Csilla Eszter Kiss

Thesis advisor:
Andrzej Baniak

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[TRUST AND RECIPROCITY – THE RECIPIENTS' ENDOWMENT GENERATING EFFORT AND ITS EFFECT ON ENDOWMENT DIVISION IN A REAL EFFORT DICTATOR GAME]

In partial fulfilment of the requirements for the degree of Masters of Arts

Abstract

In this thesis, social preferences are analyzed: I evaluate the gender differences in willingness to exert and to appreciate effort in a workplace setting, via a real effort dictator game experiment (i.e. the size of the endowment depends on the recipient's effort). The recipient was labeled 'worker' and the dictator was called 'employer' in order to contextualize the experiment as an employment situation. Women earned more on average, which might be interpreted as having greater trust in the employers and in their willingness to return a large share of the earnings. The employers' strategy for dividing the amount of money generated is also analyzed in order to draw conclusions about typical patterns for the two genders by controlling for being a student as opposed to a working professional, self-confidence, working or studying in a scientific field and age – variables that were found to be important in order to isolate gender differences. According to the results, women are more willing to give larger shares to the recipients on average. They are also less likely to apply a progressive payment structure that increases with the relative effort level: they do not particularly appreciate extra effort by giving a relatively larger share to those who exerted a lot of effort compared to the average.

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1. Introduction

The move away from 'Homo Economicus', the simplified, purely profit-regarding representative agent that most economic models are based on, has been a complex journey in Economics. Refining the model of real life individuals is essential for developing microeconomic models with increased predicting power. According to Rabin (2002), simple behavioral experiments are the most useful tools for establishing improved economic models, which perform better at describing and predicting choices in specific contexts. Identifying gender differences has been one of the focuses of behavioral research as detailed by Croson (2009), which motivated further, more detailed examination of the nature of these differences in diverse contexts. As a result, economists agree that some of the observed gender differences in the labor market originate in preference-differences that extend to risk preferences, social preferences and attitude towards competition. The extent of labor market-relevant gender differences in social preferences are the focus of this research, since there has been mixed evidence in this area in the past.

Appreciating effort is one particular manifestation of social preferences, which the present research focuses on via analyzing a modified dictator game experiment. This seemingly irrelevant factor plays an important role in individuals' choices between keeping money as opposed to giving it to the person who has worked for it. Heinz et al (2012) analyzed gender differences in a real effort dictator game by comparing how the recipient's endowment generating effort makes a difference as opposed to a randomly assigned endowment regarding the dictator's choice of dividing the money. However, in the context of this experiment it was not possible to isolate gender differences regarding effort appreciation for three reasons. First, several potentially relevant factors were not controlled for, which biased the results. Second, making a distinction between only two effort categories prevented far-reaching conclusions due to the artificial nature of the design. Finally, the limited number of data points did not allow a robust result.

So how do the two genders differ in terms of appreciating effort? Are they the same in terms of willingness to trust strangers? To what extent are these aspects present in the workplace? The mixture of popular myths and less well-known scientific evidence often confuse people when thinking about work-place relevant gender differences, with special regard to these being present in managerial roles. Likewise, previous industry experience and the field of education are also considered to affect the suitability for managerial roles. The potential misconceptions would

affect company leaders' choice for managerial functions, which in return reinforce misguided perceptions. As Eagly (1997, p. 1381) points out, the 'expectancies associated with gender roles act as normative pressures that foster behaviors consistent with these gender-typical work roles'; therefore it is crucial to expand the bundle of scientific evidence available regarding the details of potentially relevant differences, among which work effort appreciation is arguably highly relevant (Lamson 2017).

In this paper my focus is twofold. First, I evaluate if gender plays an important role at explaining trusting behavior – which in this context coincides with the endowment generating effort – by controlling for relevant characteristics. Second, I examine how the performance in a real effort task that determines the size of an endowment affects female and male dictators' choice of distributing money by adding control variables that are hypothesized to be related to appreciating effort. These questions have not been analyzed in this particular context, thus this research is a valuable addition to the behavioral economics academic literature.

In the version of the real effort dictator game presented in this paper, the endowment the dictator can distribute between themselves and the recipient is based on how much effort the recipient exerted in a preceding task. The first stage of the game resembles a one shot investment game, since the workers are not guaranteed to receive any of the money that they generate. The second stage, in which the dictators make a decision about the division rate, is in parallel with the regular dictator game. However, the knowledge that the recipient had to work for the money, and that the result depends on their exerted effort plays an important role due to the dictators' other-regarding preferences that are related to social norms. The experiment is framed in a workplace setting by referring to the two roles as 'employee' or 'worker' and 'employer'. The framing was chosen in order to be able to draw behavioral conclusions to comparable conditions, since the framework helps the subject connect the experiment to a real life experience, and hence behave in a more natural manner than they otherwise would in an artificial experimental setting.

In this thesis the money transfer is hypothesized to increase with the exerted effort due to empathy and appreciation of the work; it is hypothesized that women give more than men when more effort was exerted. Real appreciation of the work that the employee invested in the task can be represented by the money transfer, therefore the size of the transfer is linked to appreciating effort. The aforementioned hypothesis is based on Christov-Moore et al. (2014), who found evidence for women's greater empathic disposition, which is based on genetics as well as cultural expectations, and on the postulation that empathy plays a role in the willingness to think about the other party's perspective in the interaction. Previous studies that I discuss in the next chapter attempted to measure the effort's effect in dictator games and related gender differences;

however, their limited designs prevented them from making legitimate conclusions. Moreover, they were testing somewhat different hypotheses; they were primarily comparing a random and an effort based endowment's effect instead of the differences between men and women described in this research.

My results are based on four experimental sessions with 98 participants in total (49 in each role of recipient and dictator), representing students as well as working professionals across disciplines. While the recipients' first names were given to the dictator, the dictators remained completely anonymous throughout the experiment and all participants had complete privacy during decision making. The real effort task was a tedious one of counting how many 0s are printed on a sheet of paper. The dictators received information on all participants' earnings in the experimental session, and had to make decisions about the division rate for each.

According to the results, women worked harder on the task, earning significantly more money on average. One way to interpret this in the game's context is that they were willing to trust dictators more than men. The payment scheme that the employers selected was grouped into increasing, decreasing, fixed ratios, fixed amounts and random pattern categories. In the dictator role, women were less likely to apply a progressive payment scheme that increases with relative effort, but they gave more on average than men did. Moreover, being a student, having a job, working in a scientific field, as well as a proxy for self-confidence were significant control variables. These factors are recommended to be included when quantifying gender differences, since their exclusion provides biased results.

