MERITOCRACY AMONG THE TOP 1%
PRE-ANALYSIS PLAN
June 8, 2016

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The document will be registered at the AER RCT Registry before we will collect any data.

Table of Contents:

1. Introduction

In this project, we are planning to conduct experiments with Dutch millionaires and a representative sample of the Dutch population. The millionaires constitute the top 1% of the wealth distribution in the Netherlands. The nationally representative sample is drawn from Flycatcher, an internet survey panel of a diverse adult population living in the Netherlands.

The goal of this project is to compare differences in preferences for redistribution between millionaires and the general population. In particular, we are interested in whether the source of income inequality (i.e., merit or luck) affects inequality acceptance differently in millionaires relative to the general population. In other words, we ask the question whether the top 1% is more meritocratic (i.e., more likely to reward hard work or talent) than average citizens. Moreover, we will also examine a situation in which the source of inequality is ambiguous, i.e., partly due to luck and partly due to hard work. This condition more closely mimics real world situations of inequality, as in everyday life it is often unclear to what extent a person's achievement (or lack of thereof) is due to hard work. This will allow us to explore whether millionaires and the general population differ in their beliefs in a just world (see, e.g., Bénabou and Tirole 2006). In particular, millionaires might more strongly believe that income inequality is due to differences in effort rather than luck.

Why should we care about preferences for redistribution in the top 1%? First, the top 1% make the largest share of tax payments and donations. For example, in the U.S. it has been estimated that the top 1% pay nearly half of the income taxes (Frank 2015) and provide about one-third of all donations (The Almanac of American Philanthropy 2016). Thus, we need to understand what motivates the top 1% to pay their taxes and engage in philanthropy. Second, many people in the top 1% own businesses or play a central role in organizations. They therefore also have a strong influence on internal pay structures of firms. Finally, the top 1% often also hold or strive for a high political office and make large political contributions, which ultimately affects redistribution policies.

2. Research Strategy

We plan to run experiments with millionaires and the general population where they—as third parties or spectators—make income redistribution choices for pairs of workers. We plan to recruit the workers via Amazon Mechanical Turk (AMT). AMT is an international online market place on which workers can be hired anonymously to complete tasks online. The spectators will be drawn from two different populations. The first sample consists of clients from ABN AMRO MeesPierson, which is a private bank in the Netherlands that exclusively serves clients with wealth above €1 million. We plan to invite 5000 millionaires to participate. The second sample is a nationally representative sample drawn from Flycatcher, an internet survey panel of a diverse adult population living in the Netherlands. We plan to recruit 300 respondents from Flycatcher (net response).

3. Experimental Design

Our design builds strongly on Almas et al. (2016). We will employ third-party redistribution situations where spectators make a choice that has real monetary consequences for two workers who completed the same work assignment. Spectators' choices will only affect workers' payments, not their own.

Workers

Workers will receive a flat payment of US $1 upon signing up for a work assignment. We will provide them with task instructions and ask them to complete a practice round to ensure that they understand the task. After that, all workers will work on the same real-effort task for 5 minutes. The task consists of double checking entries from a digitized list of participant IDs and finding as many mistakes as possible. After completing the task, workers will be informed that they will potentially earn additional money. To determine their bonus payments, workers will be randomly matched in pairs and assigned to a spectator. One of the two workers in the pair will earn an additional US $6, whereas the other worker will receive nothing. The basis for the initial allocation of bonus payments (i.e., the source of income inequality) will vary across treatments using a between-subjects design. In treatment LUCK, we will randomly determine which of the two workers gets the paid for the task. In treatment MERIT, the worker in each pair who performed better on the assignment will earn $6. Finally, in treatment AMBIGUITY, earnings depend partly on luck and partly on performance, but we will not disclose the relative weight given to luck and performance for determining who earns $6.

Spectators

Each spectator will be assigned to one worker-pair and make one redistribution choice that has real monetary consequences for the two workers. They will first be informed about the basis for the bonus allocation (LUCK, MERIT or AMBIGUITY), and then will have to decide whether to redistribute earnings between the two workers. They can choose any possible combination of allocation in US $1-dollar steps, including not redistributing at all (i.e., $6/$0, $5/$1, …, $0/$6). This choice will serve as the basis for our measure of inequality acceptance.

