

ONLINE APPENDIX

A Survey

A.1 Survey link and questions in English

Link: https://cebi.eu.qualtrics.com/jfe/form/SV_6PcXP1t0Mw89iqp

Background and Political views

1. What is your birth year?
Dropdown menu with years. Only 1969-1973 accepted.
2. What is your gender?
Male; Female
3. How many siblings do you have with the same biological mother and father as you?
0; 1; 2 or more
4. Which municipality did you live in at the beginning of 2017? Note that in the following options, some of the municipalities are grouped together.
Dropdown menu with Danish municipalities
5. Which of the following categories best describes your highest educational level?
Primary education; Upper secondary education; Vocational education and training; Short cycle higher education; Bachelor program or vocational bachelor education; Master program or PhD program
6. What was your employment status at the beginning of 2017?
Full-time employment; Part-time employment; Self-employed; Unemployed; Not in the work-force
7. Which sector did you work in at the beginning of 2017? Note that we mean the sector which your workplace belongs to. For example, if you work with PR in a bank you should choose the sector “Finance and insurance” and not the sector “Information and communication”.
Construction; Real estate activities; Business services; Finance and insurance; Trade and transport; Manufacturing, raw material extraction and utilities; Information and communication; Culture, leisure and other services; Agriculture, forestry and fishing; Public administration, education, health and social work activities
8. Which party did you vote for in the last general election (in 2015)?
Socialdemokratiet; Venstre, Danmarks Liberale Parti; Radikale Venstre; Enhedslisten - De Rød-Grønne; Det Konservative Folkeparti; Alternativet; SF - Socialistisk Folkeparti; Liberal Alliance; Kristendemokraterne; Dansk Folkeparti; Other; Did not vote; Do not wish to answer
9. How would you describe your attitude on economic policy?
Very left-wing; Left-wing; Moderate; Right-wing; Very right-wing

Income

1. We will now ask you about your total income BEFORE tax in 2017. You should NOT include contributions to employer-managed pension schemes or mandatory pension contributions. When we later will inform you about your own position, it is important that you state your total income as precisely as possible. If you are in doubt about the amounts, you can view

them on your annual statement for 2017 from SKAT under *Opgørelse af indkomst* below *Før AM-bidrag*. You can also see a description of the different categories below. Note: In the scheme below we ask you to please state the yearly amounts in entire thousand DKK. If you enter 1, this corresponds to 1,000 DKK.

Salary and fees; Net profit from self-employment; Unemployment benefits, social assistance, study grants and pension payments

Perceptions

1. Instruction alvideo
2. We will now ask you a question to see if you have understood the video's explanation of the ladder's different positions. Think about a person with an income where 73 out of 100 people have an income that is the same as or lower than this person's income. 27 out of 100 people have an income that is higher than this person's income. Select this person's position on the income ladder using the slider below.
3. What do you think the income for P50 was in 2017 for individuals born in [PIPED BIRTH YEAR]? Remember that P50 is the income, where half have an income that is the same as or lower than this income, and half have an income that is higher than this income. Remember also that income is before tax for the whole of 2017 and consists of salary, net profit from self-employment, other business income, unemployment benefits, and transfers and payments from private and public pensions. Note: Please state your answer in entire thousand DKK. If you enter 1 it corresponds to 1,000 DKK
4. We will now ask you what you think the before tax income for P50 was in 2017 for the groups below that you are a part of. The first slider shows your answer from the previous question. You can use the other sliders to select what you think the income was for P50 for the different groups of people who were born the same year as you.
One horizontal slider for each reference group. The slider for cohort is locked at the amount entered in the previous question.
5. What do you think the income for P95 was in 2017 for individuals born in [PIPED BIRTH YEAR]? Remember that P95 is the income where 95 out of 100 have an income that is the same as or lower than this income, and 5 out of 100 have an income that is higher than this income. Please state your answer in entire thousand DKK. If you enter 1, it corresponds to 1,000 DKK
6. We will now ask you what you think the before tax income for P95 was in 2017 for the groups below that you are a part of. The first slider shows your answer from the previous question. You can use the other sliders to select what you think the income was for P95 for the different groups of people who were born the same year as you.
One horizontal slider for each reference group. The slider for cohort is locked at the amount entered in the previous question.
7. Rank among all people born in [PIPED BIRTH YEAR]. You previously reported that you had a yearly income in 2017 of [PIPED INCOME] DKK before tax. We will now ask you to report where you think this income placed you on the income ladder in 2017 for people who were born in [PIPED BIRTH YEAR]. Use the slider to select your position. Later, we will inform you about your true position.
8. Rank among [PIPED GENDER]. Now, think about all [PIPED GENDER] born in [PIPED BIRTH YEAR]. Use the slider to select where you think you were placed on the income ladder in 2017 for this group of people. Later, we will inform you about your true position.

9. Rank within [PIPED MUNICIPALITY] municipality. Now, think about people who also lived in [PIPED MUNICIPALITY] municipality at the beginning of 2017 and were born in [PIPED BIRTH YEAR]. Use the slider to select where you think you were placed on the income ladder in 2017 for this group of people. Later, we will inform you about your true position.
10. Rank within the educational level [PIPED EDUCATION]. Now, think about people whose educational level also was [PIPED EDUCATION] at the beginning of 2017 and were born in [PIPED BIRTH YEAR]. Use the slider to select where you think you were placed on the income ladder in 2017 for this group of people. Later, we will inform you about your true position.
11. Rank within the sector [PIPED SECTOR]. Now, think about people who also worked in the sector [PIPED SECTOR] at the beginning of 2017 and were born in [PIPED BIRTH YEAR]. Use the slider to select where you think you were placed on the income ladder in 2017 for this group of people. Later, we will inform you about your true position.
12. Think about your [FOR WOMEN: mother's. FOR MEN: father's] total income in the year in which you turned 15. Compared to [FOR WOMEN: mothers. FOR MEN: fathers] of children, who were also born in [PIPED BIRTH YEAR], where do you think your [FOR WOMEN: mother. FOR MEN: father] was placed on the income ladder in the year where you turned 15?
13. Is your income higher or lower than [FOR RESPONDENTS WITH ONE SIBLING: your brother's/sister's income? FOR RESPONDENTS WITH 2 OR MORE SIBLINGS: the average income of your siblings?]
Higher; The same; Lower
14. Think about your co-workers at the beginning of 2017. By co-workers, we mean the people who had the same workplace as you at the beginning of 2017. A workplace usually has the same address so if you for instance worked in a chain store then your co-workers are those who worked in the same store as you and not all the people who were employed in the same firm. How many people worked at your workplace at the beginning of 2017 including yourself? If you do not remember the exact number, then report your best guess.
15. Imagine that we rank you and your colleagues by your income in 2017 such that the person with the lowest income is number 1 and the person with the highest income is number [PIPED # COWORKERS]. What do you think your position was in this rank in 2017?
16. Think about your neighbors at the beginning of 2017. By neighbors, we mean the people who lived on the same road as you if you lived in a house or the people living on the same stairwell as you if you lived in an apartment. Think only about the people, who were between 25 and 65 years old. How many people lived on the same road or on the same stairwell as you, including your own household, at the beginning of 2017? If you do not remember the exact number, then report your best guess.
17. Imagine that we rank you and your neighbors by your income in 2017 such that the person with the lowest income is number 1 and the person with the highest income is number [PIPED # NEIGHBORS]. What do you think your position was in this rank in 2017?
18. Think about your schoolmates when you were 15 years old. By schoolmates, we mean everybody at your school who was born in [PIPED BIRTH YEAR], and not just the people in your class. How many schoolmates were you including yourself? If you do not remember the exact number, then report your best guess.

19. Imagine that we rank you and your schoolmates by your income in 2017, such that the person with the lowest income is number 1 and the person with the highest income is number [PIPED # SCHOOLMATES]. What do you think your position was in this rank in 2017?

Treatment

For the treatment group this block appears here. For the control group it appears after the block “Outcomes.”

For each reference group, cohort/gender/municipality/educational level/sector, we provide the following information on separate pages along with a visualization of the difference:

You GUESSED that you were on position PXX.

Based on the income you reported, your TRUE position is PXX.

You are actually X positions higher/lower on the ladder than you thought.

Outcomes

1. On a scale from 1 to 7 where 1 is “Completely fair”, 4 is “Neither fair nor unfair” and 7 is “Completely unfair”, indicate to what extent you think that it is fair or unfair that there are differences in income among people born the same year as you WITHIN the following groups that you are yourself a part of?
 - (a) Differences in income among people born in [PIPED BIRTH YEAR]
 - (b) Differences in income among [PIPED GENDER] born in [PIPED BIRTH YEAR]
 - (c) Differences in income among people living in [PIPED MUNICIPALITY] municipality
 - (d) Differences in income among people with the educational level [PIPED EDUCATION]
 - (e) Differences in income among people working in the sector [PIPED SECTOR]
2. Now, think about people born the same year as you WITHIN these groups (indicated below). On a scale from 1 to 7 where 1 is “Only luck”, 4 is “Equally important”, and 7 is “Only effort”, indicate to what extent you think that differences in income are caused by differences in peoples’ efforts over their lifetime or rather by luck? By luck, we mean conditions that you have no control over. By effort, we mean conditions that you can control.
 - (a) Reason for different incomes among people born in [PIPED BIRTH YEAR]?
 - (b) Reason for different incomes among [PIPED GENDER] born in [PIPED BIRTH YEAR]?
 - (c) Reason for different incomes among people living in [PIPED MUNICIPALITY] municipality?
 - (d) Reason for different incomes among people with the educational level [PIPED EDUCATION]?
 - (e) Reason for different incomes among people working in the sector [PIPED SECTOR]?
3. Which party would you vote for if there was a general election today?
Socialdemokratiet; Venstre, Danmarks Liberale Parti; Radikale Venstre; Enhedslisten - De Rød-Grønne; Det Konservative Folkeparti; Alternativet; SF - Socialistisk Folkeparti; Liberal Alliance; Kristendemokraterne; Dansk Folkeparti; Nye Borgerlige; Other; Do not wish to answer
4. Below, you see six statements that you can agree or disagree with. On a scale from 1 to 7 where 1 is “Completely agree”, 4 is “Neither agree nor disagree”, and 7 is “Completely disagree”, indicate to what extent you agree or disagree with each statement.
 - (a) Income inequality is a problem in Denmark

- (b) The government should increase redistribution of income by increasing taxes and transfers to reduce inequality
- (c) I am generally satisfied with my life
- (d) My work has generally paid off
- (e) People with high incomes have worked hard for their income and deserve it
- (f) If a person is poor this is mainly due to lack of effort from his or her side

Outro

1. It is important for our study that we only use responses from people, who have given the survey their full attention. You will automatically participate in the lottery no matter what you answer, but we would like to know how much attention you have given the survey.
1 I barely gave the survey any attention; ... ; 7 I gave the survey my full attention
2. Do you think that the survey was biased?
Yes, it was right-winged; Yes, it was left-winged; No, it was neutral
3. If you have any comments about the survey, then you are welcome to write them here:

A.2 Instructional video link and script

Link: <https://www.dropbox.com/s/ya1z0nlmii5tkpo/Instruktionsvideo.m4v?dl=0>

We will now ask you some questions regarding the distribution of income between Danes born the same year as you. It may be difficult to answer, but we ask you to try your best.