In this paper in the next chapter I review the related research that covers experimental evidence of gender differences regarding trust and reciprocity, then in the third chapter I detail the methodology as well as the operative details of the experiment. The fourth chapter discusses the results, while the fifth, concluding chapter outlines miscellaneous aspects of the research and their implication, offers some suggestions for further investigation and name some potential applications for the results.

2. Relevant Behavioral Economics Literature

The exact difference between the neoclassical prediction and the observed behavior regarding trust and reciprocity has been investigated via multiple experiment variations. In the first subchapter some examples of real effort dictator games are discussed, then some trust games will be reviewed briefly before discussing some of the relevant evidence of the impact of social distance and of other characteristics of the experimental design.

2.1. Real effort dictator games

The real effort dictator game's literature dates back to Cherry et al.'s (2002) research, who conducted a different version of the experiment than what I did; the dictators were the ones generating the endowment. This treatment results in keeping 95% of the endowment. I expect different results when the endowment is generated by the recipient for various reasons. In this subchapter I review the related literature with special regards to potential gender differences that we expect to observe.

Heinz et al. (2012) investigates the effect of a task that the recipient performs, which determines the endowment in a dictator game. Specifically, the size of the endowment depends on how many GRE test questions the recipient answers correctly out of 20. They find two significant gender differences. First, women transfer 6 percentage points more of the endowment to the recipient on average. Second, only female dictators show more reciprocity and decrease their taking-rates significantly from 63.30% to 74.02% in the real-effort treatment compared to a randomly determined endowment. This result applies regardless of how well the recipient performed: female dictators do not care about recipients' performance; they take 63.33% and 63.26% on average from the two groups. Interestingly, while men offer 2.31 percentage points more on average (not statistically significant) if the recipient exerted 'high effort' vs. 'low effort', women on average offer practically the same amount regardless of the size of effort (or equivalently, of the size of the endowment). Heinz et al. (2014) differentiate reciprocity from generosity, since the first move – the one of working on the exercise – is practically a trust game. Consequently, appreciating more effort by providing a larger share is not simply generosity, but also has reciprocity elements.

In Ruffle's (1998) study, which served as a basis for Heinz et al. (2012), the first stage of the real effort dictator game is a contest, which results in the winner earning a large endowment, and the loser receiving a small one. The dictators give more to those who earned the large endowment compared to those who were allocated the same amount randomly in the control group, and give

less to those who earned the small amount compared to those who got it by chance. Hence there is a reward associated with working hard, and a punishment in response to not doing so. However, when the dictator game is replaced by an ultimatum game, the reward decreases significantly, and the punishment disappears completely. This result suggests that second movers anticipate that workers' have different preferences about the payment schemes than they do, and therefore would like to avoid the recipient's refusal of the division, which would result in 0 earnings on the second mover's side as well.

Oxoby and Spraggon (2008) that Heinz et al. (2014) builds on compare the division rate among three treatments: when the endowment is random, when the dictator generated the endowment, and when the recipient did. There are three earning levels differentiated that correspond to the results in GMAT exercises in the two real effort variations. In the regular dictator game the giving rate is about 20%, while in the second case it is practically 0, and when the recipients generate the endowment it is 49%, which increases with the effort level.

Falk et al. (2017) investigate the effects of unfair pay in a modified dictator game in which the recipient performs a task that generates revenue. They analyze how the recipient responds physiologically (measured by heart rate variability) to this task as well as to the decision that their game-partner makes. According to their findings based on a sample of 80 subjects, unfair payment affects the heart rate adversely, which increases the risk of heart disease in the long run. This conclusion establishes the importance of my research topic and motivates a deeper analysis regarding what observable aspects of an individual are related to unfairness.

2.2. Trust games

The literature is rich in research on trust games that demonstrate generosity – represented by Croson and Buchan (1999) and Snijders and Keren (2004) –, and Berg et al. (1995) laid the groundwork for examining the nature of reciprocity in an investment setting. Studying trust and trusting behavior have been the focus of several behavioral experiments in the past and via these the literature has been further enriched by papers analyzing gender differences.

Women show reciprocal behavior as second movers in a three-stage trust game in which the transferred money triples at the second stage (the amount that the recipient transferred back to the first mover) in Croson and Buchan (1999)'s study. They do not find significant gender differences in the first stage: men and women exhibit similar trusting behavior by sending similar amounts. On the other hand, Chaudhuri et al. (2003) find significant differences between men and women in terms of reciprocity and trust in an investment game: for women reciprocity plays

an important role when making a decision, while men seem to trust more due to a lesser extent of risk aversion. Buchan et al. (2008) find comparable results: men have a greater tendency to trust others, while women are more trustworthy than men.

Hong et al. (2007) analyze if traditionally 'lower status groups', such as women, have different trust levels than privileged groups do. Their results show higher trust levels (or smaller betrayal aversion) for some disadvantaged groups, but this does not extend to a significant difference between men and women in this regard. However, they find that middle aged people do tend to trust less than younger people do, which means that they are less willing to expose themselves to betrayal, possibly partially since they generally have more to lose. This finding has particular relevance for the first stage of the real effort dictator game, since it resembles an investment game which is closely dependent on the participants' trust. Based on this evidence, we would expect that in the real effort dictator game younger people make more effort.

The decisions made in the second stage of the game can be linked to multiple behavioral concepts. According to Benner (2010), the second stage of a trust game measures trustworthiness, which follows the general tendency in the academic literature since the example of Berg et al. (1995). This particular definition could be applied in the real effort dictator game context. However, due to the one shot nature of the game, pure generosity or altruism might also describe the dictators' motives, which might be associated with regular dictator games. Dittrich (2015) uses a representative sample of the German population to determine differences in trusting and reciprocity between the two genders. Contrary to some previous findings detailed in Corson et al. (2009), they find that men not only trust more, but they also exhibit more reciprocating behavior, which partially contradicts to Buchan et al. (2008).

Due to the aforementioned mixed results, I also conduct an experiment focusing on gender differences in trust and reciprocity, and compare my finding to those mentioned above. My aim is to understand what gender differences are present in the first and second mover's behavior in the real effort dictator game in a workplace setting.

2.3. Framing & experimental effect, social distance and gender bias

The framing effect, and the experimental effect in general play critical roles at dictator games. Charness et al. (2008 p. 29.) point out that 'participants in laboratory experiments frequently choose not to maximize their own material payoffs when social influences are present', which is what we call the experimental effect. Framing, which is represented by the workplace setting in my experiment, can also have a significant effect according to papers such as Levin et al. (1998),

Duckman (2001) or Ellingsen et al. (2012). Therefore, I will not provide far-reaching interpretations of the experimental results, instead I acknowledge the limitations of the experiment, as a behavioral economics tool, and provide only applicable conclusions.

