**A New Measure of Stereotypes in the Workplace**

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Abstract

We introduce a new measure of stereotypes that is based on the principle of a multiple-price list: the elicitation of willingness to have a minority member in a team. We apply it on an example of the Roma in the Czech Republic -- an ethnic group marginalized due to stereotypes of the majority also in the realm of different work-related norms. We test the measure on a sample of 100 students from the majority population to estimate the lower threshold of the stereotypes expected in the whole population. We also elicit proxy for and discuss the role of statistical discrimination, taste-based discrimination, and the contact hypothesis. Our results show a small but significant mistreatment of the Roma. The choice of (not) having a Roma in a team seems to be driven by tastes while the role of statistical discrimination and contact hypothesis is rather limited.

*Keywords:* Roma, discrimination, experiment
JEL: C91, Z13

Introduction

Understanding why and how much people discriminate others based on observable characteristics, like gender, age, and ethnicity, is one of the central topics in economics, sociology and other social sciences. Discrimination in the labor market has been studied for a long time using predominantly field experiments, such as the correspondence tests (Riach and Rich, 2002; Bertrand & Duflo, 2017; Bertrand & Mullainathan, 2004; Bartoš et al., 2016). Laboratory experiments have mostly been considered as being less suitable due to the strong experimenter demand effect, especially when the discriminative behavior is socially condemned as is the case of the ethnic discrimination. Laboratory studies of group discrimination are not uncommon, but mostly they use standard economic games (dictator, trust, ultimatum game, prisoner's dilemma) to uncover the roots of the discriminative behavior in a certain context (see Lane 2016 for a meta-analysis). In this paper we present a novel laboratory measure of labor-market based stereotypes and apply it to measure the attitudes of the majority population towards the Roma, the Czech most oppressed minority.

The Roma ethnic group is typically thought to be marginalized due to the stereotypes of the majority in the domain of social-preferences (trust), are known for having complicated time-preferences (Želínský 2015), but also stereotypes about their work-attitudes may play a role (team-work and effort provision).

The Roma are generally characterized by a high rate of poverty, high unemployment and low levels of education, and are often discriminated against. Bartoš et al. (2016) show in their correspondence test that the Roma applicants are twice less likely to be invited for a flat visit or for a job interview than an applicant from the majority. In the spirit of the field-experiment of Hedegaard and Tyran (2018), we set up a simple task to study ethic prejudice at a workplace and the tendency to choose a partner depending on their ethnicity. We test it on a sample of university students with the intention that if we find any occurrence of discrimination, it will represent a lower bound compared to what could be expected in the real-life setting. Apart from measuring the presence and extent of discrimination, we also track the channels, if it is the statistical (Phelps, 1972) or taste-based (Becker 1957) type that drives such behavior. We also ask for personal experience to check the contact-hypothesis channel (Amir, 1969).

Our new measure is built on the principle of a multiple-price list (MPL), a method well known in the experimental economic literature (e.g. Holt and Laury, 2002). Participants repeatedly perform in a simple effort task; first alone, then in a team with a randomly chosen anonymous partner, and before the third round they can indicate which of two potential partners they prefer to be teamed-up with for the subsequent round. These two anonymous partners differ only in their ethnicity (Roma/non-Roma), while their remaining characteristics are on average the same. The choice of the partner is carried out in an MPL fashion: there are 11 situations, while one will be randomly selected for payment. In each of these situations, participants must decide whether they prefer a Roma or a non-Roma partner. The situations differ in that one of the partners gets a performance bonus that ranges from 0 to +5 which is substantial considering the average productivity of 6.5.

In particular, the effort task was designed in order to be equally demanding for any subject group and it should not depend on any cognitive skills, education attainment or knowledge: it was cutting tokens that were pre-printed on paper using scissors in the time limit of five minutes. Subjects start with a practice round with no time limit and are informed about the upcoming paid-for rounds with the 5 min time-limit. In the first-round subjects perform the effort task alone and are paid in a per-piece manner which allows us to measure their baseline productivity. In the second-round subjects perform the effort task in a team of two and they are paid equally from the total team production. In the third-round they first indicate preferences over their partner in the MPL setting, perform in the effort task and when it is over, one of their partner choices is selected at random and implemented. We communicated the ethnicity of the partner directly, knowing it may exacerbate the demand effect.