There are differences between peoples' incomes. Some people have a high income, others have a low income. The ladder to the left illustrates **how the incomes are distributed between Danes** born the same year as you. This is also called the income distribution.

Think of 100 people born the same year as you. They are ranked according to their income such that the person with the lowest income is at the bottom of the ladder and the person with the highest income is at the top of the ladder.

Look at the person next to the first rung of the ladder. 5 out of 100 people (i.e., 5 %) have an income that is the same as or **lower** than the income of this person. We call this P5, because the person has position 5 on the income ladder.

The person on the middle rung has position 50. **Exactly half** of all people (i.e., 50 %) born the same year as you have an income that is the same as or **lower** than the income of this person and **exactly half** have an income that is **higher** than the income of this person. We call the position in the middle for P50. Remember that P50 is the position in the middle since we will use this several times in the following questions.

The person next to the top rung has position 95. 95 out of 100 (i.e., 95 %) have an income that is the same as or **lower** than the income of this person and only 5 out of 100 people born the same year as you (i.e. 5 %) have an income that is higher than the income of this person. Remember what P95 indicates since we are going to use this several times.

Shortly, we will now ask you what you think the income is for P50 and P95, respectively, for Danes born the same year as you. Next, we will ask you what you think **your position** is on the ladder. You are welcome to watch the video again if you are not sure of the meaning of the different positions.

A.3 Survey screenshots

FIGURE A-1: INCOME QUESTION

We will now ask you about your **total income BEFORE tax in 2017**. You should **NOT** include contributions to employer-managed pension schemes or mandatory pension contributions. When we later will inform you about your own position, it is important that you state your total income as precisely as possible. If you are in doubt about the amounts, you can view them on your annual statement for 2017 from SKAT under *Opgørelse af indkomst* below **Før AM-bidrag**. You can also see a description of the different categories below.

Note: In the scheme below we ask you to please state the **yearly** amounts in **entire thousand DKK**. If you enter 1 this corresponds to 1,000 DKK.

Salary and fees	<input type="text"/>	thousand DKK
Net profit from self-employment	<input type="text"/>	thousand DKK
Unemployment benefits, social assistance, study grants and pension payments	<input type="text"/>	thousand DKK
Total	<input type="text" value="0"/>	thousand DKK

Examples

Salary and fees: Taxable wage income before tax and before labor market contribution and fees. You should include:

- Value of fringe benefits
- Taxable foreign wage
- Wage during sickness and maternity/paternity leave
- Fees from board duties, consultancy work, talks etc.
- Value of stock options, severance pay and anniversary bonus

On your tax statement this corresponds to box 11 + 12 + 14.

Net profit from self-employment: Net profit from self-employment after capital income and expenses. On your tax statement this corresponds to box 111 minus box 112.

Unemployment benefits, social assistance, study grants and pension payments: Unemployment benefits, cash benefits, sickness benefits, maternity/paternity benefits, study grants, payments from private pensions, public pensions and disability pensions. On your tax statement this corresponds to box 16.

FIGURE A-2: ELICITATION OF COHORT P50 PERCEPTION

What do you think the income for **P50** was in 2017 for individuals born in 1970?

Remember that P50 is the income, where half have an income that is the same as or lower than this income, and half have an income that is higher than this income.

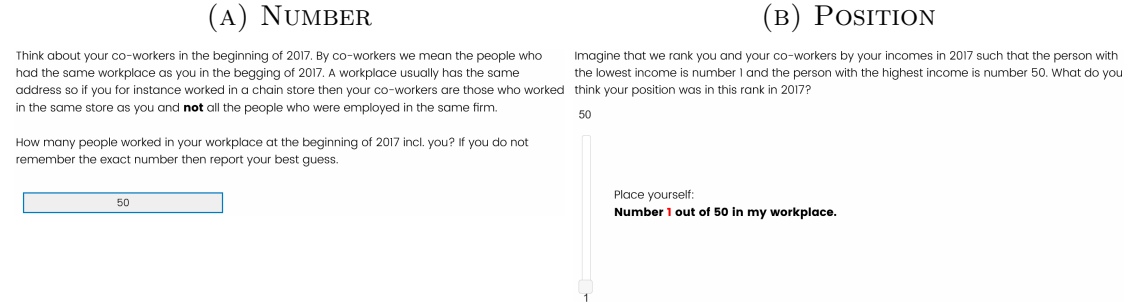
Remember also that income is before tax for the whole of 2017 and consists of salary, net profit from self-employment, other business income, unemployment benefits, transfers and payments from private and public pensions.

Note: Please state your answer in **entire thousand DKKs**. If you enter 1 it corresponds to 1,000 DKK.

<input type="text"/>	thousand DKK
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Notes: The figure shows a screenshot from the survey for a person who reported being born in 1970.

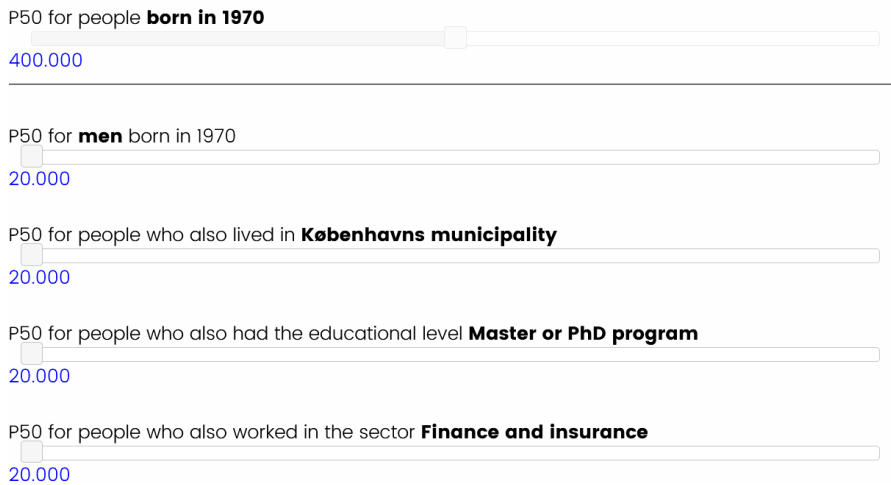
FIGURE A-4: ELICITATION OF NUMBER OF CO-WORKERS AND POSITION AMONG CO-WORKERS



Notes: Panels A and B show screenshots from two pages in the survey. On the first page in this example, the respondent reports having 50 co-workers (the box is empty as default). On the second page, this number is piped as the max of the slider, and when the respondent moves the slider with the cursor the red position number changes accordingly.

FIGURE A-3: ELICITATION OF LARGE REFERENCE GROUP P50 PERCEPTIONS

We will now ask you what you think the before tax income for **P50** was in 2017 for the groups below, which you are a part of. The first slider shows your answer from the previous question. You can use the other sliders to select, what you think the income was for P50 for the different groups of **people who were born the same year as you.**



Notes: The top slider shows the piped answer to the question in figure A-2 and cannot be moved. The sliders go from 20,000 to 8,069,000 in 200 steps according to $Y = 20000 * EXP(0.03 * Step)$. In the middle position the slider has the value 402,000.

B Conceptual Framework: Derivations

B.1 Reference groups

Let J_r denote the set of individuals j in reference group r of individual i . As explained in the main text, the weight γ_r denotes the reference group specific contribution to the fairness weight β_j if individual j belongs to the reference group of individual i . We can then rewrite Eq. (2) as

$$\begin{aligned}\tau &= \frac{\gamma_1/n_1}{\phi} \sum_{j \in J_1} \frac{x_j - x_i}{\bar{x}} + \frac{\gamma_2/n_2}{\phi} \sum_{j \in J_2} \frac{x_j - x_i}{\bar{x}} + \dots \\ &= \frac{\gamma_1 \bar{x}_1 - x_i}{\phi \bar{x}} + \frac{\gamma_2 \bar{x}_2 - x_i}{\phi \bar{x}} + \dots \\ &= \sum_{r=1}^R \frac{\gamma_r \bar{x}_r - x_i}{\phi \bar{x}}.\end{aligned}$$

QED.

B.2 Relevance for redistribution policy

We consider the demand for general redistribution (b, τ) and for redistribution within low-educated individuals (b_L, τ_L) of a person i who only cares about income differences within the low-educated. Consumption of individual i equals

$$c_i = (1 - \tau - \tau_L) x_i + b + b_L,$$

where

$$b = \frac{1}{n} \sum_{j=1}^n \tau x_j, \quad b_L = \frac{1}{n_L} \sum_{j=1}^{n_L} \tau_L x_j.$$

Utility now equals

$$u_i = \frac{1}{n_L} \sum_{j=1}^{n_L} \gamma (c_i - c_j) - \frac{\phi}{2} \frac{1}{n} \sum_{j=1}^n \tau^2 x_j - \frac{\phi}{2} \frac{1}{n_L} \sum_{j=1}^{n_L} [(\tau + \tau_L)^2 x_j - \tau^2 x_j],$$

where the second term is the average tax cost from the general tax while the third term is the additional tax cost on low-educated from their redistributive tax.

After inserting the above equations this becomes

$$u_i = (1 - \tau - \tau_L) \gamma (x_i - \bar{x}_L) - \frac{\phi}{2} \frac{1}{n} \sum_{j=1}^n \tau^2 x_j - \frac{\phi}{2} \frac{1}{n_L} \sum_{j=1}^{n_L} [(\tau + \tau_L)^2 x_j - \tau^2 x_j]$$

Differentiation with respect to τ and τ_L gives the first order conditions:

$$\begin{aligned} -\gamma(x_i - \bar{x}_L) - \phi\tau\bar{x} - \phi\tau_L\bar{x}_L &= 0, \\ -\gamma(x_i - \bar{x}_L) - \phi\tau\bar{x}_L - \phi\tau_L\bar{x}_L &= 0. \end{aligned}$$

By comparing these two equations, it follows that $\tau = 0$ (no demand for general redistribution). Solving for τ_L then gives

$$\tau_L = \frac{\gamma}{\phi} \frac{\bar{x}_L - x_i}{\bar{x}_L},$$

which reveals a demand for redistribution within the reference group. QED.