Social distance, which is related to the degree of anonymity – such as seeing the partner, knowing their name or talking to them – also affects participants' decisions, hence this aspect should also be taken into account when interpreting an experiment's results. The impact of varying social distance is explored in multiple papers. Haley et al. (2005) investigate prosocial behavior in dictator games, and find that anonymity plays an important role for the extent of generosity. In the version of the game discussed in his paper the recipient is in another room, however, the experimenters are aware of the division due to the administration of respective earnings. Furthermore, even though the explicit knowledge of anonymity would suggest the elimination of this effect, according to Haley the intuitive judgements might be evoked by certain cues that the participants encounter during the experiment that can only be controlled by ensuring homogeneous circumstances across experimental sessions and for all participants.

Dufwenberg et al. investigate the effect of anonymity and the participants' gender on generosity in dictator games. They find that dictators give 27.5% on average, but 'less is given with payments on stage rather than in private, men receive less than women, and fewer men than women give non-zero amounts' (2006 p. 42). This piece of evidence does not only reinforce the experimental design's significance, but also motivates the analysis of gender bias.

The behavioral literature regarding gender discrimination is extensive, and offers diverse conclusions. While Riach et al. (2002) find evidence for negative discrimination in the labor market in general, Booth et al. (2010) demonstrate positive discrimination for women represented by more callbacks after a job application, an effect especially strong at professional fields dominated by women. Heinz et al. (2014) examine discrimination in a real effort dictator game, and find evidence supporting that employers take more from female employees in a piece-rate remuneration system. Inspired by this result, evidence for discrimination will be gathered in this research also.

3. The Experiment

3.1. Experimental design

The first stage of the canonical dictator game was modified such that the recipients completed a simple task, which determined the size of the endowment being allocated in the second stage. Moreover, the game was framed as a worker-employer interaction: the two roles were being referred to as 'worker' and 'employer' throughout the game. This framing helps the participants to play their respective roles, and behave comparably to a situation modelled by the experiment.

Framing the experiment as an on-the-job interaction has multiple consequences. We can expect that a large group of the employers feels entitled to a share of the endowment, which they rationalize by having costs related to providing employment, but the portion kept is expected to be relatively small due to the recognition of the employees' work. Also, the idea of a motivating remuneration system can also have an effect on employers' decision regardless of the game being a one-shot interaction. Depending on the extent to which the participants internalized the context and tried to behave in accordance to a real life interaction at work, the aforementioned aspects could have affected their choices to different degrees.

The workers would receive the 'show-up fee' regardless of the employers' decision, which if recognized by the dictators could have an impact on their decisions. This effect could reduce giving rates. Additionally, the strategy method used to analyze decisions made in the dictator role might also have a similar effect according to Casari et al. (2009). Making several hypothetical decisions and only one that has an impact on the participant's profits is supposed to be irrelevant, since the decisions have an equal chance of being selected as the basis for payment (and both the recipient and the dictator would be paid according to the same data-pair), but in practice this might decrease giving rates on average. However, there is no reason to believe that the strategy method should impact the two genders differently.

The strategy method is highly useful however, since it provides information for the employers about what a 'typical' effort is, and what counts as a greater or a lesser effort. Moreover, being able to identify the employer's remuneration patter (if it increases or decreases by effort) is only possible by asking them to make decisions about multiple workers. The strategy method also maximizes the number of data points, which further strengthens the results. However, since there is a lot of information on the sheet of paper that the dictators receive, the participants often do not pay attention to the name. The employers do have an impression about the workers being

real individuals though, and understand that they have exerted effort to complete their task with lesser or greater success.

I essentially use Heinz et al. (2012)'s experimental design, but introduce some changes in addition to the previously mentioned ones in order to be able to accurately measure the impact of different effort levels on division rates. I framed the dictator's task as a 'division' instead of 'taking', because it is a more neutral phrase, and hence would be more appropriate to highlight gender differences of the real effort task. Second, according to Sporer (2015) the results of the GRE test are arguably correlated with IQ and having practiced GRE problems earlier; and not necessarily with effort. Therefore, I altered Heinz et al. (2012)'s design, and used a game in which subjects needed to determine how many 0's they see on sheets of paper of 0's and 1's for 25 minutes. I used the same exercise that was implemented in Falk et al. (2017), since it has been established that the performance in this exercise is dependent on exerted effort. Third, effort levels of the recipient were determined on a discrete scale (based on how many sheets the 'worker' solved correctly, and how many they only miscalculated by 1), and the corresponding endowments were determined accordingly.

The protocol for subject anonymity mostly followed Oxoby and Spraggon (2008): participants remained in their assigned rooms for the experiment's duration, and recipients (workers) and dictators (employers) were dismissed from the experiment at different times. Additionally, before making their decision, the dictators were informed that the recipients had known (before they started the real-effort task) that a dictator would decide on the allocation to ensure that they have full information about why the recipient exerted effort. The first name of the recipient was disclosed, which provided information about the recipient's gender.

3.2. Operative details of the experiments

There were 4 sessions of the experiment, with 24 Hungarian subjects participating on average, 12 recipients/employees and 12 dictators/employers in each experimental session. The language of the experiment was entirely in Hungarian that is the native tongue of the participants to ensure that they completely understand the instructions that they were presented with. The experiments took place in two separate rooms in the same building, which ensured anonymity.

The workers, after receiving and reading the instructions and an example of the exercise, had the chance to ask clarifying questions. They signed a consent form, indicating that they understood and accepted the instructions and were willingly participating in the experiment. They then received 20 sheets of paper with 0s and 1s, on which there were 420 digits and between 138 and

219 0s. Their task was to add how many 0s there are on each page, and enter the result into the google form appearing on the computer screen in front of them. They had 25 minutes to work on as many sheets as they thought necessary and could manage within the given time. A countdown was projected on the front wall, which was initiated once everyone had received the exercise sheets. The participants were separated by panels providing complete privacy. They were aware that the correct answer is worth 300 (400)HUF[1], while an answer that is only off by 1 is worth 100 (200)HUF. The average effort-based endowment was approximately 1500HUF. After the 25 minutes the employees are given a questionnaire covering basic information, including age, education and field of work.

In the other room, the employers were invited with a 30 minutes delay not only to ensure anonymity, but also to prevent them from losing interest in the experiment during an unreasonably long waiting time. After receiving and reading the instructions, they had the chance to ask clarifying questions. They signed a consent form, indicating that they understood and accepted the instructions and were willingly participating in the experiment. When the results of the employees were available they were handed a sheet of paper with the information of the results: how much each worker earned (listed in a random order, with the workers' first names indicated). They had to make 11 to 13 decisions (depending on the experimental session) about the allocation of the money that the employees generated, and then they were asked to fill out a similar questionnaire to the one that the recipients received.

Given the limited resources, the payout to each participant was determined on a random basis: a dictator was paired with one recipient, and both of them received money according to the same interaction. The payment was given in Aldi vouchers that can be used in 30 supermarkets in Budapest.