We also elicit subjects' expectations regarding the productivity of the two potential team-members; and their risk, social and time preferences. To elicit their risk preferences, subjects engage in an MPL where they choose over a lottery or a fixed payment in 10 different situations where the fixed payment is gradually increasing (Dohmen et al., 2010). The social preferences are measured with a simple dictator game (Kahneman, Knetsch and Thaler, 1986) where subjects are asked to divide 100 CZK between themselves and a Roma and a non-Roma team-member. In the final questionnaire we also ask subjects three questions on subjects' personal experience with Roma.

Our results from an experiment with 100 university students show small but significant effects: (i) that the Roma are expected to produce significantly smaller output than the non-Roma; (ii) they are less likely to be chosen as partners in the MPL setting; and (iii) the Roma receive slightly smaller transfer in the dictator game. When we explain the selections of the Roma partner in the regression analysis, the expected difference in the productivity between a Roma and non-Roma team-member correlates significantly negatively, which suggests an important role of the statistical discrimination. However, when we add the difference in the transfer in the dictator game to account for the taste-based discrimination and control for risk-, time-preferences, age and surveyed general trust, the statistical-discrimination term turns insignificant while the taste-based term keeps its magnitude as well as significance levels robust.

We contribute to the literature by introducing a simple laboratory measure of stereotypes about the provided effort in the workplace, the first of its kind, even though Hegedaard and Tyran (2018) conducted a similar study in the field-experiment setting.

We argue that we find the lower bound of the effect if even university students discriminate the Roma minority. Since we observe that the discrimination in preference of a team-partner is largely taste-based, our results are in line with Hegedaard and Tyran (2018) as they also show that taste-based discrimination accounts for a prevailing portion of the observed discrimination.

Although we are aware of shortcomings and limitation of our study, such as having only the student sample and presenting only correlational evidence, we consider our results to be a decent contribution to the study of discrimination and ethnic inequality and the first step in the study of the stereotypes about the effort provision.

This paper is organized as follows: Section 2 gives a statistical overview or Roma and their position within the Czech. Section 3 describes the literature discrimination in economics and measuring discrimination using field and laboratory experiments. Section 4 shows used methodology with experimental design and section 5 presents the results of our research.

The Roma ethnic group in the Czech Republic

The Roma ethnic group is the largest minority living in Europe. According to statistics of European Commission[[1]](#footnote-1), there are 10 to 12 million of Roma living in Europe and 6 million Roma living in the European Union. The Roma distinguish from the majority mainly by their unique culture, traditions and historical heritage, but also labor market outcomes.

The Roma first came to the territory of central Europe at the turn of 12th and 13th century, living mostly on the periphery of Hungarian Kingdom for several centuries. (Horváthová 1964; Jurová 2002a; Matlovič 2005). Since the beginning of the 20th century the Roma have faced repeated forced resettlements, open and official state discrimination, forced attempts to assimilate to the majority population, cultural and economic shocks connected to forced changes, and were also one of the ethnic groups mass-murdered during the WWII in Holocaust. All these changes led to a deepening of the poverty of the Roma and fully accelerated after 1989 (Jurová 2000; Matlovič 2005; Kumanová et al. 2006; Matlovičová et al. 2012).

Nowadays they mostly reside in Central and Eastern Europe. The Roma are non-territorially based, meaning they do not have their own "home" state, but they are unequally dispersed across the states and regions in Europe. According to the estimates of special representative of the secretary general for Roma issues from 2012[[2]](#footnote-2), the highest representation of the Roma in Europe is in Bulgaria (9,9%), Slovakia (9%), Romania (8,6%), Hungary (7,5%). The Roma are a very diverse ethnic group, including distinct sub-ethnicities, sometimes differing even from a settlement to settlement: e.g. the Vlašíka Roma (the nomadic Roma) or the Rumungri (the settled Roma) (Vašečka 1999).