B.3 Fairness motive

The main result is derived for the case where individuals care about their own position relative to others (selfish fairness motive). Here, we consider an alternative setting with individuals care about income differences per se, unrelated to own position (altruistic fairness motive), but may care more about differences within certain reference groups.

The utility function of the individual equals

$$u = - \sum_{i=1}^n \sum_{j=1}^n \beta_{ij} |c_i - c_j| - \frac{\phi}{2} \frac{1}{n} \sum_{j=1}^n \tau^2 x_j$$

where $|c_i - c_j|$ denotes the numerical value of the income difference between a pair of individuals. The demand for redistribution is found by taking the derivative with respect to τ and using the expression for c_i and b , which gives

$$\tau = \sum_{i=1}^n \sum_{j=1}^n \frac{\beta_{ij}}{\phi} \left| \frac{x_i - x_j}{\bar{x}} \right|.$$

Consider now the case where the individual cares about income differences within a number of reference groups R , indexed by r . Group r contains n_r people. Individual i places a fairness weight γ_r/n_r^2 on income differences between any pair of individuals in reference groups r . Two individuals can belong to different reference groups. Therefore, the weight β_j placed on a pair of individuals is the aggregate of the fairness weights placed on each reference group they belong to. For example, if a pair is in reference group 1 and 2 then $\beta_{ji} = \gamma_1/n_1^2 + \gamma_2/n_2^2$, while if they are only in reference group 1 then $\beta_j = \gamma_1/n_1^2$. We can then rewrite the above formula as

$$\tau = \sum_{r=1}^R \frac{\gamma_r}{\phi} \sigma_r, \quad \sigma_r \equiv \frac{1}{n_r^2} \sum_{i \in J_r} \sum_{j \in J_r} \left| \frac{x_i - x_j}{\bar{x}} \right|,$$

where J_r denotes the set of individuals in reference group r . Note that this formula is the same as (4) with the exception that the relevant income inequality measure within reference groups is now σ_r . This implies that the main results that follow from (4) also go through with the altruistic fairness motive.

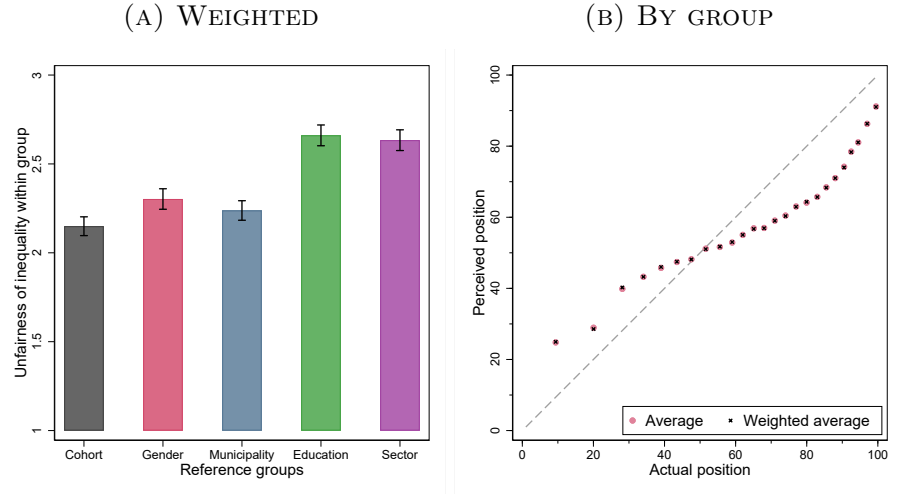
C Figures and tables referenced in the main text

TABLE A-1: SUMMARY STATISTICS: SAMPLE COMPARED TO POPULATION

	Sample	Started	Invited	Population	Incl. immigrants
	(1)	(2)	(3)	(4)	(5)
Demographics					
Male (%)	51.4	47.2	50.8	50.5	50.3
Age	47.0	47.0	47.0	47.0	47.0
Married (%)	63.3	61.3	57.0	56.5	57.8
Immigrant (%)	0.0	0.0	0.0	0.0	13.0
Descendant (%)	0.4	0.4	0.5	0.5	0.4
Income Position					
Income position	64.2	59.6	53.7	53.3	50.5
Bottom 50% (%)	28.8	36.1	45.5	46.1	50.0
Middle 40% (%)	54.3	50.1	43.7	43.2	40.0
Top 10% (%)	16.9	13.8	10.8	10.7	10.0
Education					
Primary education (%)	7.6	9.6	15.6	15.8	17.2
Upper secondary edu. (%)	5.8	5.6	5.2	5.3	5.8
Vocational education (%)	31.5	34.1	39.3	38.8	37.6
Short cycle higher edu. (%)	9.1	8.2	7.0	7.0	7.0
Bachelor's programs (%)	26.9	25.9	20.2	20.2	19.6
Master's programs (%)	19.2	16.5	12.6	12.7	12.8
Socioeconomic Status					
Self-employed (%)	3.7	4.1	6.0	5.9	6.0
Employee (%)	90.2	87.3	80.8	80.3	77.2
Unemployed (%)	1.3	1.6	1.9	2.1	2.5
Not in work force (%)	4.8	7.0	11.3	11.7	14.3
Private sector (%)	65.8	64.6	70.0	69.3	69.7
Regions					
Copenhagen (%)	31.0	30.3	29.2	29.5	31.7
Sealand (%)	16.2	16.5	16.1	15.9	15.3
Southern Denmark (%)	20.7	21.4	21.5	21.5	21.0
Middle Jutland (%)	23.1	22.7	23.4	23.0	22.4
North Jutland (%)	8.9	9.2	9.9	10.0	9.5
Parents' Income					
Mother's income position	53.1	52.1	50.6	50.5	50.2
Father's income position	53.3	52.4	50.7	50.8	50.5
Observations	9415	13686	50100	339231	389863

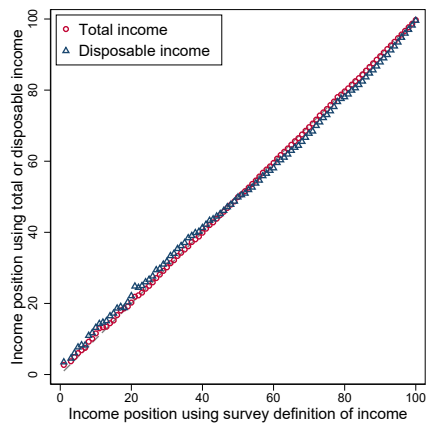
Notes: *Sample* are the respondents who completed the survey and are used in the analysis. *Started* are the respondents who began the survey. *Invited* are the respondents who received an invitation to participate in the survey. *Population* is the population our contact sample was drawn from. This sample was provided by Statistics Denmark and is the full population excluding immigrants. *Incl. immigrants* is the full Danish population born in 1969-1973. All variables marked with (%) are indicators.

FIGURE A-5: UNFAIRNESS VIEWS AND PERCEPTIONS OF OWN POSITION WHEN RE-WEIGHTING



Notes: This figure shows our key results on fairness from Figure 2, Panel A and the key result on perception about own position in Figure 3 but reweighting the analysis sample to match the representative sample of people invited. The probability weights are based on the inverse of the predicted probability that an invitee completed the survey. The prediction uses income position, cohort, gender, region of residence and sector of work (incl. a category for unemployed/not in the work force) fixed effects. The graphs are very similar to the original graphs in Figure 2, Panel A and Figure 3.

FIGURE A-6: POSITIONS USING DIFFERENT INCOME DEFINITIONS



Notes: The figure uses all individuals born from 1969 to 1973 observed in the income register data, for which N=389,759. For each percentile position in the income distribution based on the survey definition of income, we plot the average percentile position in the income distribution based on either total income or disposable income of the individuals at that position. We use total income and disposable income as defined by Statistics Denmark.

TABLE A-2: ATTRITION ANALYSIS

	Not in sample	
Panel A		
Treatment	0.011	(0.008)
Male	-0.083***	(0.008)
Age	0.001	(0.003)
Married	-0.021**	(0.008)
Ref.: Middle 40%		
Bottom 50 %	0.149***	(0.009)
Top 10 %	-0.060***	(0.012)
Ref.: Master's programs		
Primary education	0.157***	(0.017)
Upper secondary edu.	0.017	(0.019)
Vocational education	0.086***	(0.012)
Short-cycle higher edu.	0.014	(0.017)
Bachelor's programs	0.026*	(0.012)
Ref.: Northern Jutland		
Copenhagen	0.016	(0.015)
Sealand	-0.000	(0.016)
Southern Denmark	0.007	(0.015)
Middle Jutland	-0.014	(0.015)
Observations	13667	
Panel B		
		Share
Not in the final sample		0.312
Drop out at consent question		0.010
Drop out at income question		0.102
Drop out before treatment		0.242
Drop out after treatment		0.012
Screened out		0.049

Notes: Respondents who dropped out before the treatment were not assigned to either the treatment or control group. We randomly assign these individuals to one of the groups. The number of observations in the regression in Panel A is 19 less than total number of people who started the survey. This is because we miss educational information for these individuals. The sum of *Drop out before treatment*, *Drop out after treatment*, and *Screened out* is 30.3%. The last 0.9% are people who are assigned to the control but do not complete the survey. *Ref.* refers to the reference/baseline group for the following set of indicators. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE A-3: TREATMENT BALANCING

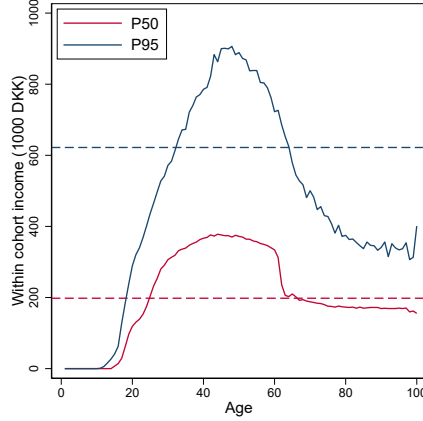
	Control	Treatment	Difference	
Actual cohort position	64.003	64.370	-0.367	(0.513)
Treatment information	-5.812	-6.048	0.237	(0.335)
Cohort misperception	-5.767	-6.064	0.297	(0.353)
Left-wing	0.219	0.222	-0.003	(0.009)
Right-wing	0.236	0.241	-0.004	(0.009)
Male	0.511	0.518	-0.007	(0.010)
Age	47.058	46.998	0.060*	(0.029)
Primary education	0.077	0.075	0.001	(0.005)
Upper secondary education	0.061	0.054	0.007	(0.005)
Vocational education	0.317	0.312	0.005	(0.010)
Short-cycle higher education	0.090	0.091	-0.001	(0.006)
Bachelor's programs	0.264	0.274	-0.010	(0.009)
Master's programs	0.190	0.193	-0.003	(0.008)
Self-employed	0.037	0.037	0.000	(0.004)
Employee	0.901	0.903	-0.002	(0.006)
Unemployed	0.013	0.013	-0.000	(0.002)
Private sector	0.660	0.657	0.003	(0.010)
Not in work force	0.049	0.047	0.002	(0.004)
Copenhagen	0.087	0.086	0.001	(0.006)
Sealand	0.237	0.229	0.008	(0.009)
Southern Denmark	0.199	0.215	-0.016	(0.008)
Middle Jutland	0.312	0.308	0.004	(0.010)
Northern Jutland	0.164	0.161	0.003	(0.008)
<i>N</i>			9415	