[1] 308 Huf (Hungarian forint) = 1 Euro, and 275 Huf = 1 USD at the time of the experiments

4. The experiment's results & data analysis

4.1. The first stage of the experiment

The results of the first stage of the experiment, the workers' efforts and corresponding earnings provide some interesting insights regarding trusting behavior. There were 47 observations on the worker side corresponding to those workers who also filled out the questionnaire that provides additional information about them. The participants represented a young but diverse group (displayed in Table 1): out of the 47 participants, there were 21 women, the average age was 26, 35 people are still at school attending university, and 34 people worked, some of whom were also going to university. 31 of the participants could be identified with a 'science mindset' as opposed to humanities based on their field of study or the industry they work in.

Table 1 *– Summary statistics (workers)*

Variable*	Number of participants	Percentage**
female worker	21	45%
degree (worker)	35	74%
working (worker)	34	72%
science(worker)	31	66%
strategy	27	57%

Variable	Obs	Mean	Std. Dev.	Min	Max
earnings	47	1640.426	1002.098	0	4400
age	47	26.191	5.826	19	58

* see explanations in Table 7
** out of the 47 participants

The average earning in the first two sessions when a good answer was worth 300HUF and the ones that are only off by 1 were worth 100HUF, was 1361HUF; while it was 1888HUF in the second two round when earnings were increased to 400 and 200 respectively. Figure 1 shows that women earned more on average (1845HUF, while men earned 1352HUF). 27 of the recipients, or 57%, indicated in the questionnaire that they played being aware of the fact that they might not receive any money or that they understood the strategic motives of the employers. This information appears in the regression on relative earnings, encoded in the 'strategy' dummy variable.

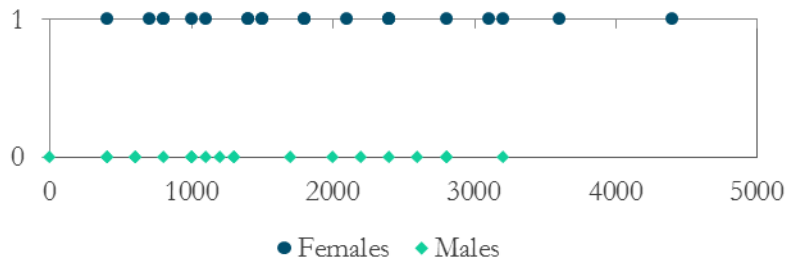

Figure 1 *– Earnings by gender*

Interestingly, in general, regret or betrayal aversion did not seem to play a role in the workers' behavior, which is demonstrated by the relatively high earnings. The harder the employees work, the more they expose themselves to a potentially highly unequal and unfair distribution of the earnings. However, I observed that all workers made significant effort, and even though some of them solved relatively few exercises or made some mistakes, all of them did some work.

Based on the results and the questionnaire, it is noticeable that the workers were typically overly focused on their job as opposed to strategic motives, and did not deeply consider how they would behave in the other, employer role. As a result, they were more optimistic than realistic about their payment expectations, which was also demonstrated by their answer to how they would have split the money. Moreover, nobody played according to the neoclassical Nash equilibrium, meaning that they would not make any effort expecting that the employer would not have an incentive to return any money to them – assuming only monetary-payoff dependent utility functions. The lack of zero effort[2] is unexpected, especially provided that there was a temptation to do something else than work: a computer and their phones were both available, and they had complete privacy by being surrounded by panels around their desks.

The surprisingly high effort might be partially associated with the experimenter effect: many of the participants who were recruited from online social network platforms knew the experimenter (myself), and they might have implicitly assumed that the harder they work, the better for the success of my MA thesis. However, many of those who solved the most exercises and hence earned the most money were not acquainted with me, which suggests a complex decision making mechanism that is influenced by other factors as well as the experimenter effect.

[2] There were participants who did not earn any money, but this was because they miscalculated the number of 0s (deviating by more than 1 from the actual number) or counted 1s instead of 0s.

I run a complex regression including variables motivated by Hong et al. (2007) – controlling for age, having university education, working, having indicated thinking through strategically the interaction – to isolate gender differences in the first stage:

$$\text{relative\_earnings} = \alpha + \beta_1\text{gender} + \beta_2\text{educated} + \beta_3\text{science} + \beta_4\text{working} + \beta_5\text{age} + \beta_6\text{strategy}$$

The regression output, displayed in Table 2 represents a strong relationship between being female and earning more compared to the average earnings, with a significant *p* value of 2.3% (the definition of the variables can be found in Table 7). This finding can be interpreted in two different ways. First, if the first stage of the game is understood as a trust game, then women seem to have had more positive expectations regarding the amount of money that their 'employer' would return to them. Second, they might not have focused on the strategic aspect of the game, and only paid attention to the task that they were presented with, and without coming up with a strategy appropriate in the game's context, they simply strived to do their best due to the framing. Even though the 'strategy' dummy variable is included in the regression, it does not provide appropriate control of the second option. This is because the question was raised after the experiment, and participants might have given biased answers regarding whether they thought through strategic considerations i.e. I expect unreliable responses to this question partially due to the fact that they were asked the question.

Table 2 *– Regression output – 1st regression on workers' relative performance*

Exmplained variable		**relative earnings**	
Number of observations			47
R squared			0.185
F stat			0.199
Variable	**Coefficient**	**St error**	**P>|t|**
female	0.665	0.282	0.023
degree	0.619	0.328	0.067
science	0.195	0.319	0.545
working	0.196	0.332	0.557
age	-0.010	0.025	0.690
strategy	-0.064	0.296	0.830
constant	0.651	0.719	0.371

Since only gender and education seem to play roles at explaining relative earnings in the regression displayed in Table 2, a reduced model was identified with only these two variables (shown in Table 3).

Table 3 *– Regression output – 2nd regression on workers' relative performance*

Exmplained variable		**relative earnings**	
Number of observations			47
R squared			0.168
F stat			0.018
Variable	**Coefficient**	**St error**	**P>|t|**
female	0.602	0.256	0.024
degree	0.696	0.292	0.022
constant	0.592	0.297	0.053

According to the new model that is displayed in Table 3, women earn significantly more than men do, and having a degree is also associated with higher relative earnings. Both results, if interpreted as being more willing to trust in others, contradict those of Croson and Buchan (1999), Chaudhuri et al. (2003), Hong et al. (2007) and also Dittrich (2015). This suggests that the framing has a powerful effect on participants' decisions; they behave differently in this setting, and women are more motivated to perform well. Alternatively, women might be significantly better at this specific tedious task, and their results were better than those of men.