The Roma in Europe face multiple ongoing socio-economic problems, from severe poverty, poor living conditions, housing, health problems, to low education, high unemployment rate and poor labor market outcomes in general.[[3]](#footnote-3) Many of them live in segregated communities and are socially excluded from the society. Because of that, the Roma face a severe discrimination and are stereotyped by the majority. Experimental evidence shows that the Roma in the Czech Republic are 2 times less likely to be employed or invited for flat visit (Bartoš et al. 2016). Overall, there seems to be a continuously deepening gap between the Roma and the majority.

Methodology

The experiment is composed of a two-stage procedure: the first stage is the full experiment conducted with students in the laboratory while the second stage includes the lab-in-the-field experiment for the collection of the decisions of the “partners” in the team, the Roma and non-Roma with similar characteristics. Both stages of experiment are very similar and are explained in detail below. We mainly focus on the first stage.

***Task***

The task was designed with the intention to make it simple enough and equally demanding for any subject group, not dependent on educational attainment or previous knowledge. It consists of cutting tokens (circles) out of templates pre-printed on paper in a strict time limit of five minutes.

At the beginning subjects performed in a practice round, where they were given the opportunity to practice cutting 3 tokens with no time limit and so get familiar with the quality assessment criteria. They were also told to plan the best strategy since in the subsequent rounds they would be paid for the number of correct pieces under a strict time limit, under slightly varying payment regimes. They were informed that there would be more rounds but only one would be randomly selected at the end of the experiment to be relevant for their payment.

***Procedure***

In the first round (individual performance scheme) participants were given a time limit of 5 minutes to cut as many tokens as possible out of a template printed on paper. Each correctly produced token was rewarded by 10 CZK.

In the second round (simple team performance scheme) subjects were again given five minutes to cut as many pieces as possible. They were told they had been randomly paired with an anonymous “another” participant who would participate in the second stage of the experiment later. Subjects were given their basic characteristics: a male or female, 18 to 40 years, with at most secondary education, living in the Czech Republic, and that they would attend the experiment elsewhere than in university premises. The payment scheme was such that partners and subjects would be paid for an equal share of the combined number of produced tokens, while one token was again rewarded by 10 CZK, i.e. if one player produced one token, it would pay 5 CZK to them and 5 CZK to the other player. The partners faced also a 5 min limit to cut out as many tokens as possible. To ensure everyone understood the new remuneration scheme, they were given two control questions.

After five minutes had elapsed and the production phase was over, we elicited the expectations of subjects about the average productivity in the group of partners. A correct answer was incentivized by 10 CZK. Apart from the point estimate we elicited the expectations about the distribution of productivity in the other group. In order to simplify the question, subjects were asked to imagine that in the group of partners were ten people, and then to guess how many out of these ten fall into the following brackets: less than 4 tokens, 5-8, 9-12, and 13+ tokens. A correct answer was again incentivized by 10 CZK.

***Choosing a partner***

Before the production phase in the third-round, participants were supposed to make eleven decisions whether they prefer their partner for the upcoming production phase to be from the group A (a Roma) or group B (a non-Roma). Apart from ethnicity they were informed that on average partners from both groups would share the same characteristics (as was described in round two).[[4]](#footnote-4) Subjects were then informed that one of the eleven choice-pairs would be chosen at random and their decision made in this chosen pair would be relevant for their payoff, if this round would have been selected at the end of the experiment. In the eleven situations we varied the size of a performance bonus (affirmative action) that one of the two types of a partner received (see Figure1 below): from the non-Roma receiving the bonus +5 (top row) the bonus size was steadily decreasing by one token per choice-pair over the situation when none of the two types receiving a bonus (row 6), from which point on the Roma started to receive a bonus, to the last situation when the Roma received +5 (bottom row).