Notes: Column 1 and 2 show the group means of the variables. Column 3 shows the difference. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE A-4: MATCH BETWEEN SURVEY RESPONSE AND REGISTER DATA

	N	Share
Correct cohort	9,415	1.00
Correct gender	9,415	1.00
Correct municipality	9,239	0.98
Correct level of education	6,958	0.74
Correct sector	6,768	0.72
All correct	4,952	0.53

FIGURE A-7: WITHIN COHORT P50 AND P95 BY AGE



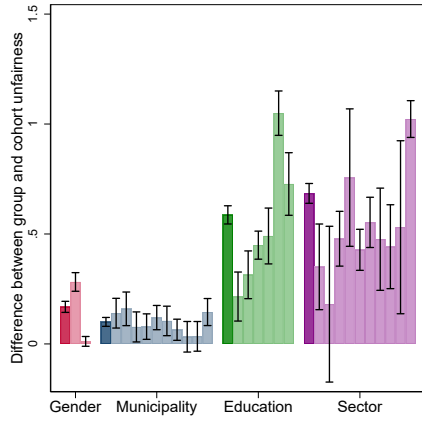
Notes: This figure shows the within cohort P50 and P95 income based on a 10% sample of the full population in Denmark. We use the same income definition as in the survey, which excludes early retirement benefits since the cohorts surveyed are not yet eligible for this benefit. The age cut-off for early retirement benefits is 60 and therefore we see a sharp drop at this age. We include pension payments since we cannot disentangle old-age pension and disability pension.

TABLE A-5: MOMENTS IN THE FULL INCOME DISTRIBUTION

	Income distribution percentiles				
	P5	P25	P50	P75	P95
Full population	0	57	198	358	622
Adult population	36	158	261	394	670
Working age population	39	217	333	447	751
45- to 50-year-olds	112	262	373	502	896

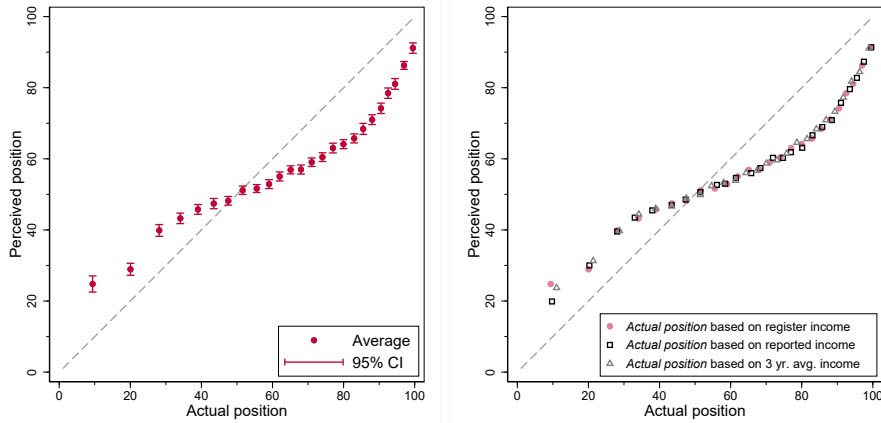
Notes: This table shows different moments of the income distribution in 1,000 DKK based of different definitions of the population. The moments are based on a 10% sample of the full population in Denmark in 2017. *Adult population* are individuals from age 18 and up. *Working age population* are individuals from age 25 to 65.

FIGURE A-8: DIFFERENCES IN VIEWS ON UNFAIRNESS OF INEQUALITY BETWEEN LARGE REFERENCE GROUPS AND COHORT



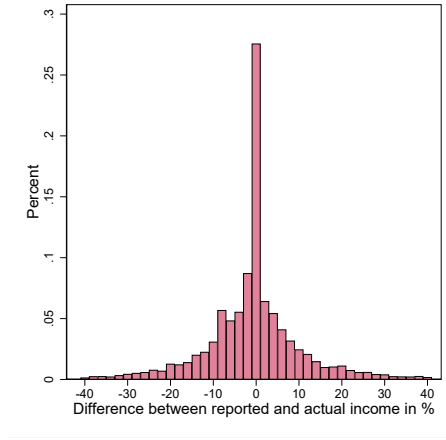
Notes: The figure uses only responses from the control group. It shows the unfairness views for the large reference groups (darker color) as well as the specific reference groups, i.e. men and women for *Gender* (lighter color), relative to cohort unfairness views. For municipality we do not show the difference for each municipality, but group the municipalities into 10 groups based on the P50 income level in the municipality. We control for actual income position linearly (normalized such that P50 is the constant in the regression).

FIGURE A-9: PERCEIVED POSITION WITHIN COHORT
 (A) WITH CONFIDENCE BANDS (B) ACTUAL INCOME MEASURES



Notes: Panel A is a bin scatter of the average perceived position by actual position (in 25 equal-sized bins) with 95% confidence bands using robust standard errors. Panel B shows actual position when based on the actual income observed on the tax return, the income reported in the survey, or a three-year average of actual income.

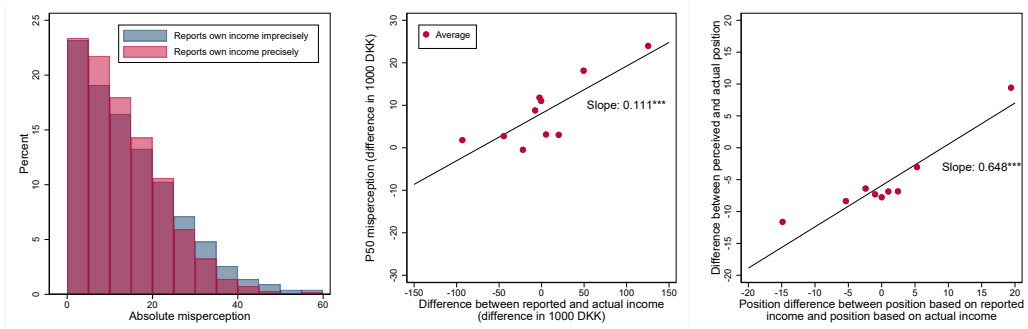
FIGURE A-10: RELATIVE DIFFERENCE BETWEEN REPORTED AND ACTUAL INCOME



Notes: Figure shows a histogram of the relative difference between reported and actual income in percent. The bin width is 2 and the plot is truncated at $\pm 41\%$. Note that the spike at exactly zero suggests that some of the respondents have checked their actual income on the tax return when answering the survey. We see a small spike at a reported income 8-9% below actual income. Respondents are asked to report their income including labor-market contribution, which is 8% of income before taxes; a few respondents seem to report their income excluding these contributions.

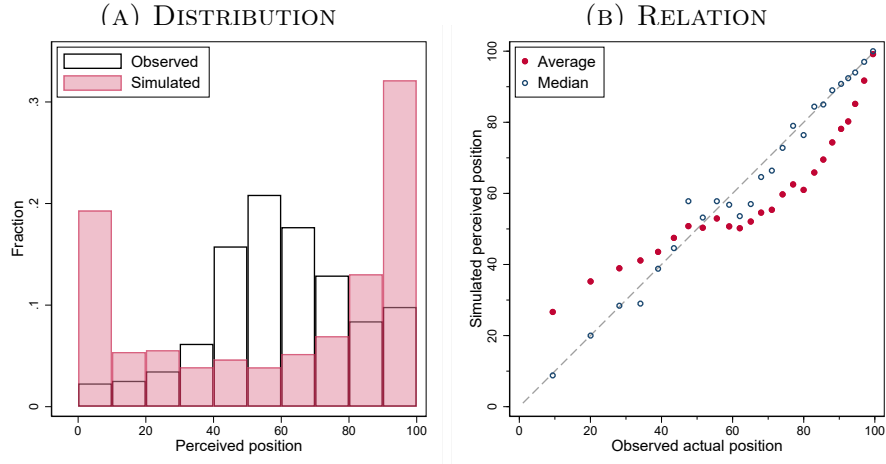
FIGURE A-11: MISPERCEPTION OF OWN INCOME AND OWN POSITION

(A) DISTRIBUTION (B) P50 MISPERCEPTION (C) OWN POSITION



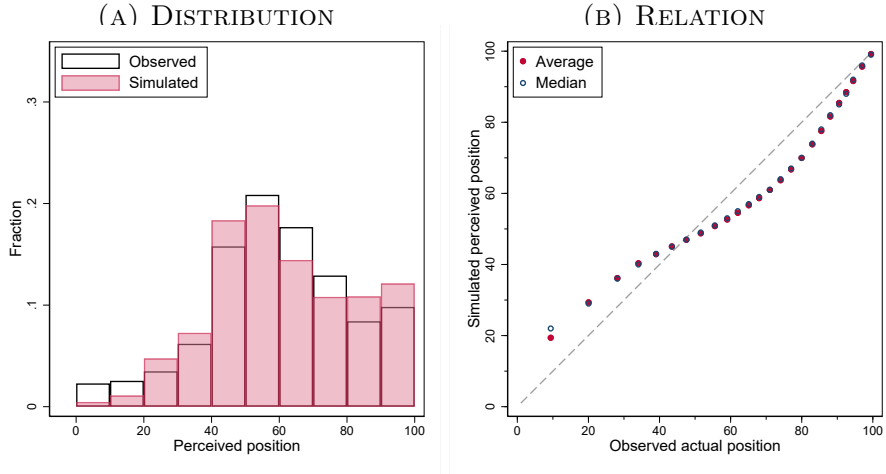
Notes: Panel A shows the distribution of absolute misperceptions. We split the sample into people whose perceived income is within a 5% error band of the actual income, which we label *Reports own income precisely*, and those whose perceived income is more than 5% above or below the actual income, which we label *Reports own income imprecisely*. Panel B shows a binned scatter of the average misperception in P50 by difference between reported and actual income. The line illustrates the predicted relationship from an OLS regression. Panel C shows a binned scatter of the average misperception of cohort position by the difference between actual position based on reported income and actual position based on actual income. The line illustrates the predicted relationship from an OLS regression.