4.2. The second stage of the experiment

The results of the second stage of the experiment, that is the employers' choices, are reviewed in this section. The participants in this group are diverse: 41% of the employers were women, 61% were students, 73% were enrolled or finished tertiary education, 71% have a job, and 51% could be identified with a science mindset

Table 4 *– Summary statistics (employers)*

Variable*	Number of participants	Percentage*
female	20	41%
student	30	61%
degree	36	73%
working	35	71%
science	25	51%

Variable	Obs	Mean	Std. Dev.	Min	Max
age	49	24.714	2.915	19	30
would have earned	12	2145.833	778.535	1000	3500

* see explanations in Table 7
** out of the 49 participants

Five different money transfer patterns were identified based on how much money the employers returned to the workers: 1) giving on a random basis, 2) giving a fixed ratio of the earnings, 3) giving or 4) keeping a fixed amount, and 5) decreasing or increasing the ratio based on the worker's performance. Note that giving a fixed ratio of the earnings can also have a progressive payment interpretation, since the harder the employee works, the more money they can expect to receive if the employer follows such a pattern. The ratio of the five categories were compared by Pearson's chi squared test to see if the frequency in the two genders, or two fields of work (science or humanities) can be associated with different endowment distributing patterns. Three of these tests' results that were significant are displayed in Table 5. The Pearson's chi squared statistics for the gender-science interest pair is also included in this table to shed light on the relationship between gender and scientific field of work: women are less likely to work in a scientific field.

There is one significant gender difference: relatively fewer women use a progressive pattern than men do. Additionally, those who are interested in scientific fields are more likely to select a progressive pattern, while less likely to go with a regressive one. One might also observe that the sample consists of relatively fewer women than men in the scientific field; which suggests that

gender's impact on division rate should not be viewed in isolation from other factors, such as the field of work, which motivates the need for a complex regression including additional control variables.

Table 5 *– Chi square test for progressive distribution ratio – females, progressive distribution ratio – scientific field, regressive distribution ratio – scientific field, and scientific field - females*

		Progressive		
	Female employer	**0**	**1**	**Total**
In data Expected	**0**	14 17.2	15 11.8	29
In data Expected	**1**	15 11.8	5 8,2	20
Total		**29**	**20**	**49**

Pearson chi2(1) = 3.500 Pr= 0.061

		Regressive		
	Employer in science field	**0**	**1**	**Total**
In data Expected	**0**	19 21.1	5 2.9	**24**
In data Expected	**1**	24 21.9	1 3.1	**25**
Total		**43**	**5**	**49**

Pearson chi2(1) = 3.229 Pr = 0.072

		Progressive		
	Employer in science field	**0**	**1**	**Total**
In data Expected	**0**	18 14.2	6 9.8	24
In data Expected	**1**	11 14.8	14 10.2	25
Total		**29**	**20**	**49**

Pearson chi2(1) = 4.871 Pr= 0.027

		Employer in science field		
	Female employer	**0**	**1**	**Total**
In data Expected	**0**	10 14.2	19 14.8	**29**
In data Expected	**1**	14 9.8	6 10.2	**20**
Total		**25**	**25**	**49**

Pearson chi2(1) = 5.975 Pr = 0.015

Table 6 shows that employers gave 53% of the earnings on average, which corresponds to 896HUF. This result stands out, since the average giving rate is generally significantly less in a non-real effort environment. However, in the real effort experiments it is not so unusual: in Heinz et al. (2012) the average giving rate is about 30%, while Oxoby and Spraggon (2008) it is nearly 50%. This result confirms the significant difference between altruistic and reciprocal behavior on the dictator side. Moreover, among these results having more earning categories are associated with larger transfers, since Heinz et al. (2012) only identified two categories ('low' and 'high' earnings), while Oxoby and Spraggon (2008) had three. This result is confirmed by my

findings, since in my design there are multiple earning levels depending on the performance in the real effort task.

Data regarding the transferred share within subgroups of the employers are also displayed in Table 6. The number of observations refers to the individual decisions that the participants made regarding how much to return of each endowment that the workers generated in their experimental session. On average, women transferred 4 percentage points larger shares than men did. Two extreme categories of employers were identified: one for those who gave significantly smaller shares of the earnings than the average did, and one for those who transferred the entire amount.

Table 6 *– Summary statistics - returned shares (subgroups)*

Variable: returned share

Subgroup of employers	Obs	Mean	Std. Dev.	Min	Max
total	579	0.528	0.259	0	1
female employer	237	0.551	0.202	0	1
male employer	342	0.512	0.291	0	1
'low'	25	0.059	0.096	0	0.33
'high'	36	1	0	1	1

A more detailed analysis of the giving rate was based on the following regression:

$$fraction\_given = \alpha + \beta_1 gender_{dicator} + \beta_2 gender_{recipient} + \beta_3 relativeeffort + \beta_4 relativeeffort*gender_{dictator} + \beta_5 student + \beta_6 working + \beta_7 acquaintances + \beta_8 science + \beta_9 educated + \beta_{10} age$$

The included variables are based on Hong et al. (2007), and some further assumptions, such as those who have work experience might appreciate work effort differently than those who do not. Furthermore, I assume that working and being a student affect the participants' wealth, which can have an impact on willingness to give money to someone else. Likewise, a dummy for science vs humanities field of work is included not only as a proxy for underlying characteristics, but also because interacting in a specific field's environment might also reinforce some of the characteristic preferences, and align one with the prevalent norms.

According to my initial hypothesis, β_1[3], β_3, β_4, β_6 and β_7 would be positive (represented with bold font), β_2 and β_5 negative, while β_8, β_9 and β_{10} ambiguous (written in italics). I included additional dummy variables to control for the potentially changing environment among the experimental sessions. The questions raised after reading the instructions since they might serve as anchors, the exact language used by the experimenter, and waiting time could be some examples of the uncontrolled factors that could affect the employers' decisions. The positive and negative outliers in terms of division rate were also controlled for by adding corresponding dummy variables for those who gave less than 6% on average ('low'), and those who gave 100% ('high'). Most likely unusual preference functions are associated with these decisions, therefore including a dummy variable for the outlier individuals is essential to be able to isolate the relevant gender differences.

[3] Gender is defined as 1 if the participant is female.