Figure 1: Multiple price lists choices

After the partner-selection phase the 5 min production phase followed. We again applied the equal-share payment scheme for the combined production in a team. After the production phase we elicited the expectations about the average productivity and distribution of productivity in each of these two groups. Each correct answer was incentivized by 10 CZK. A lower expected productivity may be the main reason for avoiding a partner from a group, the difference in the expected productivity between the two groups is thus our proxy for a taste-based discrimination.

***Dictator game***

In round four we used a standard dictator game (Kahneman et al. 1986). Subjects were given 100 CZK (while the partner 0 CZK) and were asked to divide this amount between themselves and the partner. The partner had a passive role. The choice was made on one screen for both types of partner (a Roma and a non-Roma) simultaneously. Subjects were told that if this round would be selected for payment, one of the two partners would be selected at random.

***Risk-preferences – incentivized elicitation***

Round five featured an MPL where subjects indicated their preference in ten situations over a safe amount paid and an “all or nothing” lottery where they had a 50% chance to win a larger amount or win nothing. The lottery option was held constant across all ten choice-pairs while the safe amount was gradually increasing.

***Questionnaire***

Before they received payment, participants had filled in a short questionnaire that among others included a set of three question on personal experience with the Roma: (i) Would you say you have a lot of experience with Roma minority? (ii) Do you personally know a member of Roma community? (iii) Do you encounter the Roma seldom or rather frequently? The aim was to investigate the role of the contact hypothesis (Amir, 1969). Other questions included standardized questions on risk preferences, time preferences, and generalized trust.

The payment was determined by the randomly chosen round and the individual choices of subjects. Subjects were told that the decisions of the partners were yet to be collected and once collected, subjects would be paid the full amount either by a bank transfer, or in cash upon another arrival to the laboratory. Most subjects opted for the bank transfer.

***Second stage – decisions of partners***

The second stage procedure was implemented with the Roma and non-Roma partners in the lab-in-the-field setting and was almost identical to the first stage as it consisted of three performance rounds and several additional tasks.[[5]](#footnote-5) The practice, first and second rounds were the same as in stage one, including the elicitation of expectations. The only difference comes with the third round where no selection of partners occurred. Participants in this round were re-matched to a different “another participant” than in round 2 and performed the production phase. We then elicited the second order beliefs on the productivity expectations in the group of “other participants” – what the “other participants” expected the average productivity to be among both the Roma and non-Roma. The accuracy was rewarded by 10 CZK.

Additional tasks included the incentivized elicitation of the expectations about the behavior of the first movers in the dictator game (from the first stage), asking how much they expected other participants had sent to Roma and to non-Roma participants out of the 100 CZK at hand.

The following activity was risk-preference elicitation designed after Gneezy and Potters (1997). Participants faced how much from endowment of 50 CZK to invest in a lottery where the chance to win and triple the investment was 50%.

The last task of this stage was a short questionnaire where we asked on personal information (age, sex, nationality, marital status, kids, education, job), and we added standard questions on patience, risk behavior, experience with stereotypes about Roma concerning their working habits and whether they experienced any discrimination in the workplace.

**Sample**

The first stage[[6]](#footnote-6) was carried out in five experimental sessions on 100 university students in 2017. All were members of majority population. The experiment was conducted at the Laboratory of Experimental Economics at University of Economics Prague. Most of our sample were economics undergraduates. Average age of participants was 22 (SD=1.8), 48 % were women, 98 % participants were Czech or Slovak, 24 % came originally from Prague, and all were proficient in Czech. The average time of one experimental session was 1.5 hours, but the experiment was combined with another one. To recruit participants, we used ORSEE (Greiner, 2014) and the experiment was programmed in z-Tree (Fischbacher, 2007). The average payment was 303 CZK per subject including a show-up fee of 150 CZK.

Results

Table 1 presents the descriptive statistics of the main variables from Stage 1. The average productivity increased from 5.61 in the round 1 to 6.78 in the round 3. Figure 2 in the Appendix shows the distribution of productivity with a decent variation across the three rounds.