FIGURE A-12: SIMULATION I



Notes: This figure illustrates that idiosyncratic misperceptions of the income distribution cannot explain the inverted S-shape of perceived own income positions in Figure 3. For each individual, we draw μ from a normal distribution with the same standard deviation as $\hat{\mu}$ obtained from the estimation underlying Appendix Figure A-13. We generate the respondents' (simulated) perceived positions by assuming they know their own income perfectly and add μ to the actual percentile limits in the cohort income distribution and use these “noisy” distributions to place the respondents in the distribution. Panel A shows the distribution of perceived positions among the respondents (*Actual*) and the distribution of perceived positions based on the simulated perceptions (*Simulated*). The two distributions are not aligned. Panel B shows bin scatters of the average and median perceived position by actual position in 25 equally sized bins as in Figure 3. *Actual position* is based on the income from the tax return and *Perceived position* is based on the simulation. While the simulated average perceptions exhibit an inverted S-shape, the medians lie closely to the 45^o-line, in contrast to the inverted S-shape of the medians in Figure 3.

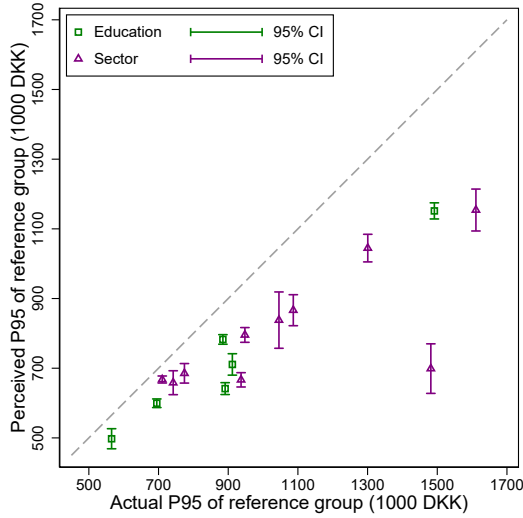
FIGURE A-13: SIMULATION II



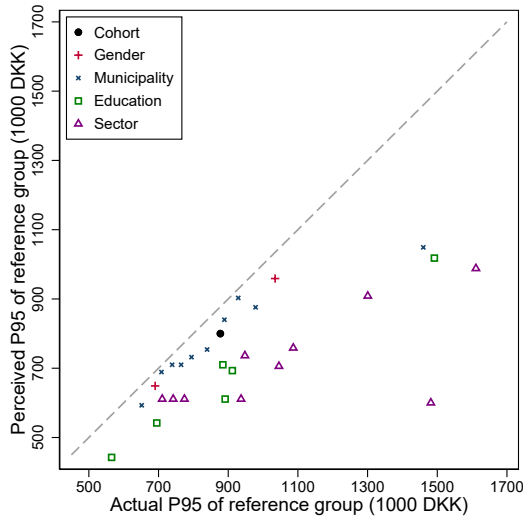
Notes: This figure illustrates how systematic misperceptions of the income distribution (P50 and P95) lead to misperceptions of own income position. To generate the simulated perceived position, we first generate a noise term from the actual data, $\varepsilon = 0.5Misperception_{P50} + 0.5Misperception_{P95}$, where $Misperception_{P50}$ and $Misperception_{P95}$ are the misperceptions of P50 and P95 in the cohort in DKK (both winzorized at the 5th and 95th percentile within actual position percentile). We then estimate the systematic part of the noise by predicting $\hat{\varepsilon}_i$ from the following OLS regression: $\varepsilon_i = \beta_0 + \beta_1 Actual\ position_i + \mu_i$. Finally, we generate the respondents' (simulated) perceived positions by assuming they know their incomes perfectly and add $\hat{\varepsilon}_i$ to the actual percentile limits in the cohort income distribution and use this “noisy” distribution to place the respondents in the distribution. Panel A shows the distribution of perceived positions among the respondents (*Actual*) and the distribution of perceived positions based on the simulated perceptions (*Simulated*). They align reasonably well. Panel B shows a bin scatter of the average and median perceived position by actual position in 25 equally sized bins as in Figure 3. *Actual position* is based on the income from the tax return and *Perceived position* is based on the simulation. The simulated median and average perceptions by actual position both exhibit an inverted S-shape like in Figure 3.

