

  - Inherited Intelligence
  - Education
  - Luck

- Effort

[Distribution of 100 points across the four options.]

B8. How fair do you think it is that some people earn an annual income of $100,000/$500,000? [Scale.]

B9. Do you think it is plausible that a person earns an income of $100,000/$500,000 from *a job that mainly involves performing simple repetitive tasks/a job that mainly involves performing abstract problem solving and complex communications tasks?*

- Entirely plausible
- Somewhat plausible
- Neither plausible or implausible
- Somewhat implausible
- Entirely implausible
- Don't know

Demographics

D1. How old are you?
[Number.]

D2. What is your gender?

- Female
- Male
- Other
- Prefer not to answer

D3. To which of these groups do you consider you belong? You can choose more than one group.

- American Indian or Alaska Native
- Asian
- Black or African-American
- Native Hawaiian or other Pacific Islander
- Spanish, Hispanic or Latino
- White

- Other group
- Prefer not to answer

D4. Which category best describes your highest level of education?

- Primary education 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)
- Prefer not to answer

D5. What is your total (annual) household income before tax?

- Under $10,000
- $10,000 – $20,000
- $20,001 – $30,000
- $30,001 – $40,000
- $40,001 – $50,000
- $50,001 – $60,000
- $60,001 – $80,000
- $80,001 – $100,000
- $100,001 – $150,000
- $150,001 – $200,000
- $200,001 - $350,000
- $350,001 - $500,000
- Above $500,000
- Don't know
- Prefer not to answer

D6. What is your current employment status?

- Full-time employee
- Part-time employee
- Self-employed or small business owner
- Medium or large business owner
- Unemployed and looking for work
- Student
- Not currently working and not looking for work (e.g. full-time parent)
- Retiree
- Prefer not to answer

D7. Have you ever taken a module on economics or a related subject area at university?

- Yes
- No
- I have never attended higher education

D8. Do you think you can trust the government to do what is right?
- Never
- Only some of the time
- Most of the time
- Always

D9. In politics people sometimes talk of left and right. Where would you place yourself on the following scale?

Left   Right   Don't know

0	1	2	3	4	5	6	7	8	9	10		

D10. Which party do you feel closest to?

- Democratic party
- Republican party
- Other
- Don't know

D11. Who did you vote for in the recent 2020 Presidential Election?

- Joe Biden
- Donald Trump
- Other candidate
- Didn't vote
- Don't remember
- Prefer not to say

D12. Please tell us, in general, how willing or unwilling you are to take risks. Please use a scale from 0 to 10, where 0 means "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.
[Scale.]

D13. Please respond to the following statements by indicating the extent to which you agree or disagree with them on a scale from 1 (I strongly agree) to 7 (I strongly disagree).

- There is a right way and a wrong way to do almost everything
- Practically every problem has a solution
- I feel relieved when an ambiguous situation suddenly becomes clear
- I find it hard to make a choice when the outcome is uncertain

End