Table 1: Descriptive statistics, Stage 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Stage 1** |   | Mean  | SD | N |
| Round 1 | Productivity | 5.61 | 1.9 | 100 |
| Round 2 | Productivity | 6.47 | 2.2 | 100 |
|  | Expectations | 5.96 | 2.8 | 100 |
| Round 3 | Productivity | 6.78 | 2.7 | 100 |
|  | Expectations - A (Roma) | 5.69 | 2.6 | 100 |
|  | Expectations - B (non-Roma) | 6.15 | 2.3 | 100 |
|  |  Difference (B-A) | 0.46 | 1 | 100 |
|  | Choices of Roma partner (of 11) | 4.91 | 1.1 | 100 |
| Round 4 | Dictator - share to A (Roma) | 14.87 | 18 | 100 |
|  | Dictator - share to B (non-Roma) | 16.56 | 20 | 100 |
|  |  Difference (B-A) | 1.69 | 8.4 | 100 |
| Round 5 | Risk-preferences (lottery choices) | 5.19 | 1.3 | 100 |
| Questionnaire | A lot of experience with Roma  | 4.3 | 2 | 96 |
|  | Personally knows a Roma (yes=1) | 0.55 | 0.5 | 96 |
|  | Encounter the Roma frequently | 3.76 | 2.2 | 96 |
|  | Time-preferences | 7.26 | 1.8 | 100 |
|  | Risk-preferences | 5.33 | 1.8 | 100 |
|   | Trust | 5.14 | 2.25 | 100 |

The expectations after round 3 indicate clearly a difference in the expected productivity between a Roma and a non-Roma partner of almost one half of a token in favor of a non-Roma (0.46, t = 4.51, p<0.001) which could be translated to 7.5 % of the total expected productivity of a non-Roma.[[7]](#footnote-7) The expectations of students in our sample are thus biased against the Roma, show a sign of statistical discrimination, and are also in line with the common belief that the expectations of the majority population are negatively biased towards Roma.

Choosing the team partner in the MPL setting was the main task of our study. Participants were choosing partners in 11 different situations, first 5 options favored a Roma, the last 5 options favored a non-Roma, and one was neutral. If participants do not discriminate towards Roma, we should expect them to choose Roma on average 5.5 times. However, we find the average choice for Roma is 4.91 which is significantly less frequent (t = 42.17; p < 0.001). This points to the fact that participants differentiate between minority and majority groups and rather choose a team with majority partners. When investigating the consistency of choices, we find only 3 subjects who switch back and forth with their choices and thus are inconsistent.

In the dictator game, participants were splitting 100 CZK between themselves and a Roma or a non-Roma. The mean amount sent to Roma was 14.78 CZK and average amount sent to non-Roma was 16.56 CZK. Again, we observe a small but significant difference (1.69, t = 2.01; p = 0.047). This result points to the existence of a taste-based discrimination.

In the questionnaire at the end of the experiment we asked subjects on their personal experience with the Roma. Even though our sample consists of university students, they had widely diverse experiences with the Roma as Figure 3 in the Appendix presents.

In the next step we explain the number of choices of a Roma partner using ordinary least squares regression with robust standard errors while controlling for baseline productivity (Table 2). In column 1 we examine the influence of the difference in expected productivity (non-Roma – Roma, *Diff\_exp\_productivity*) which is our proxy for statistical discrimination. We observe that the coefficient is significant and negative which we interpret as a sign of negative statistical discrimination in the preference of a team-partner. The size of its standardized coefficient (beta-coefficient) -0.253 informs us that one standard deviation (SD) increase in a difference in productivity is associated with a 0.25 decrease of preference of a Roma as a team partner. In column 2 we add the difference in the dictator game transfer (*DG\_diff*) as a proxy for the taste-based discrimination, and its coefficient is significantly negative. We interpret the beta of -0.298 as if a person has by 1 SD larger difference in transfer not favoring the Roma, it is associated with almost a 0.3 SD lower preference of a Roma in a team. Interestingly, the beta coefficient of the statistical-discrimination term decreases its magnitude and significance level.