Table 7 – Regression variables and their descriptions

Variable*	Description
acquaintance	1 if the employer indicated that they recognized a specific worker and therefore deviated from their strategy, 0 otherwise
age	the employer's age
degree	1 if the employer has tertiary education, 0 otherwise
earning/average	the size of the endowment that the worker generated by exerting effort standardized by the session's average earnings
female employer	1 if the employer identified as female in the questionnaire, 0 otherwise
female worker	1 if the worker gave a female name, 0 otherwise
female*relative effort	the size of the endowment that the worker generated by exerting effort standardized by the session's average earnings if the employer identified as female
first session	1 if the data point is from the first experimental session, 0 otherwise
high	1 if the employer returned the full endowment to the worker, 0 otherwise
ln(would have earned)	logarithm of the amount of money that the employer thought they would have earned in the employee role
low	1 if the employer returned unusually low amounts to the worker, 0 otherwise
relative earnings	earnings standardized by average earnings in the same condition (1361 Huf in the first two sessions and 1888 Huf in the second two sessions)
returned share	the share of the money transferred to the worker
science	1 if the employer is working or studying in a science (or economics/finance) field, 0 otherwise
second session	1 if the data point is from the second experimental session, 0 otherwise
strategy	1 if the worker indicated that they had understood the potential strategic motives, 0 otherwise
student	1 if the employer is studying, 0 otherwise
third session	1 if the data point is from the third experimental session, 0 otherwise
working	1 if the employer is working, 0 otherwise

* refers to the worker if (worker) explicitly included in the variable label

First, a general model was tested, and then it was reduced by eliminating insignificant variables, which were also found to be unrelated to gender. Based on the first regression on the whole sample that explains 44% of the variation in the division rates (exhibited in Table 8), employers give relatively more: 1) if the worker earned more compared to others in the experimental session; 2) if they are women; 3) if the dictator and the participants are acquaintances and also the employer recognized the worker; and 4) if they work or study in a scientific field. Lower giving rates are associated with being a student, and having a job. The recipient's gender, having tertiary education and age do not seem to be significant factors at explaining division rates. This means that there is no evidence for gender discrimination. As mentioned earlier, this might be due to the strategy method, since many of the participants did not read the names.

Table 8 *– Regression output – 1st regression on returned shares*

Exmplained variable			**returned share**
Number of observations			579
R squared			0.436
F stat			0.000
Variable	**Coefficient**	**St error**	**P>|t|**
relative effort	0.074	0.018	0.000
female employer	0.182	0.036	0.000
female worker	0.008	0.017	0.629
student	-0.060	0.029	0.039
working	-0.050	0.024	0.036
acquaintance	0.503	0.199	0.012
science	0 .042	0.020	0.040
degree	0.017	0.024	0.482
age	-0.006	0.005	0.232
female*relative effort	-0.081	0.029	0.006
first session	-0.067	0.024	0.006
second session	0.072	0.027	0.007
third session	0.036	0.025	0.153
low	-0.487	0.046	0.000
high	0.486	0.040	0.000
constant	0.576	0.139	0.000

The interaction of relative effort and gender is also significant: women are less likely to appreciate relatively high effort than men are. This is an interesting result when considered jointly with the fact that women tend to give more in general, but they are less likely to select a progressive payment scheme. This might be interpreted as women appreciating effort regardless of its extent, and therefore they are less willing to make a large difference between those who performed well compared to those who did not. On the other hand, by choosing the progressive payment scheme, men behaved more reciprocally than women did. Another interpretation of men's behavior might be that they have the tendency to select a payment scheme that would be more

motivating in a repeated interaction scenario, which means that they apply strategic considerations that are not reasonable in the one shot game they played.

The highly insignificant regressors were removed in the second regression after a joint F test: age, working full time, and the recipient's gender. Based on the second regression that is presented in Table 9, a woman would give 10 percentage points less of the earnings to an individual who earned approximately average within the experimental session, while they would give the same amount as men to someone who earned 2.3 times the average.

Table 9 *– Regression output – 2nd regression on returned shares*

Exmplained variable		**returned share**	
Number of observations			579
R squared			0.434
F stat			0.000
Variable	**Coefficient**	**St error**	**P>|t|**
relative effort	0.076	0.018	0.000
female employer	0.182	0.036	0.000
student	-0.039	0.021	0.063
working	-0.052	0.023	0.026
acquaintance	0.514	0.198	0.010
science	0.050	0.019	0.010
female*relative effort	-0.080	0.029	0.006
first session	-0.065	0.024	0.006
second session	0.070	0.025	0.007
third session	0.041	0.024	0.094
low	-0.474	0.044	0.000
high	0.488	0.040	0.000
constant	0.427	0.041	0.000

One additional question was asked from the dictators in the 3rd and 4th experimental sessions: how much did they believe they would have earned if they were playing the worker role? This belief is assumed to be linked to the giving rate, and could be related to other factors included; therefore it was added to the regression. When the regression is adjusted to include this additional variable (in the 3rd regression), the fit is significantly better than earlier: 63% of the variation in the division rate is explained by the model. I also found that most relevant variables in the previous model are still significant, some of which surprisingly have changed their signs: being a student and having university education. While having a job has become an insignificant factor; age still seems to matter: the older the employer is, the more they are willing to give to the worker. The newly added variable – how much the employer thinks they would have earned in the employee role – has a negative impact on the division rate, as expected. This variable is a proxy for self-confidence, which is not only related to appreciation of effort exerted by others, but can also be related to gender. Due to this relationship, the coefficient of gender and that of the gender-effort interaction change in magnitude.

Table 10 *– Regression output – 3rd regression on returned shares*

Number of observations			156
R squared			0,626
F stat			0.000
Variable	**Coefficient**	**St error**	**P>|t|**
relative effort	0.178	0.040	0.000
female employer	0.357	0.069	0.000
female worker	0.008	0.029	0.422
student	0.172	0.064	0.008
working	0.062	0.046	0.175
science	0.164	0.053	0.002
degree	-0.233	0.071	0.001
age	0.061	0.123	0.000
female*relative effort	-0.209	0.052	0.000
low	-0.253	0.066	0.000
ln(would have earned)	-0.382	0.063	0.000
constant	1.606	0.408	0.000

My results in general align with those of Heinz et al. (2012), since they also found that women tend to give more, but do not differentiate between high and low effort levels. There is an interesting difference between Heinz and my findings however: effort level does matter for men in my research, and men are willing to give relatively more to those who exerted more effort than average. In addition, as previously noted, the average giving rate is comparable with those found by Oxoby and Spraggon (2008) in the real effort environment – around 50%, which could mean that some common elements of our experimental design that are not present in Heinz et al. (2012), evoke greater tendency for reciprocity.

5. Concluding remarks

5.1. Miscellaneous observations and suggestions for further research

The experiment's results provide some further insights to some behavioral aspects in addition to those in the primary focus of this research. The difference between Homo Economicus and 'regular people' can be observed at multiple instances. In the first stage of the experiment, even those who were either familiar with the dictator game, or simply figured out potential strategic motives, did not behave according to the neoclassical prediction. This is highlighted because the exact decision making process in the first stage has not been completely mapped in this particular context. Even though the insights from investment games can provide some relevant intuition, the way the participants think in the context of the real effort dictator game that framed as a workplace interaction might significantly differ. Certain statements still can be made about the workers' behavior, such as they work *as if* they expect the employers to appreciate their efforts, which is especially true in case on women.