In the following we provide the complete instructions for the spectators (instructions will be translated into Dutch):

Treatment 1: LUCK

Unlike the other questions in this survey, you will now make a choice that has real monetary consequences for other people. We therefore ask you to pay careful attention to the instructions.

We recently hired two individuals via an online platform to work on an assignment. Let us call them worker A and worker B. The assignment was the same for both workers and

consisted of manually double checking entries from a list of participant ID numbers. Each worker received a flat payment of $1.00 for signing up, regardless of their potential earnings for the assignment.

After completing the assignment, we told the workers that their earnings for the assignment will be determined **by chance**:

- The worker **who is chosen by chance** earns **$6.00** for the assignment.
- The other worker earns **nothing** for the assignment.

Earnings of the workers:

Worker A was chosen by chance and therefore earns $6.00 for the assignment. Thus, worker B earned nothing for the assignment.

We did not inform the workers about who was chosen by chance. However, we told the workers that a third person will be informed about this outcome. We also told them that this person would get the opportunity to **redistribute the earnings**.

You are the third person and will now choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose once the study is complete, but they will not receive any further information.

Please consider your decision carefully, as $6.00 is a considerable amount of money for these workers.

Your decision

You can now redistribute the earnings of the two workers. Worker A was chosen by chance and therefore earns $6.00 for the assignment. Thus, worker B earned nothing for the assignment.

Please choose one of the following options:

I do not want to redistribute earnings:

- Worker A is paid $6.00 and Worker B is paid $0.00

I want to redistribute earnings:

- Worker A is paid $5.00 and Worker B is paid $1.00
- Worker A is paid $4.00 and Worker B is paid $2.00
- Worker A is paid $3.00 and Worker B is paid $3.00

- Worker A is paid $2.00 and Worker B is paid $4.00
- Worker A is paid $1.00 and Worker B is paid $5.00
- Worker A is paid $0.00 and Worker B is paid $6.00

Treatment 2: MERIT

Unlike the other questions in this survey, you will now make a choice that has real monetary consequences for other people. We therefore ask you to pay careful attention to the instructions.

We recently hired two individuals via an online platform to work on an assignment. Let us call them worker A and worker B. The assignment was the same for both workers and consisted of manually double checking entries from a list of participant ID numbers. Each worker received a flat payment of $1.00 for signing up, regardless of their potential earnings for the assignment.

After completing the assignment, we told the workers that their earnings for the assignment will be determined **by their performance** on the assignment:

- The worker who **performs best** earns **$6.00** for the assignment.

- The other worker earns **nothing** for the assignment.

Earnings of the workers:

Worker A performed best and therefore earns $6.00 for the assignment. Thus, worker B earns nothing for the assignment.

We did not inform the workers about who performed best. However, we told the workers that a third person will be informed about this outcome. We also told them that this person would get the opportunity to **redistribute the earnings**.

You are the third person and will now choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose once the study is complete, but they will not receive any further information.

Please consider your decision carefully, as $6.00 is a considerable amount of money for these workers.

Your decision

You can now redistribute the earnings of the two workers. Worker A performed best and therefore earns $6.00 for the assignment. Thus, worker B earns nothing for the assignment.

Please choose one of the following options:

I do not want to redistribute earnings:

- Worker A is paid $6.00 and Worker B is paid $0.00

I want to redistribute earnings:

- Worker A is paid $5.00 and Worker B is paid $1.00
- Worker A is paid $4.00 and Worker B is paid $2.00
- Worker A is paid $3.00 and Worker B is paid $3.00
- Worker A is paid $2.00 and Worker B is paid $4.00
- Worker A is paid $1.00 and Worker B is paid $5.00
- Worker A is paid $0.00 and Worker B is paid $6.00

Treatment 3: AMBIGUITY

Unlike the other questions in this survey, you will now make a choice that has real monetary consequences for other people. We therefore ask you to pay careful attention to the instructions.

We recently hired two individuals via an online platform to work on an assignment. Let us call them worker A and worker B. The assignment was the same for both workers and consisted of manually double checking entries from a list of participant ID numbers. Each worker received a flat payment of $1.00 for signing up, regardless of their potential earnings for the assignment.

After completing the assignment, we told the workers that their earnings for the assignment will based on a **scoring system**. Each worker's score is determined **partly by chance** and **partly by their performance** on the assignment.

- The worker with the **higher score** earns **$6.00** for the assignment.
- The other worker earns **nothing** for the assignment.