When we add individual control variables (column 4), namely the incentivized measure of risk preferences as the number of lottery choices out of 10 (*Risk\_prefs*), non-incentivized time preferences, trust, and age, we observe that the statistical discrimination term further loses its magnitude and significance, while the taste-based discrimination term keeps being the same. Interestingly, none of the control variables explains the dependent variable, except for age, which is significant and negative.

In column 4 we further add the dummy for having personal experience to roughly control for the contact hypothesis. The dummy variable is not significantly different from zero, which suggests that in this selection of a team-partner the personal experience did not play a role.[[8]](#footnote-8)

To sum up, the results reveal the larger relative importance of taste-based discrimination term across the models. It remains significant even after the addition of multiple control variables, while the statistical discrimination term decreases its magnitude and loses its significance completely. We cannot be sure what would have happened with a larger sample size as the loss of significance may be only due to small statistical power. Personal experience did not play a role at all.

Table 2: Explaining choices of partner

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | (1) | (2) | (3) | (4) |
|  | No. of choices - Roma part. |
|   |   |   |   |   |
| R1\_productivity | -0.0603 | -0.0673 | -0.0937\* | -0.0889 |
|  | (-0.0984) | (-0.110) | (-0.153) | (-0.147) |
| Diff\_exp\_productivity | -0.289\*\* | -0.247\* | -0.235 | -0.229 |
|  | (-0.253) | (-0.216) | (-0.206) | (-0.201) |
| DG\_diff |  | -0.0413\*\* | -0.0420\*\* | -0.0415\*\* |
|  |  | (-0.298) | (-0.303) | (-0.297) |
| Time\_prefs |  |  | 0.0518 | 0.0565 |
|  |  |  | (0.0778) | (0.0854) |
| Trust |  |  | 0.0439 | 0.0551 |
|  |  |  | (0.0850) | (0.108) |
| Risk\_prefs |  |  | -0.170 | -0.152 |
|  |  |  | (-0.186) | (-0.163) |
| Age |  |  | -0.0965\* | -0.106\* |
|  |  |  | (-0.148) | (-0.162) |
| Experience -\_personal |  |  |  | -0.323 |
|  |  |  |  | (-0.138) |
| Constant | 5.381\*\*\* | 5.471\*\*\* | 8.013\*\*\* | 8.211\*\*\* |
|  |  |  |  |  |
|  |  |  |  |  |
| Observations | 100 | 100 | 100 | 96 |
| R-squared | 0.070 | 0.157 | 0.206 | 0.221 |

*Note*: The dependent variable is the number of choices for a Roma partner in the MPL task. Robust normalized beta coefficients in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Concluding remarks

In this study we introduced a novel experimental approach using the multiple-price list idea that allows us to study a new dimension of discrimination in the laboratory: the preference of having a member of a minority (in our case the Roma, the largest European ethnic minority) as a team-partner in a real effort task with real payoff consequences. The real effort task was cutting circular shapes out of templates pre-printed on paper.

Our results suggest that Roma are discriminated against both statistically as well as due to tastes, as they are expected to produce smaller output than non-Roma by cca 0.5 piece (7.5%), and they receive a smaller transfer in the dictator game. In the partner selection task, the Roma are less likely to be chosen as partners, mostly due to taste-based discrimination and not statistical discrimination, having personal contact, or individual (risk time or social) preferences.

Overall, we show evidence for the existence of a small but significant taste-based discrimination in the laboratory using a university student sample and their choices of Roma as partners in a team in a real effort task. Previous research on ethnic discrimination (e.g. Charles and Guryan, 2008) shows that the animus towards ethnic groups tends to lower when subjects have higher education. Therefore, we argue that the observed effects constitute a lower bound of what could be found with more a sample more representative of the population, or with more realistic setting of the task, be it a real job, or at least partners being personally present.