I expect that the workers had some assumptions about the dictators' decision making process, which are possibly biased. The assumptions might also be incomplete, i.e. not extending to some potential incentives that are present. A question focusing on how they think they would have divided the money in an employer role was raised in the questionnaire that was filled out after completing the endowment generating stage, in order to gain a better understanding of the workers' strategic thinking. The timing of the question is crucial for drawing any conclusions from the answers. Since individuals might be more generous to the worker role after having exerted significant amount of effort and knowing that it is only a hypothetical question, they might give biased estimates of their strategy in the opposite role. This is exactly what we find: the workers claim that they would have given 73% to the employee if they were in an employer role.

Therefore, if our aim is to assess the decision making process in the first stage, and to find the relevant factors affecting the strategy, we need to have a different experimental design, by switching the order of the task and the questionnaire. However, asking the participants about the other role's strategy before completing the endowment generating task might affect their strategy in a complex way; therefore this should be examined in a controlled experimental environment by comparing different treatments. In order to get an estimate of the dictators' strategy, accuracy of the estimation should be incentivized. The effect of this treatment should be compared to the original design, which would shed light on how being forced to think through strategic motives as accurately as possible affects trusting behavior and hence exerted effort levels.

The anchoring effect of the employer-employee labeling might also be further analyzed. Since the focus of this research was evaluating gender differences in effort-appreciation in a workplace context, the labeling was essential. Presumably some workers worked harder due to the label, and focused less on coming up with a behavior strategy. The framing supposedly affected the employers in a conflicting way, since it might have become easier to rationalize both giving and keeping a larger share. It is interesting to observe that as a result of the setting, two very different perspectives appear regarding who has what right on the generated endowment in the two roles of the experiment, which resonates with Ruffle's (1998). According to the questionnaire, most workers thought of the employers' choice as stealing their money. This is in contrast with how some of the employers viewed the distribution: most of them felt entitled to a significant portion of the earnings, even though they knew they would receive some show-up fee.

The experimental design could be altered in future research in order to model a workplace interaction more closely by allowing a more direct interaction between employers and employees, even a face to face meeting. Social distance is likely to play a complex role in this setting; hence it would be important to introduce multiple control variables that might affect the subjects' decisions, such as looks.

I also noted in my experiment that arithmetic errors were quite common on the employer side: those who indicated the choice of a certain payment pattern in the questionnaire did not always follow it in practice. It is uncertain if this was the participants' unconscious mental processes affecting the division rate, or several genuine mistakes were made due to worn out math skills. However, using a calculator was neither forbidden nor uncommon; therefore making a decision of not using one might possibly be linked to other characteristics and relevant decision making factors. Controlling this in a following experiment could provide some insights into this mechanism and the issue's significance.

The strategy method used in the experiment distracted employers from reading the names of the participants, and therefore prevented the identification of any gender bias that might occur. For this reason I propose a different experimental design, one in which the employers receive the information about the workers earnings on a computer screen. They would first see all the information about the workers' earnings with some basic summary statistics, and then, after having the chance to come up with a payment scheme they would need to make one decision at a time by seeing only one worker's name and result on the screen. This method could enable employers to read the names as well as the results, and make decisions while keeping in mind both pieces of information.

It is debatable whether conclusions from a dictator game regarding trust and reciprocity are robust and could be applied to various contexts, and an ultimatum game variation of the experiment could serve as a robustness check. The ultimatum game variation would be more complex, but a more real-life like experiment to consider, since corporate decision makers usually participate in dialogues with the employees regarding their remuneration.

5.2. Final conclusions & application possibilities

In this thesis convincing evidence of gender differences in the willingness to exert and to appreciate effort were found in controlled experimental environment. Women were willing to work harder than then men in the first stage of the real effort dictator game experiment, and therefore generated more money, which is an original observation in behavioral economics. Female dictators tended to give more money to recipients on average, which confirms Heinz et al. (2012). Women were less willing to select a progressive payment structure that increases the giving rate by relative performance, which is a novel addition to the literature. I also observed that the fact that the recipients worked for the money matters more for women's decisions than how hard the employers worked. This might mean that empathy is a more powerful factor for employers' decisions as opposed to effort-appreciation. Chaudhuri et al.'s (2003) findings about significant gender differences in terms of reciprocity align with these results, however I shed light on some relevant complexity in these differences. According to the results, employers behaved in an exceptionally reciprocal manner compared to previous research such as Heinz et al. (2012), especially if the potential negative effect of the strategy method on giving rates that was identified by Cesari (2009) was present in this context.

Further relevant factors were identified that are necessary to include in analyses aiming to quantify gender differences, since not taking these into account would bias the assessment. These factors are working, being a student, age, education, field of work, and a proxy for confidence. This is a crucial finding for behavioral economics, since such variables had not been included in the past, even though they have the potential to refine some of the conclusions that previous research has made, which can improve the predictive power of related economic models.

In addition to the results' relevance in the experimental economics field, there are also takeaways for management science. Even though drawing conclusions that can be applied for companies' human resource strategies is out of the scope of this project, recognizing that a remuneration scheme designed by women in managerial roles might be less performance dependent has far-reaching consequences. Management science has recognized several other ways than monetary motivation to bring the best out of employees, such as building 'strategically aligned and ethical

high performance organizational cultures' (Kontoghiorghes 2016, p. 1833). Linking remuneration to performance too strongly and creating a competitive environment can have adverse effects especially on women according to Heinz et al. (2014). Taking this into account, my research suggests that a balanced workforce works best with balanced leadership.

The differences between the two genders' behavior that I identified in the real effort dictator game experiment are significant both statistically and economically. However, there is still some work to be done in terms of mapping how individuals behave in certain situations, especially in a workplace context. Thus I proposed some areas of further research, which can further improve our understanding of these differences. Linking theory to practice is also a crucial quest to be perused in order to improve organizational behavior and hence the wellbeing of employees, therefore I hope that my findings will be linked to applied research in the future.

Appendices

The instructions of the experiment and the questionnaire given to the participants are presented below in English (the original version was in Hungarian).

Appendix A - Workers' instructions and questionnaire

Instructions to the workers:

Dear Participant!

Thank you for participating in this experiment that is funded by the CEU Master Thesis Research Grant.

Please read the instructions carefully. You will find all relevant information here, and you will not receive any false or misleading information.

The results will be aggregated during the analysis if the experiment, therefore your anonymity is ensured.

In case you have any questions, please let us know by raising your hand, and we will be happy to answer them.

You will receive 500HUF in Aldi vouchers for your presence. In addition to this, you can earn money during the experiment. The total amount you receive will depend on your decisions, as well as on the decisions of another participant. This amount will be given to you at the end of the experiment in Aldi vouchers.