Earnings of the workers:

Worker A had the higher score and therefore earns $6.00 for the assignment. Thus, worker B earns nothing for the assignment.

We did not inform the workers about who had the higher score. However, we told the workers that a third person will be informed about this outcome. We also told them that this person would get the opportunity to **redistribute the earnings**.

You are the third person and will now choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose once the study is complete, but they will not receive any further information.

Please consider your decision carefully, as $6.00 is a considerable amount of money for these workers.

Your decision

You can now redistribute the earnings of the two workers. Worker A had the higher score (which was partly determined by chance, partly by the worker's performance) and therefore earns $6.00 for the assignment. Thus, worker B earns nothing for the assignment.

Please choose one of the following options:

I do not want to redistribute earnings:

- Worker A is paid $6.00 and Worker B is paid $0.00

I want to redistribute earnings:

- Worker A is paid $5.00 and Worker B is paid $1.00
- Worker A is paid $4.00 and Worker B is paid $2.00
- Worker A is paid $3.00 and Worker B is paid $3.00
- Worker A is paid $2.00 and Worker B is paid $4.00
- Worker A is paid $1.00 and Worker B is paid $5.00
- Worker A is paid $0.00 and Worker B is paid $6.00

4. Post-experimental survey

After making their redistribution choice, spectators will complete a short survey:

1. Open question

Thank you for your answer. Please explain briefly why you made this decision.

2. Manipulation check

To what extent do you think workers' initial earnings for the assignment (that is, before any money was redistributed) were due to hard work as opposed to luck?

(1 "Entirely due to hard work" – 7 "Entirely due to luck")

3. Taxes

a. Attitudes on wealth tax

Currently, everyone pays 1.2% tax on wealth above 21,000 euro. In your opinion, should people with wealth beyond 1 million euro pay a lower, the same, or a higher wealth tax?

- a much lower tax rate
- a lower tax rate
- the same tax rate
- a higher tax rate
- a much higher tax rate
- Don't know

b. Attitudes on income tax

The marginal tax rate for annual incomes above 57,585 euro in the Netherlands is currently 52%. In your opinion, should the tax rate for households with annual incomes above 57,585 euro be lower, stay the same, or be higher?

- a much lower tax rate
- a lower tax rate
- the same tax rate
- a higher tax rate
- a much higher tax rate
- Don't know

4. Please indicate to what extent you agree or disagree with the following statement. (1 strongly disagree - 7 strongly agree)

- A society should aim to equalize incomes.
- Differences in incomes in the Netherlands are too large.
- I have high self-esteem
- I strongly care about what other people think of me.

5. The role of the government

For each of the following questions, please indicate on a scale from 1 to 7 how much responsibility you think the government should have. 1 means it should not be the government's responsibility at all and 7 means it should be entirely the government's responsibility.

[Answer categories will be presented in randomized order]

- To ensure a job for everyone who wants one
- To ensure adequate health care
- To ensure that all children can go to good schools

[Columns]
1 – Not the government's responsibility at all
2
[…]
6
7 – Entirely the government's responsibility

6. Salaries

Next, we give you a list of professions and would like to know your estimate what you think people in these jobs actually earn gross per year (before taxes). This may be difficult, but it is important for the study. Please make an estimate that is as good as possible.

[Answer categories will be presented in randomized order]

How much do you think a **chairman of a large corporation listed in the AEX** earns?
_____euro

How much do you think a **member of congress** earns?
_____euro

How much do you think a **public school teacher at an elementary school** earns?
_____euro

How much do you think an **unskilled worker in a factory** earns?
_____euro

Next, we would like to know what you think people in these jobs **ought** to be paid. *How much do you think they should earn each year before taxes, regardless of what they actually get.*

How much do you think a **chairman of a large corporation listed in the AEX** should earn?
_____euro

How much do you think a **member of congress** should earn?
_____euro

How much do you think a **public school teacher at an elementary school** should earn?
_____euro

How much do you think an **unskilled worker in a factory** should earn?
_____euro

7. Altruism

In general, how willing are you to give to good causes without expecting anything in return?
(0 Completely Unwilling – 10 Completely Willing)

8. Social interaction with poor people

a) Consider the people in your elementary school and high school class. How many of them were from relatively poor families?
   - almost all of them
   - most of them
   - about half of them
   - some of them
   - almost none of them
   - Don't know