The results are in line with findings of Hedegaard and Tyran (2018). They conducted a natural field experiment where they hired high-school juveniles for preparing letters for mailing – a natural real job. Their experiment consisted of two rounds, where in the first round the juveniles were paid based on their individual productivity level. In the second round they worked in a team of two and they were to have been paid on the team-basis. The Danish participants were asked to select a partner out of two candidates, one with a Muslim-sounding name and one with Danish-sounding name, where the Dane had always a lower productivity than the Muslim which allowed researchers to calculate the indirect price of discrimination. The choice of a partner related to the day of the week when the work was to be done (e.g. on Monday with Ahmed or Tuesday with Adam). Our setting is even more direct than that – here the choice of a partner cannot be excused by the preference for the day of the week.

Interestingly we do not observe any effects of personal experience with the Roma, even though our sample shows enough variation. Our results therefore touch the literature on the contact hypothesis (Amir 1969) which has been seen to be a controversial but hopeful intervention against the ethnic stereotypes. Of course, our study did not manipulate the personal experience and merely looks at correlations, and those suggest no role of experience in the selection of a partner for the effort task.

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Appendix

Table A.1. Overview of experimental design

|  |  |
| --- | --- |
| **1st stage** | **2nd stage** |
| **Practice round****1st round:*** 5 minutes effort task
* paid by personal productivity

**2nd round:*** 5 minutes effort task
* paired with another participant
* paid by equal share
* eliciting average productivity in another group
* eliciting distribution of productivity in another group

**3rd round:*** MPL
* 5 minutes effort task
* paired with another participant (different than in round 2), with either identity of Roma (group A) or non-Roma (group B)
* paid by equal share
* eliciting average productivity in another group
* eliciting distribution of productivity in another group

**Further tasks:*** Dictator Game – player A role
* Risk preference elicitation
* Questionnaire on experiences
 | **Practice round****1st round:*** 5 minutes effort task
* paid by personal productivity

**2nd round:*** 5 minutes effort task
* paired with another participant
* paid by equal share
* eliciting average productivity in another group

**3rd round:*** 5 minutes effort task
* paired with another participant (different than in round 2)
* paid by equal share
* eliciting average productivity in another group of participants
* eliciting expectations of another group of participants, both for Roma and non-Roma

**Further tasks:*** eliciting DG beliefs of 1st group of participants (both to Roma and non-Roma)
* Lottery - risk preference elicitation
* Questionnaire on patience and discrimination
 |



Figure 2: histogram of productivity, by rounds



Figure 3: Histogram, experience questions

1. *The social and economic integration of the Roma in Europe*. Brussels, 2010. <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC0133&from=EN> [↑](#footnote-ref-1)
2. <https://www.coe.int/en/web/portal/roma> [↑](#footnote-ref-2)
3. Statistics on education and unemployment rate of the Roma in the Czech Republic are taken from UNDP Roma survey conducted in 2011. Documents available at: <http://fra.europa.eu/en/publication/2012/situation-roma-11-eu-member-states-survey-results-glance-0>. The unemployment rate of the Roma in the Czech Republic reached almost 38% in 2012, while the overall unemployment rate was 9.4%. Looking at the educational level, only 33% of the Czech Roma finish high school, compared to 84% of majority population. Furthermore, 41% of the Czech Roma reported having faced discrimination at workplace because their ethnicity. [↑](#footnote-ref-3)
4. Verbally the experimenter informed participants that he would do his best to find the Roma and non-Roma participants so that they are as similar as possible, apart from their ethnicity. We decided to split the experiment into two stages due to logistical difficulties of getting the Roma and similar non-Roma into the laboratory. [↑](#footnote-ref-4)
5. For better understanding of the whole experimental procedure see overview table A.1 in Appendix [↑](#footnote-ref-5)
6. Due to political sensitivity we don’t analyze the results from the stage 2 experiment. We only note that decisions of participants in the second stage were payoff relevant for the participants in the first stage. [↑](#footnote-ref-6)
7. A detailed look shows that 6 participants expected a higher productivity in the Roma group, 55 participants expected the same productivity, and 39 participants expected a higher productivity in the non-Roma group. [↑](#footnote-ref-7)
8. The remaining experience questions also did not play a significant role in the regression analysis, nor a factor created out of the three questions using principal component analysis as they were highly correlated. Results available upon request. [↑](#footnote-ref-8)