Please note that communication among the participants in strictly forbidden. Communication among the participants will result in exclusion from the experiment.

The participants of the experiments have been allocated to two groups: either to workers or to employers. You have been allocated to the worker group.

During the experiment you can earn money by doing a task. The money that you earn will be given to the employer, who can decide how they divide the money between you two. During the interaction they can only see your first name, therefore your anonymity is ensured.

Your task:

Your task is to count how many 0s there are on the pages prepared for you that contains 0s and 1s. We have provided you an example to this exercise. You can find the number of the exercise on the top of the page, and the table with 0s and 1s below that. You have to count how many 0s there are on the page, and enter the number to the questionnaire appearing on the screen to the appropriate place.

Every correct solution is worth 300HUF.[4] The answers deviating by one from the correct one (one below or above the right number) are worth 100HUF. Further answers that are incorrect are not worth any money.

You have 25 minutes (1500 seconds) to complete the task. You will see the countdown projected on the front wall. After the 25 minutes you need to submit your answers. You can work on as

[4] In the 3rd and 4th experimental session the amounts were raised to 400 and 200HUF.

many sheets of exercises as you wish. The exercise-sheets will be distributed after reading the instructions.

The decision of the employer

Your employer who has been assigned to you on a random basis will have the amount of money that you generated.

They will know that you will have worked for the amount, and that the amount depends on your effort. The employer will divide the money between you two. Any feasible division can occur: for example, if you earn 1000 forints, you might receive any amount between 0 and 1000.

While the employers are making their decision, please fill out a form. Following this the experiment will and, and you will receive you payment in Aldi vouchers.

If you have any questions, please let us know.

The instructions above are confidential; therefore please do not share them with anyone.

Example sheet:

0	1	0	1	1	1	0	0	0	1	1	0	1	1	0	0	0	0	0	0
0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	1	0	1
0	0	0	1	0	1	1	1	1	1	1	0	0	0	1	1	1	1	1	0
1	0	1	1	1	0	1	0	1	0	0	1	0	1	0	1	0	1	1	0
1	1	1	1	0	1	0	1	0	0	1	0	1	1	0	1	0	1	1	1
0	1	0	0	1	1	1	1	1	0	0	0	1	0	1	0	0	1	1	0
1	0	0	1	0	1	0	0	1	1	1	0	1	0	0	1	1	0	1	1
1	0	1	0	0	0	0	0	1	0	1	1	0	1	1	0	1	1	0	0
1	0	0	0	1	0	1	0	0	1	0	1	0	1	1	1	1	1	1	0
0	0	1	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	1	1
1	0	0	1	1	0	0	0	0	0	1	1	1	0	1	0	1	0	1	1
0	0	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	0	1	1
1	1	1	1	0	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0
0	0	1	1	1	1	1	0	0	1	1	0	1	1	0	0	1	1	1	1
0	0	1	1	1	1	1	0	1	0	0	0	1	1	1	0	1	1	0	1
1	1	0	1	0	0	1	0	0	0	0	0	1	1	1	0	1	0	1	1
1	1	1	1	1	1	1	0	1	1	1	0	1	0	1	1	0	0	0	0
0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	0	1	1	1	0
0	0	0	1	0	0	0	0	1	0	1	0	1	1	0	1	0	1	1	0
1	1	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0	0	0
0	1	1	0	1	1	0	0	1	0	1	1	1	1	0	0	0	1	1	1

Employees' questionnaire (filled out after the decisions are made)

1. Your age:
2. Your gender:
3. Your education level:
4. Do you study, or work (or both)?
5. What do/did you study?
6. If you work – what do you do, and in which industry?
7. What strategy did you use for completing the exercise? Why did you use this one?
8. How would have you split the money if you were in the employer role in the experiment?

9. Have you been to a similar experiment before? Did this affect your decisions in this experiment?
10. Do you know if anyone you know is participating in the experient in the other room? If yes, (how) did this influence your behavior?
11. Are you acquainted with any of the experiment leaders? If yes, (how) did this affect your decisions?
12. What do you think the experiment was measuring?

Appendix B – Employers' instructions and questionnaire

Instructions to the employers:

Dear Participant!

Thank you for participating in this experiment that is funded by the CEU Master Thesis Research Grant.

Please read the instructions carefully. You find all relevant information here, and you will not receive any false or misleading information.

The results will be aggregated during the analysis if the experiment, therefore your anonymity is ensured.

In case you have any questions, please let us know by raising your hand, and we are happy to answer them.

You receive 500 HUF in Aldi vouchers for your presence. In addition to this, you can earn money during the experiment. The total amount you receive will depend on your decisions, and well as on the decisions of another participant. This amount will be given to you at the end of the experiment in Aldi vouchers.

Please note that communication among the participants in strictly forbidden. Communication among the participants will result in exclusion from the experiment.

The participants of the experiments have been allocated to two groups: either to workers or to employers. You have been allocated to the employer group.

The workers will not your name or any other indication of your identity, which ensures complete anonymity.

The workers can earn money by completing a simple task. The amount of the earning depends on the effort the employee makes. The harder they work, the more money they earn. The money will be given to you. You can decide how you want to divide it between you two. Any feasible division can be made. For example, if the worker made 1000 forints, any division summing up to 1000 is an option (for example the worker gets 500 and you get 500 as well, or the worker gets 0 and you get 1000, or the worker gets 1000 and you get 0, etc.).

During the experiment you do not work and do not make money.

The workers can work for up to 25 minutes, which they had started before you arrival. Afterwards we summarize the results, and you will receive the information about the workers' earnings printed on a sheet of paper. Please write down how you want to divide the earnings.

At the end of the experiment you will be randomly paired with a worker, according to which you will receive your payment. So the money you earn will depend on the effort of this worker and your decision about the division.

If you have any questions, please let us know.

The instructions above are confidential; therefore please do not share them with anyone.

The employers received the information about the workers' performance in the following format (the names and values are made-up examples):

		Kept portion	**Portion transferred to the worker**
Aladár	earned 1200 forints.	Ft	Ft
Béla	earned 300 forints.	Ft	Ft
Cecília	earned 500 forints.	Ft	Ft

Employers' questionnaire (filled out after the decisions are made)

1. Your age:
2. Your gender:
3. Your education level:
4. Do you study, or work (or both)?
5. What do/did you study?
6. If you work – what do you do, and in which industry?
7. How did you make your decisions about splitting the money? what strategy did you use? Why did you use this one?
8. Have you been to a similar experiment before? Did this affect your decisions in this experiment?
9. Did you recognize any of the workers from their names? Did this affect your decisions? If so, how?
10. Are you acquainted with any of the experiment leaders? If yes, (how) did this affect your decisions?
11. What do you think the experiment was measuring?

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