FIGURE A-14: DISTRIBUTION OF P50 MISPERCEPTIONS AND MEDIAN PERCEIVED P50 AND P95 INCOMES FOR LARGE REFERENCE GROUPS

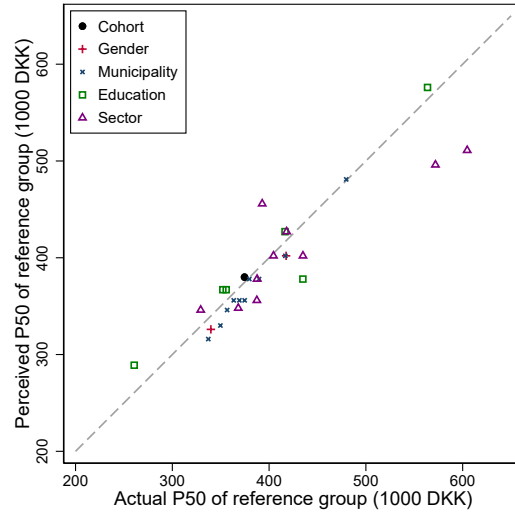
(A) P95 WITH CONFIDENCE BANDS



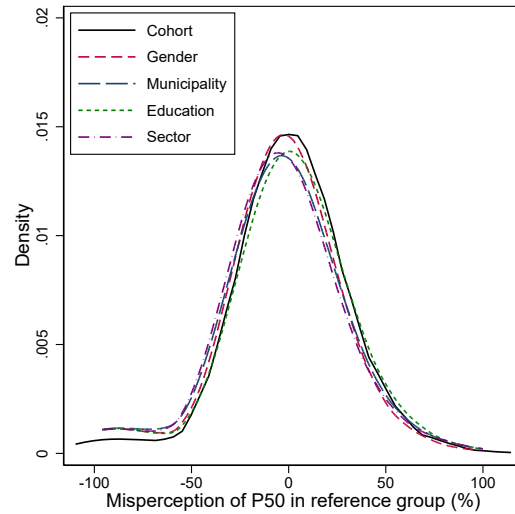
(C) P95 WITH MEDIANS



(B) P50 WITH MEDIANS

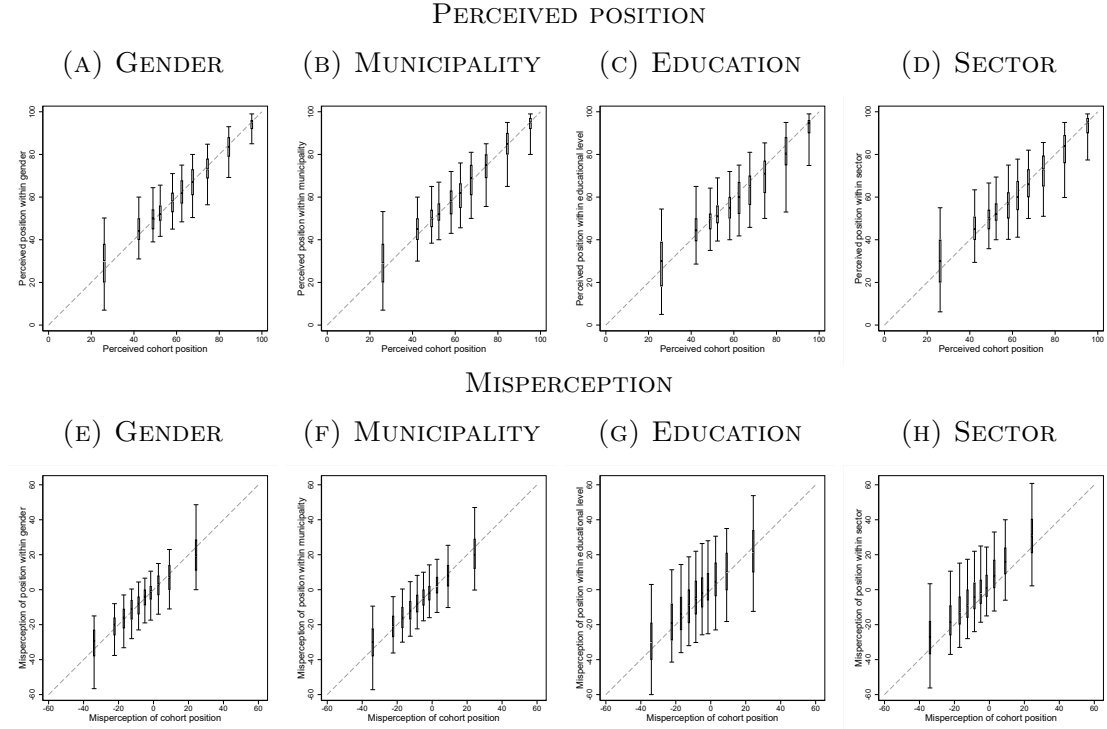


(D) DISTRIBUTION



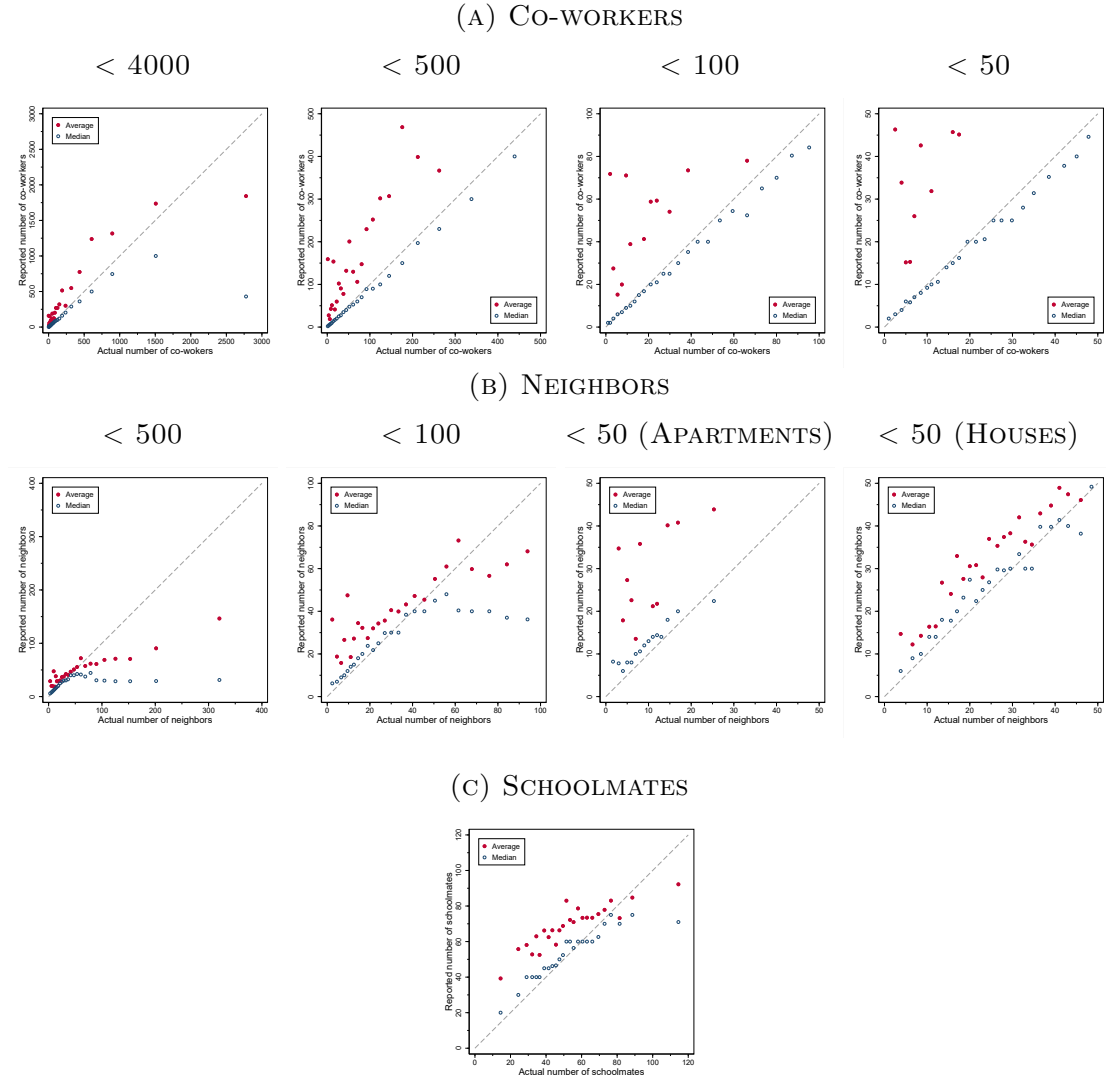
Notes: Panel A shows the averages for the education and sector groups is in Figure 6 and includes the 95% confidence bands based on the robust standard errors. In Panels B and C, we show bin medians instead of bin means using the same sample as in Figure 6. For gender, we show one scatter plot for men and one for women. For municipality, we divide the respondents into 10 similar-sized groups based on the actual municipality P50 and P95 income and plot one scatter for each group. For education and sector, we show one scatter plot for each educational level or sector. In Panel D, we show the distributions of P50 misperceptions in the large reference groups. The distributions are smoothed using Epanechnikov kernels with a bandwidth of 15.

FIGURE A-15: VARIATION IN PERCEIVED POSITION AND MISPERCEPTION ACROSS LARGE REFERENCE GROUPS



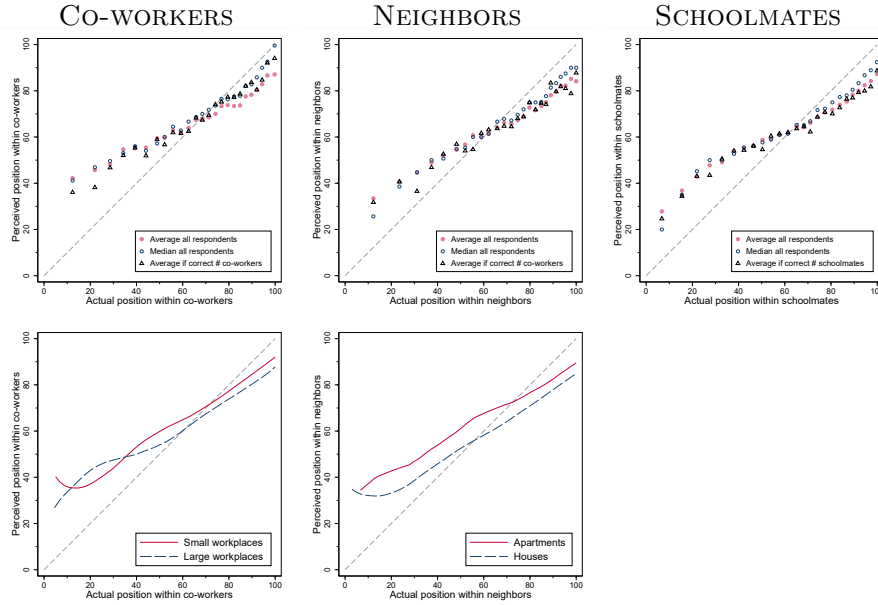
Notes: This figure shows 5th, 25th, 50th, 75th and 95th percentile of reported position within the large reference group by bins of perceived cohort position in the top row and misperception of own position within the large reference group by bins of misperception of cohort position in the bottom row.

FIGURE A-16: ACTUAL AND REPORTED NUMBER OF PEOPLE IN SMALL REFERENCE GROUPS



Notes: The figures show bin scatters of the reported number of co-workers by the actual number of co-workers. In each panel, the sample is restricted to observations where the *Actual number of co-workers* is below a certain threshold. All observations are used to calculate the bin averages but the panels only show the averages if they are smaller than the threshold. There are 25 bins in each panel (15 in the third panel in B) and there are the same number of observations behind each bin. The bin averages are only plotted if they are lower than the maximum actual number. For *Schoolmates*, the figure is based on respondents enrolled in Basic School at age 15. The figure excludes observations from one very large school.

FIGURE A-17: PERCEIVED POSITION IN SMALL REFERENCE GROUPS



Notes: There are 25 bins in each panel. They are of equal size, except the top bin for co-workers and neighbors in the top panels, which have more observations. The top panels shows similar patterns as in figure 9, using medians instead of averages or restricting the sample to respondents who report a number of people in the small reference group that matches the number observed in the register data $\pm 10\%$. In the bottom panels, the local linear polynomials have a bandwidth of 10 and are based on the respondents who report the correct number of people in the reference group by $\pm 10\%$. Small workplaces have 10 to 100 employees. Large workplaces have more than 100 employees.

TABLE A-6: PERCEPTIONS REGRESSED ON INDIVIDUAL CHARACTERISTICS

	A. Top 25% most inaccurate			B. Top 25% most accurate			C. Positive misperception		
	Position	P50	P95	Position	P50	P95	Position	P50	P95
Male	-4.4*** (1.0)	-5.9*** (1.0)	-5.9*** (1.1)	5.1*** (1.0)	2.3* (1.1)	8.1*** (1.1)	4.1*** (0.9)	-0.5 (1.2)	3.6** (1.2)
Children	-1.2 (1.0)	0.9 (1.1)	-1.0 (1.1)	2.1* (1.0)	-0.6 (1.1)	0.8 (1.1)	0.8 (1.0)	0.4 (1.2)	1.2 (1.2)
Partner	-2.0 (1.2)	0.1 (1.2)	1.0 (1.2)	-0.1 (1.2)	0.1 (1.2)	1.0 (1.2)	0.5 (1.1)	-0.3 (1.4)	0.1 (1.3)
High-income partner	1.4 (1.2)	-3.3* (1.3)	-3.3* (1.3)	0.7 (1.3)	2.6 (1.4)	2.3 (1.4)	5.1*** (1.3)	-2.3 (1.5)	-0.4 (1.5)
Ref. Father mid 50%									
Bottom 25%	-0.9 (1.1)	-1.0 (1.1)	0.2 (1.2)	1.3 (1.1)	-1.1 (1.2)	0.7 (1.2)	-0.1 (1.1)	-0.6 (1.3)	0.8 (1.3)
Top 25%	-2.1* (1.0)	-0.4 (1.1)	0.6 (1.1)	2.4* (1.1)	0.5 (1.1)	2.6* (1.2)	0.7 (1.0)	0.7 (1.2)	5.1*** (1.2)
Ref. Moderate									
Left wing	-1.8 (1.1)	0.2 (1.1)	2.5* (1.2)	1.6 (1.1)	1.1 (1.2)	2.6* (1.2)	-1.6 (1.1)	-1.5 (1.3)	4.3*** (1.3)
Right wing	-2.9** (1.1)	-1.6 (1.1)	-0.3 (1.1)	2.9* (1.1)	1.0 (1.2)	-0.1 (1.2)	3.3** (1.0)	-1.8 (1.3)	3.1* (1.3)

Continues on next page.