9. Success in life

Please tick one box for each of these to show how important you think it is for getting ahead in life. How important is:

[Answer categories a)-e) will be presented in randomized order]

a) Hard work
b) Being intelligent
c) Being lucky
d) Coming from a wealthy family
e) Having connections

Options:

- Very important
- Somewhat important
- Not very important
- Not important at all
- Don't know

5. Empirical Strategy

We designed the experiments in order to study differences in preferences for redistribution between millionaires and the general population. In particular, we will examine the causal role of the source of inequality using three treatments: (i) a LUCK treatment where earnings differences between workers are entirely determined by chance, (ii) a MERIT treatment where earnings are awarded based on workers' performance, and (iii) an AMBIGUITY treatment where the source of the earnings remains ambiguous, i.e., it is partly due to chance and partly due to performance.

5.1.Manipulation check

The manipulation check, which comes right after spectators' redistribution choice, will allow us to check to what extent spectators perceive the source of income inequality differently across treatments. We will ask spectators "*To what extent do you think workers' initial earnings for the assignment (that is, before any money was redistributed) were due to hard work as opposed to luck?*" with possible answers ranging from 1 "*Entirely due to hard work*" to 7 "*Entirely due to luck*." We will perform non-parametric tests (e.g., a Wilcoxon rank-sum test) to examine whether spectators' attributions of the source of inequality differs across treatments. Specifically, we predict that spectators will attribute "hard work" to a greater extent to the source of income inequality in the MERIT treatment relative to the LUCK treatment, and that the results for the AMBIGUITY treatment are in between the other two treatments.

5.2.Measure of inequality

Two workers will perform a task and receive earnings. The spectator is informed about initial earnings and then decides on a distribution $(y; 1-y)$ in treatment j = L; M; A, where y is the share of total income to the worker with zero initial earnings, i.e., before any money was redistributed. Income inequality implemented by spectator *i* is therefore measured by:

$$e_i = \frac{|\text{Income worker } A_i - \text{Income worker } B_i|}{\text{Total income}} = |2y_i - 1| \in [0,1]. \qquad (1)$$

Our measure of preferences for redistribution (i.e., inequality acceptance) is equivalent to the Gini-coefficient for a two-people situation as considered by the spectators (Almas et al. 2016). The income inequality is equal to one in all treatments before any redistribution, and is equal to zero if a spectator decides to completely equalize workers' incomes.

5.3.Regression analysis

Our main goal in this project is to compare differences in preferences for redistribution between millionaires and the general population. For ease of comparison, we will first report regression estimates separately for millionaires and the general population. Specifically, for each sample we will estimate a regression model of the following form using OLS:

$$e_i = \alpha + \beta_M M_i + \beta_A A_i + \gamma X_i + \epsilon_i, \qquad (2)$$

where e_i is the income inequality implemented by spectator i, M_i is an indicator taking the value of 1 if a participant is in the MERIT treatment, A_i is an indicator taking the value of 1 if a participant is in the AMBIGUITY treatment. Thus, α captures the amount of inequality acceptance in the omitted category, i.e., treatment LUCK. X_i is a vector of individual background variables, including age, gender, education etc. Finally, ϵ_i is the idiosyncratic error term. We will report estimates of model (2) both with and without control variables. In both cases, we will report robust standard errors to account for arbitrary forms of heteroscedasticity.

The estimated causal effect on inequality acceptance when merit (i.e., workers' performance) is the source of inequality is given by β_M, and β_A reveals the effect on inequality acceptance when the source of inequality is unknown (i.e., partly due to luck and partly due to performance), respectively.

To directly compare the two populations, we will pool the data from the two samples and run the following regression model using OLS:

$$e_i = \alpha + \beta_M M_i + \beta_A A_i + \delta R_i + \delta_M M_i R_i + \delta_A A_i R_i + \gamma X_i + \epsilon_i, \qquad (3)$$

where e_i is the income inequality implemented by the spectator i, M_i is an indicator taking the value of 1 if a participant is in the MERIT treatment, A_i is an indicator taking the value of 1 if a participant is in the AMBIGUITY treatment, and R_i is an indicator taking the value of 1 if a participant is from the millionaire sample. Thus, α captures the amount of inequality acceptance in the omitted category, i.e., the general population in treatment LUCK. X_i is a vector of individual background variables, including age, gender, education etc. Finally, ϵ_i is the idiosyncratic error term. We will report estimates of model (3) both with and without control variables. In both cases, we will report robust standard errors to account for arbitrary forms of heteroscedasticity.