TABLE A-6 CONTINUED

	A. Top 25% most inaccurate			B. Top 25% most accurate			C. Positive misperception		
	Position	P50	P95	Position	P50	P95	Position	P50	P95
Ref. Nothern Jutland									
Middle Jutland	-1.3 (1.7)	3.1 (1.7)	2.8 (1.7)	0.7 (1.8)	1.4 (1.8)	0.3 (1.8)	-3.5* (1.6)	2.7 (2.0)	3.8* (1.9)
Southern Denmark	-2.0 (1.7)	2.9 (1.7)	2.8 (1.8)	0.7 (1.8)	0.0 (1.8)	-1.4 (1.8)	-1.7 (1.7)	0.2 (2.0)	2.4 (2.0)
Sealand	-0.7 (1.6)	4.6** (1.7)	2.6 (1.7)	1.3 (1.7)	-0.3 (1.7)	0.3 (1.8)	-2.1 (1.6)	4.8* (2.0)	5.2** (1.9)
Copenhagen Area	-0.9 (1.8)	4.1* (1.8)	2.0 (1.8)	-0.4 (1.9)	-1.3 (1.9)	1.1 (1.9)	-1.8 (1.7)	0.8 (2.1)	3.4 (2.0)
Ref. Basic edu.									
Vocational education	-8.8*** (2.5)	-4.6 (2.6)	-3.1 (2.6)	1.6 (2.4)	-1.5 (2.4)	5.7* (2.6)	-2.3 (2.4)	12.6*** (2.8)	15.9*** (2.8)
Upper secondary edu.	-5.5** (1.8)	-4.7* (1.9)	-1.6 (1.9)	3.0 (1.8)	2.0 (1.8)	1.6 (1.8)	-0.7 (1.8)	7.1*** (2.0)	6.8*** (1.9)
Short-cycle higher edu.	-6.5** (2.3)	-8.9*** (2.3)	-5.2* (2.2)	2.6 (2.2)	1.4 (2.3)	7.5** (2.3)	-0.6 (2.1)	9.3*** (2.6)	8.5*** (2.4)
Bachelor's programs	-8.8*** (2.0)	-7.7*** (2.1)	-4.1* (2.1)	5.1** (2.0)	1.5 (2.0)	5.8** (2.0)	1.2 (2.0)	9.3*** (2.3)	15.1*** (2.2)
Master's programs and PhD	-17.2*** (2.2)	-13.2*** (2.2)	-3.3 (2.2)	11.7*** (2.2)	4.9* (2.2)	6.1** (2.2)	5.4** (2.1)	6.3* (2.5)	20.5*** (2.4)
Ref. Unemployed									
Construction	2.3 (3.2)	-0.7 (3.3)	-2.7 (3.3)	0.1 (3.3)	-4.8 (3.3)	-3.6 (3.3)	6.7* (3.2)	6.2 (3.7)	1.7 (3.6)
Real estate activities	5.4 (4.7)	-1.9 (4.5)	-5.2 (4.6)	-1.2 (4.8)	-6.1 (4.6)	-1.3 (4.7)	11.1* (4.6)	-6.0 (5.2)	-3.5 (5.2)
Business service	4.6 (2.7)	2.0 (2.7)	-1.1 (2.7)	-2.8 (2.7)	-2.5 (2.7)	-0.4 (2.7)	4.4 (2.6)	7.3* (3.0)	1.3 (2.9)
Finance and insurance	-1.4 (3.2)	0.9 (3.3)	-5.1 (3.2)	3.2 (3.3)	-6.1 (3.3)	4.0 (3.4)	7.1* (3.1)	5.8 (3.7)	3.7 (3.6)
Trade and transport	4.4 (2.6)	2.4 (2.6)	-1.1 (2.7)	-2.1 (2.6)	-3.8 (2.6)	-2.4 (2.6)	7.4** (2.5)	3.7 (2.8)	-2.8 (2.8)
Manufacturing	3.7 (2.7)	1.9 (2.7)	-0.5 (2.7)	-1.6 (2.7)	-4.6 (2.7)	-2.1 (2.7)	6.0* (2.6)	7.3* (2.9)	0.6 (2.9)
Information and comm.	-2.1 (3.0)	-1.5 (3.1)	-4.2 (3.1)	0.7 (3.1)	-3.9 (3.1)	-1.4 (3.2)	9.3** (2.9)	2.4 (3.4)	0.2 (3.4)
Culture and leisure	-0.3 (3.2)	-2.8 (3.3)	-4.0 (3.3)	6.4 (3.3)	0.6 (3.3)	0.3 (3.3)	7.5* (3.1)	1.1 (3.7)	-4.2 (3.6)
Agriculture	7.6 (5.6)	-11.2* (4.7)	-7.6 (4.9)	-5.7 (5.2)	3.7 (5.5)	1.4 (5.4)	9.0 (4.7)	6.0 (6.0)	7.2 (5.9)
Public adm., edu. & health	1.5 (2.6)	-3.1 (2.6)	-2.6 (2.6)	-1.0 (2.6)	0.4 (2.5)	-0.5 (2.5)	5.0* (2.6)	5.5 (2.8)	-0.9 (2.8)
Ref. Academic occupation									
Vocational occupation	1.4 (1.1)	0.5 (1.1)	-0.2 (1.1)	-0.5 (1.1)	0.0 (1.1)	-2.5* (1.1)	-2.9** (1.0)	0.6 (1.2)	-2.2 (1.2)
Ref. Public sector									
Private sector	-0.3 (1.4)	-2.8 (1.4)	-0.2 (1.5)	0.3 (1.5)	3.3* (1.5)	-0.3 (1.5)	1.7 (1.4)	1.7 (1.7)	2.0 (1.6)
<i>N</i>	9415	9415	9415	9415	9415	9415	9415	9415	9415
<i>R</i> ²	0.093	0.035	0.029	0.088	0.023	0.058	0.300	0.070	0.111
Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Actual position FE	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: In Panels A and B, the outcomes are indicator variables equal to 1 if the respondent is among the 25% of respondents with the largest and smallest misperceptions for each variable, respectively. In Panel C, the outcome is an indicator for having positive misperceptions (> 0). All explanatory variables are indicators. See Figure 10 for details. *Ref.* refers to the reference/baseline group for the following set of indicators. The *Actual position FE* is fixed effects for all 100 positions in the cohort income distribution. Robust standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE A-7: PERCEPTIONS REGRESSED ON INDIVIDUAL CHARACTERISTICS

	A. Top 25% most inaccurate			B. Top 25% most accurate			C. Positive misperception		
	School	Road	Work	School	Road	Work	School	Road	Work
High IQR	-2.6** (0.9)	0.8 (1.1)	-2.6* (1.1)	1.6 (1.0)	-0.6 (1.1)	2.6* (1.1)	0.1 (0.9)	-3.2** (1.2)	-2.9* (1.3)
Large group	-0.8 (0.9)	-0.7 (1.1)	1.7 (1.0)	2.4** (0.9)	-0.7 (1.1)	-2.0* (1.0)	-0.1 (0.9)	-2.8* (1.2)	-7.8*** (1.2)
High-income group	1.1 (0.9)	-3.2** (1.2)	-2.5* (1.2)	1.0 (1.0)	2.0 (1.2)	0.6 (1.2)	5.1*** (1.0)	1.8 (1.3)	0.1 (1.3)
+3 years same place		-3.4* (1.5)	-2.1* (1.0)		2.7 (1.4)	1.1 (1.0)		-0.5 (1.6)	0.1 (1.1)
Long road		2.9* (1.1)			-2.4* (1.1)			-2.8* (1.2)	
Higher house position		1.7 (2.3)			-3.2 (1.9)			3.7 (2.2)	
Higher car position		4.4 (2.3)			-2.6 (1.9)			5.3* (2.2)	
Managerial role			-6.7*** (1.5)			10.2*** (2.1)			18.4*** (2.2)
High unionization rate			-4.8** (1.9)			4.8** (1.8)			1.6 (2.1)
Male	-0.4 (1.0)	-0.1 (1.2)	0.8 (1.1)	0.9 (1.0)	2.2 (1.2)	-0.3 (1.1)	5.6*** (1.0)	5.1*** (1.3)	6.8*** (1.3)
Children	0.6 (1.1)	1.3 (1.3)	0.8 (1.1)	-0.3 (1.0)	-0.9 (1.3)	-0.3 (1.1)	0.2 (1.1)	0.5 (1.4)	2.8* (1.3)
Partner	0.2 (1.2)	-1.3 (1.5)	0.4 (1.3)	2.9* (1.2)	1.9 (1.5)	0.7 (1.3)	-0.9 (1.2)	-6.3*** (1.7)	2.0 (1.5)
High-income partner	0.6 (1.3)	-0.4 (1.5)	2.0 (1.5)	-1.0 (1.3)	-1.1 (1.4)	-1.8 (1.4)	4.8*** (1.3)	0.5 (1.6)	-0.3 (1.6)
Ref. Father mid 50% Bottom 25%	-1.0 (1.1)	1.5 (1.3)	-0.3 (1.3)	-0.1 (1.2)	-0.3 (1.3)	0.1 (1.2)	0.2 (1.1)	-1.6 (1.4)	0.1 (1.4)
Top 25%	-0.4 (1.1)	0.7 (1.2)	-1.7 (1.1)	-0.4 (1.1)	0.0 (1.2)	-1.3 (1.2)	-0.8 (1.1)	-1.0 (1.3)	2.4 (1.3)
Ref. Moderate Left wing	-0.6 (1.1)	-0.8 (1.4)	0.5 (1.3)	0.7 (1.2)	0.4 (1.3)	-1.4 (1.2)	0.4 (1.2)	0.3 (1.5)	-2.4 (1.4)
Right wing	-0.7 (1.1)	-4.0*** (1.2)	-1.4 (1.2)	3.6** (1.2)	2.8* (1.3)	1.7 (1.2)	4.4*** (1.1)	3.9** (1.4)	2.0 (1.4)
Ref. Nothern Jutland Middle Jutland	-2.1 (1.7)	-0.1 (1.9)	-0.5 (1.9)	0.4 (1.7)	4.0* (1.8)	0.0 (1.9)	-1.8 (1.7)	-2.6 (2.0)	-1.0 (2.1)
Southern Denmark	-1.6 (1.8)	-1.1 (1.9)	-1.8 (2.0)	0.5 (1.8)	2.7 (1.9)	2.3 (1.9)	-2.4 (1.7)	-1.3 (2.1)	1.1 (2.1)
Sealand	-0.5 (1.7)	1.4 (2.0)	-2.0 (1.9)	0.7 (1.7)	1.9 (1.9)	4.0* (1.9)	-0.3 (1.7)	-2.5 (2.2)	-1.2 (2.1)
Copenhagen Area	-1.4 (1.9)	-0.1 (2.0)	-0.5 (2.1)	-0.5 (1.8)	3.5 (2.0)	0.6 (2.0)	-1.5 (1.8)	-0.1 (2.2)	0.7 (2.2)

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TABLE A-7 CONTINUED

	A. Top 25% most inaccurate			B. Top 25% most accurate			C. Positive misperception		
	School	Road	Work	School	Road	Work	School	Road	Work
Ref. Basic edu.									
Vocational education	-3.6 (2.7)	-8.2** (3.1)	-7.5* (3.1)	1.2 (2.5)	1.7 (3.0)	7.3** (2.7)	2.8 (2.6)	1.5 (3.2)	3.0 (3.3)
Upper secondary edu.	-0.7 (2.0)	-2.7 (2.3)	-5.7* (2.4)	1.2 (1.7)	-1.7 (2.1)	4.7* (1.8)	2.9 (1.8)	1.1 (2.3)	0.9 (2.3)
Short-cycle higher edu.	-0.4 (2.4)	-5.1 (2.7)	-5.9* (2.8)	-1.1 (2.2)	1.2 (2.6)	5.0* (2.3)	4.2 (2.2)	2.2 (2.8)	2.6 (2.8)
Bachelor's programs	-2.7 (2.2)	-4.7 (2.5)	-7.2** (2.6)	3.0 (2.0)	-1.2 (2.3)	4.9* (2.1)	9.5*** (2.0)	6.0* (2.5)	7.5** (2.6)
Master's programs and PhD	-6.1** (2.3)	-9.8*** (2.6)	-10.7*** (2.7)	8.6*** (2.2)	3.3 (2.5)	9.1*** (2.3)	19.9*** (2.2)	13.0*** (2.7)	11.1*** (2.8)
Ref. Construction									
Real estate activities	2.8 (4.7)	5.2 (5.6)	11.6 (6.2)	-0.2 (4.5)	0.4 (5.5)	0.4 (5.5)	-0.2 (4.4)	2.0 (5.6)	0.7 (6.4)
Business service	1.6 (2.8)	3.2 (3.1)	-0.6 (3.2)	-2.0 (2.7)	-6.4* (3.1)	1.5 (2.9)	0.5 (2.7)	-1.9 (3.3)	-5.3 (3.3)
Finance and insurance	-1.7 (3.1)	-5.1 (3.3)	-4.5 (3.5)	0.1 (3.3)	4.0 (3.9)	3.3 (3.4)	2.3 (3.3)	3.6 (4.0)	-2.0 (3.8)
Trade and transport	1.3 (2.7)	2.1 (2.9)	-1.6 (3.0)	-1.0 (2.5)	-3.1 (2.9)	1.2 (2.7)	-0.3 (2.5)	0.9 (3.1)	0.0 (3.1)
Manufacturing	1.2 (2.7)	-0.5 (2.9)	-1.5 (3.0)	-0.2 (2.6)	-3.1 (3.0)	3.5 (2.7)	-1.7 (2.6)	-0.9 (3.1)	-2.2 (3.1)
Information and comm.	-1.6 (3.0)	2.1 (3.4)	-3.0 (3.4)	2.7 (3.2)	-0.0 (3.7)	5.2 (3.4)	3.6 (3.1)	1.4 (3.8)	1.0 (3.7)
Culture and leisure	2.9 (3.4)	-2.1 (3.9)	-0.7 (3.8)	0.7 (3.4)	-1.2 (4.0)	-2.6 (3.7)	1.4 (3.4)	-0.5 (4.2)	1.1 (4.3)
Agriculture	-2.6 (5.6)	7.3 (7.0)	-3.6 (7.4)	-7.7 (4.8)	-9.6 (5.4)	11.7 (8.2)	5.6 (5.3)	2.9 (6.6)	7.2 (9.7)
Public adm., edu. & health	3.1 (2.9)	3.9 (3.2)	2.2 (3.3)	-0.7 (2.7)	-2.2 (3.2)	-0.8 (3.0)	-3.5 (2.8)	-2.6 (3.4)	-3.5 (3.4)
Unemployed	-10.2** (3.4)	-1.8 (3.9)		3.7 (3.1)	-1.9 (3.6)		-11.3*** (3.2)	-8.9* (4.1)	
Ref. Academic occupation									
Vocational occupation	-0.1 (1.1)	1.4 (1.2)	3.1* (1.2)	0.5 (1.1)	-1.0 (1.2)	0.7 (1.2)	-0.7 (1.1)	-0.3 (1.3)	-2.7 (1.4)
Ref. Public sector									
Private sector	2.4 (1.5)	2.6 (1.8)	1.2 (1.8)	-0.5 (1.5)	1.0 (1.6)	-3.6* (1.7)	2.3 (1.5)	3.8* (1.8)	-1.7 (2.0)
<i>N</i>	9070	7203	7546	9070	7203	7546	9070	7203	7546
<i>R</i> ²	0.102	0.057	0.123	0.049	0.051	0.122	0.312	0.167	0.171
Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Actual position FE	✓	✓	✓	✓	✓	✓	✓	✓	✓

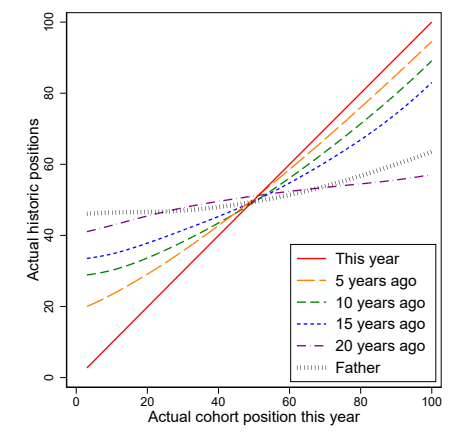
Notes: In Panel A (respectively, Panel B), the outcomes are indicator variables equal to 1 if the respondent is among the 25% of respondents with the largest (respectively, smallest) misperceptions of own position within each group. In Panel C, the outcome is an indicator for having positive misperceptions (> 0). All explanatory variables are indicators. See Figure 10 and 11 for details. *Ref.* refers to the reference/baseline group for the following set of indicators. The *Actual position FE* is fixed effects for all 100 positions in the income distribution of the group. Robust standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE A-8: SURVEY INFORMATION EXPERIMENT AND UNFAIRNESS VIEWS USING RESPONDENT WHOSE REPORTED INCOME MATCHES OBSERVED INCOME

	Unfairness of inequality				
	Cohort	Gender	Municipality	Education	Sector
Panel A					
Treatment (=1)	0.082* (0.034)	0.063 (0.038)	0.073* (0.036)	0.039 (0.041)	0.049 (0.042)
Panel B					
Positive misperception	-0.051 (0.042)	-0.114** (0.039)	-0.116** (0.040)	-0.082* (0.038)	-0.197*** (0.040)
T × Positive	0.117* (0.048)	0.118** (0.045)	0.105* (0.045)	0.043 (0.038)	0.065 (0.039)
T × Negative	0.031 (0.026)	0.004 (0.027)	0.020 (0.026)	0.006 (0.030)	-0.003 (0.031)
Difference in unfairness relative to cohort					
		Gender	Municipality	Education	Sector
Panel C					
Treatment (=1)		-0.016 (0.018)	-0.005 (0.014)	-0.026 (0.031)	-0.019 (0.032)
<i>N</i>	6660	6537	6539	6272	5873
Group position FE	✓	✓	✓	✓	✓

Notes: As Table 4 but we only use respondents whose reported income generate treatment information that is at most five positions from the information they would have received if the reported and actual income exactly matched. Robust standard errors on the estimates are reported in the parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

FIGURE A-18: CORRELATION OF CURRENT AND HISTORIC POSITIONS



Notes: Bandwidth for local linear polynomials is 20. For *Father*, the y-axis is the father's position among fathers when the respondent was 15 years old.

TABLE A-9: CORRELATION OF LIFE EVENTS WITH DIFFERENCES IN UNFAIRNESS VIEWS

	Difference in unfairness relative to cohort				N
	Gender	Municipality	Education	Sector	
Unemployment	0.05 (0.06)	0.00 (0.05)	-0.06 (0.09)	-0.03 (0.09)	3758
Disability	0.15 (0.23)	0.27 (0.18)	-0.24 (0.28)		4649
Hospitalization	0.02 (0.03)	-0.01 (0.02)	-0.05 (0.05)	-0.09 (0.05)	2234
Promotion	-0.02 (0.04)	-0.02 (0.03)	-0.15* (0.07)	-0.23*** (0.07)	3889
Pre-shock position FE	✓	✓	✓	✓	
Controls	✓	✓	✓	✓	

Notes: Each cell in the table is a separate regression of the column outcome on the row regressor and the controls indicated in the bottom part of the table. The explaining variables are all indicators that equal 1 if the respondent experienced the shock between 2012 and 2017. In each row, we exclude respondents who already experienced this type of shock in the pre-period (2008-2011). For *Unemployment*, we only use respondents who were in the workforce during the entire period. For *Disability*, we do not estimate the effect on fairness within sector because very few disabled people work. *Controls* included in all regressions are a treatment indicator, cohort, gender, municipality, education, and sector fixed effects (incl. unemployed/not in workforce), all measured in 2008. Robust standard errors on the estimates are reported in the parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE A-10: CORRELATION OF LIFE EVENTS WITH UNFAIRNESS VIEWS OF INEQUALITY WITHOUT CONTROLS

	Cohort position			Unfairness of inequality				N	Affected % (9)
	Actual (1)	Perceived (2)	Cohort (3)	Gender (4)	Mun. (5)	Edu. (6)	Sector (7)		
Unemployment	-9.41*** (1.37)	-4.24** (1.35)	0.27* (0.12)	0.31* (0.13)	0.28* (0.12)	0.13 (0.13)	0.16 (0.13)	3758	5.27
Disability	-20.75*** (2.47)	-20.43*** (3.25)	0.72* (0.31)	0.89** (0.34)	0.98** (0.33)	0.42 (0.29)		4649	0.67
Hospitalization	-2.57*** (0.70)	-1.76* (0.68)	0.22*** (0.06)	0.26*** (0.07)	0.21*** (0.06)	0.19** (0.07)	0.15* (0.07)	2234	55.64
Promotion	9.05*** (0.87)	7.53*** (1.08)	-0.21* (0.08)	-0.22* (0.09)	-0.23** (0.09)	-0.34*** (0.10)	-0.42*** (0.09)	3889	6.74
Pre-shock position FE	✓	✓	✓	✓	✓	✓	✓		
Controls									

Notes: Each cell in the table is a separate regression of the column outcome on the row regressor and the controls indicated in the bottom part of the table. The explaining variables are all indicators that equal 1 if the respondent experienced the shock between 2012 and 2017. In each row, we exclude respondents who experienced the shock between 2008 and 2011. For *Unemployment*, we only use respondents who were in the workforce in the entire period. For *Disability*, we do not estimate the effect on fairness within sector because very few disabled people work. Robust standard errors on the estimates are reported in the parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

TABLE A-11: CORRELATION OF LIFE EVENTS WITH UNFAIRNESS VIEWS OF INEQUALITY USING 2SLS

	Unfairness of inequality					N	Affected
	Cohort	Gender	Mun.	Edu.	Sector		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Unemployment	-3.25** (1.23)	-3.52** (1.25)	-3.30** (1.26)	-2.34* (1.15)	-4.41* (2.10)	3758	5.27
Disability	-3.77* (1.81)	-4.52* (1.78)	-5.05** (1.89)	-2.60 (1.90)		4649	0.67
Hospitalization	-10.5* (4.65)	-9.64* (3.96)	-8.56* (3.79)	-8.96 (5.72)	-5.98 (5.61)	2234	55.6
Promotion	-2.18* (0.95)	-2.30* (1.00)	-2.40* (0.99)	-3.36*** (0.93)	-3.56*** (0.83)	3889	6.74
Pooled	-3.05*** (0.76)	-3.45*** (0.79)	-3.50*** (0.81)	-2.82*** (0.74)	-3.59*** (0.80)	14530	11.9
Pre-shock position FE	✓	✓	✓	✓	✓		
Controls	✓	✓	✓	✓	✓		

Notes: Each cell in the table is a separate 2SLS regression of the column outcome on current position instrumented using the row regressor and the controls indicated in the bottom part of the table. The instruments are all indicators that equal 1 if the respondent experienced the shock between 2012 and 2017. In each row, we exclude respondents who experienced the shock between 2008 and 2011. For *Unemployment*, we only use respondents who were in the workforce in the entire period. For *Disability*, we do not estimate the effect on fairness within sector, because very few disabled people work. *Controls* includes cohort fixed effects, an indicator for men, municipality fixed effects, educational level fixed effects, and sector (incl. unemployed/not in workforce) fixed effects, all measured in 2008, and a treatment indicator. Robust standard errors on the estimates are reported in the parentheses. In the pooled regression, we cluster the standard errors at the individual level. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.