The estimated causal effect on inequality acceptance when merit (i.e., workers' performance) is the source of inequality is given by β_M (general population) and $\beta_M + \delta_M$ (millionaires). Thus, the population difference in the causal effect of merit is given by δ_M. Analogously, the estimated causal effect on inequality acceptance when the source of inequality is unknown (i.e., partly due to luck and partly due to performance) is given by β_A (general population) and $\beta_A + \delta_M$ (millionaires). Thus, the population difference in the causal effect of ambiguity is given by δ_M. The coefficient δ allows testing whether millionaires and the general population differ systematically in inequality acceptance when the source of income inequality is luck.

Moreover, we will also present estimates of the prevalence of different fairness views in the two populations. Specifically, we will focus on three types of fairness ideals identified previously in the literature (e.g., Konow 2000; Cappelen et al. 2007): egalitarianism, libertarianism, and meritocracy. The classification will be based on redistribution choices in treatments MERIT and LUCK. The prevalence of each of the three fairness types is estimated based on the following definitions:

1) *Egalitarians*: The share of egalitarians is given by the share of participants dividing equally in the MERIT treatment.

2) *Libertarians*: The share of libertarians is given by the share of participants allocating everything to the lucky worker in the LUCK treatment.

3) *Meritocrats*: The share of meritocrats is given by the difference between the share of participants allocating more to the more productive worker in the MERIT treatment and the share of participants allocating more to the lucky worker in the LUCK treatment.

The share of participants that is not classified with this procedure is referred to as having "*Other*" fairness views.

5.4.Hypotheses

5.4.1. Merit and Ambiguity

First, we will test whether both millionaires and the general population take merit into account when deciding whether to redistribute money between workers. In addition, we will examine how inequality acceptance changes when uncertainty about the source of inequality is introduced. Accordingly, we will test the following hypotheses using model (3):

Hypothesis 1 (MERIT vs. LUCK):

Merit is not causing increased inequality acceptance, neither in the millionaires nor in the general population.

Testing hypothesis 1 for millionaires:

H0: $\beta_M + \delta_M = 0$

H1: $\beta_M + \delta_M \neq 0$

Testing hypothesis 1 for the general population:

H0: $\beta_M = 0$

H1: $\beta_M \neq 0$

Hypothesis 2 (AMBIGUITY vs. LUCK):

Ambiguity is not causing increased inequality acceptance, neither in the millionaires nor in the general population.

Testing hypothesis 2 for millionaires:

H0: $\beta_A + \delta_A = 0$

H1:$\beta_A + \delta_A \neq 0$

Testing hypothesis 2 for the general population:

H0: $\beta_A = 0$

H1: $\beta_A \neq 0$

5.4.2. Comparisons of the Millionaires and the General Population

Second, and this is the main focus of this project, we will examine whether millionaires and the general population differ in the extent to which they redistribute money between the two workers. Specifically, we will test whether they redistribute differently when the source of inequality is merit or ambiguous, respectively. Moreover, we will test whether millionaires are generally more or less inequality accepting than the general population by focusing on decisions when the source of inequality is luck. Finally, as we may observe differences in the level of inequality acceptance between millionaires and the general population when luck is the source of inequality, we will also investigate population differences in the treatment effects.

Hypothesis 3 (MERIT: millionaires vs. general population):

When income inequality is based on merit, millionaires and the general population are equally inequality accepting.

Testing hypothesis 3:

H0: $\delta + \delta_M = 0$

H1: $\delta + \delta_M \neq 0$

Hypothesis 4 (AMBIGUITY: millionaires vs. general population):

When income inequality is based on both merit and luck in unknown proportion, millionaires and the general population are equally inequality accepting.

Testing hypothesis 4:

H0: $\delta + \delta_A = 0$

H1: $\delta + \delta_A \neq 0$

Hypothesis 5 (LUCK: millionaires vs. general population):

When income inequality is based on luck, millionaires and the general population are equally inequality accepting.

Testing hypothesis 5:

H0: $\delta = 0$

H1: $\delta \neq 0$

Hypothesis 6 (MERIT/LUCK: millionaires vs. general population):

When the source of inequality is merit rather than luck, the effect on inequality acceptance is the same for millionaires and the general population.

Testing hypothesis 6:

H0: $\delta_M = 0$

H1: $\delta_M \neq 0$

Hypothesis 7 (AMBIGUITY/LUCK: millionaires vs. general population):

When the source of inequality is ambiguous rather than luck, the effect on inequality acceptance is the same for millionaires and the general population.

Testing hypothesis 7:

H0: $\delta_A = 0$

H1: $\delta_A \neq 0$

Hypothesis 8 (AMBIGUITY/MERIT: millionaires vs. general population):

When the source of inequality is ambiguous rather than merit, the effect on inequality acceptance is the same for millionaires and the general population.

Testing hypothesis 8:

H0: $\delta_M = \delta_A$

H1: $\delta_M \neq \delta_A$

5.4.3. Heterogeneity

We will also explore heterogeneity in preferences for redistribution using data collected in the survey. First, we will examine differences in preferences for redistribution between inherited and non-inherited (i.e., self-made) millionaires because they may have, for example, different personal experiences of social mobility, which in turn may affect their social preferences (e.g., Piketty 1995). Second, we will also investigate whether millionaires' preferences are differently depending on the extent of social interaction they had with poor people while in school as this may influence their willingness and/or ability to put themselves into the shoes of a low-income person. We will test for these potential heterogeneities by extending model (2):

$$e_i = \alpha + \alpha_H H_i + \beta_M M_i + \beta_M^H M_i H_i + \beta_A A_i + \beta_A^H A_i H_i + \gamma X_i + \epsilon_i, \qquad (4)$$

where H_i is an indicator taking the value 1 if spectator i is, for example, a self-made millionaire as opposed to an inherited millionaire. Thus, α_H reveals whether self-made millionaires are more or less inequality accepting when the source of inequality is luck. Analogously, $(\alpha_H + \beta_M^H)$ and $(\alpha_H + \beta_A^H)$ show whether self-made millionaires are more or less inequality accepting than inherited millionaires when the source of inequality is merit or ambiguous, respectively.

5.4.4. Real-world attitudes toward redistribution

We will further examine whether our experimental measure of redistribution is able to predict survey measures of participants' attitudes toward actual redistribution, as measured by (i) their political orientation (i.e., left vs. right), (ii) their attitudes toward top income and wealth taxes in the Netherlands, (iii) the amount they donated to charitable cause in the previous year (i.e., 2015), and (iv) their general attitude toward income redistribution. To do this, we will estimate regression models, separately for millionaires and the general population, which take on the following form using OLS:

$$a_i = \alpha + \beta_L^e e_i + \beta_M^e M_i e_i + \beta_A^e A_i e_i + \gamma X_i + \epsilon_i, \qquad (5)$$

where a_i is spectator i's attitude toward a real-world redistribution "policy," such as the acceptable income tax rate for rich people. Thus, the coefficient β_L^e, measures the relationship between participants' choices in the LUCK treatment and their attitudes toward real-world

redistribution policies. The coefficients β_M^e and β_A^e capture differences in the relationship between inequality acceptance and real-world attitudes toward redistribution in treatments MERIT and AMBIGUITY relative to treatment LUCK.

Finally, we will also study the extent to which beliefs in the factors that determine success in life, such as hard work or social connections, predict real-world attitudes toward redistribution relative to participants' preferences for redistribution, as measured by their choices as spectators. To measure participants' beliefs about the importance of several factors for getting ahead in life, we use the question "*How important do you think are each of the following factors for getting ahead in life*: (i) *hard work*, (ii) *being intelligent*, (iii) *being lucky*, (iv) *coming from a wealthy family*, and (v) *having connections*, with answer categories ranging from 1 "*Not important at all*" to 4 "*Very important*". We will then extend model (5) to include participants' beliefs about the sources of success in life:

$$a_i = \alpha + \beta_L^e e_i + \beta_M^e M_i e_i + \beta_A^e A_i e_i + \beta_1^b b_1 + \beta_2^b b_2 + \beta_3^b b_3 + \beta_4^b b_4 + \beta_5^b b_5 + \gamma X_i + \epsilon_i, \quad (6)$$

where $b_{1,\dots,5}$ are participants' beliefs in the importance of each factor (hard work, intelligence, luck, wealthy family, and social connections) for getting ahead in life.

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