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Income Inequality and Risk Taking

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ABSTRACT

Standard economic theory assumes that individual risk taking decisions are independent from the social context. Recent experimental evidence however shows that the income of peers has a systematic impact on observed degrees of risk aversion. In particular, subjects strive for balance in the sense that they take higher risks if this gives them the chance to break even with their peers. The present paper is, to the best of our knowledge, the first systematic analysis of income inequality and risk taking. We perform a real-effort field experiment where inequality is introduced to different wage rates. After the effort phase subjects can invest (part of) their salary into a risky asset. Besides the above mentioned possibility of higher risk taking of low-wage individuals to break even with high-wage individuals, risk taking can be influenced by an income effect consistent with e.g. decreasing absolute risk aversion and a house money effect of high-wage individuals. Our results show that the dominant impact of inequality on risk taking is what can be termed a social house money effect: high-wage individuals take higher risks than low-wage individuals only if they are aware of the inequality in wages.

Keywords: Risk; Inequality; Real Effort; Field Experiment; Social Comparison

JEL: D81; C93; D63; J31

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1. Introduction

Risk taking is an important determinant of economic prosperity and growth. Income inequality, in particular inequality at the top end of the distribution can, therefore, promote growth as it may boost risky investments of the rich agents (Perotti, 1993). However, from a behavioural perspective, the relation between income inequality and risk taking has not been systematically studied yet and the present study aims to fill this gap.

In traditional decision theory and standard economic analyses risk taking of an individual is determined solely by her own state-dependent payoffs. In this case, inequality can only impact risk taking via a mere income effect. E.g. in the case of decreasing relative risk aversion a higher degree of inequality increases risk taking of rich subjects disproportionately and, therefore, leads to higher risky investments in the society which in turn will promote growth. However, since the work of Veblen (1899) it is well-known that people compare their income and well-being to those of their peers. It is evident that such social comparisons should influence risk taking decisions as higher risk taking allows, on the one hand, to bridge the gap to richer peers in case of good luck but, on the other hand, also involves the risk of falling behind poorer peers in case of bad luck.

In view of this obvious relation between social comparison and risk taking it is rather surprising that the behavioural literature on individual decision making under risk started only very recently to integrate the social context into their analyses. The first work we are aware of is that of Hill and Buss (2010) who demonstrated that concern for relative position leads to increased risk taking when there is the potential to be better off than a peer for decisions in the gain domain. In our view, however, it is not clear what causes this influence. This is because a theoretical background is missing, and in all stimuli, the choice of a subject not only influences the subject's payoff but also the payoff of the peer. Hence, it must be recognized that considerations other than social comparison may have influenced the observed choice behavior. Rohde and Rohde (2011), in contrast, found only a limited impact of social comparison on risk taking when analyzing whether people will opt to change their individually chosen lottery if a social context is introduced. The fact that they observed only a few switches that may actually be caused by a type of status-quo bias motivated us to employ a between-subject design in our study. Using a

between-subject design, Schwerter (2013) found that decision makers are willing to take more risks if they are able to surpass a peer than to stay ahead of a peer.

The most popular behavioral models of decision making under risk, i.e. (cumulative) prospect theory (Kahneman and Tversky, 1979; Tversky and Kahneman, 1992) and the model of Köszegi and Rabin (2006, 2007) suppose that utility is reference-dependent. While usually it is assumed that the reference point is determined only by (expectations about) the own wealth of the decision maker, recent experimental studies have analyzed social reference points. Linde and Sonnemans (2012), Vendrik and Woltjer (2007), Schmidt et al. (2015) and Lahno and Serra-Garcia (2012) found evidence for loss aversion in the presence of social comparison, i.e. being behind a peer has a higher impact on utility than being ahead of her. Note that also the standard model of inequality aversion by Fehr and Schmidt (1999) implies social loss aversion if, as usually assumed, the coefficient for disadvantageous inequality aversion exceeds that for advantageous inequality aversion. Friedl et al. (2014) showed that inequality aversion influences insurance demand of experimental subjects.

Given this evidence that the social context has a strong impact on risk preferences the relation between income inequality and risk taking seems to be an open question. Even if poor individuals take higher risks in order to break even with richer individuals, rich individuals may take less risk due to a fear to fall behind poorer subjects such that inequality may actually be harmful for growth. In the present paper we present an experiment which is designed to assess the impact of income inequality on individual risk taking decisions. We perform a real-effort field experiment where inequality is introduced to different wage rates. After the effort phase subjects can invest (part of) their salary into a risky asset such that the chosen investment amount can be regarded as measure of their risk taking. In order to disentangle mere income effects from the impact of social comparison, we run treatments with and without information of differing wage rates. Apart from the real-effort field treatments we also ran standard laboratory treatments where the endowment of subjects was a windfall gain instead of a wage. This allows us to analyze the impact of the well-known house money effect (Thaler and Johnson, 1990) on risk taking with and without social comparison.

The paper is organized as follows. The next section introduces our experimental design and discusses the main hypotheses we wish to test. Section 3 presents our results. Some concluding discussion appears in Section 4.

2. Experimental Design and Hypotheses

2.1 Overview

The experiment was run in the Economics Faculty of Vilnius University in Lithuania in cooperation with Lithuanian National Consumer Protection Organization (NCPO). A total number of 240 subjects participated in the experiment. All subjects were undergraduate students of the economics faculty with an average age of 22. The experiment lasted about 60 minutes in the real effort treatments and about 20 minutes in the windfall treatments (for details see below). Average payoff was 15.92 Lithuanian Litas (LTL) which corresponds to 4.61 Euros. Recall that minimum hourly wage in Lithuania is 1.82 Euros and the average hourly wage is 3.38 Euros.

In all our treatments, subjects first work for money, resp. are endowed with money, and then have to make a risky decision which allows to elicit their degree of risk aversion. We employ a 2x2x2 factorial design which gives altogether eight treatments. Table 1 presents these eight treatments, which involve 30 subjects each. In the first four (T1-4) treatments subjects received their endowments as windfall gain whereas they had to exert a real-effort task in treatments T5-8. The use of a real-effort task has shown to reduce a house-money effect (Thaler and Johnson, 1990) in previous studies (Jelschen and Schmidt, 2015). In order to induce inequality, subjects received 10 LTL in treatments T1, T3, T5, and T7 whereas the endowment amounted to 20 LTL in the remaining treatments. In order to disentangle the effect of inequality from a mere income effect, in some treatments (T1-T2, T5-T6), subjects were only informed about their own endowments so they were not aware of the income inequality. In the other treatments (T3-T4, T7-T8), they were told that there exists a low (10 LTL) and a high (20 LTL) income group and that they were randomly assigned to one of these groups. Consequently subjects were aware of income inequality and of their position in the social ranking in these treatments. As subjects could follow how the randomization device (i.e. a coin-flip) was performed they knew that they had an equal

chance of getting the high or low endowment. Consequently, there was no ex-ante inequality which should reduce the impact of inequality (Brock et al., 2013).

Table 1: Treatments

Treatment	Task	Endowment	Information
T1	Windfall	10 LTL (low)	No
T2	Windfall	20 LTL (high)	No
T3	Windfall	10 LTL (low)	Yes
T4	Windfall	20 LTL (high)	Yes
T5	Real Effort	10 LTL (low)	No
T6	Real Effort	20 LTL (high)	No
T7	Real Effort	10 LTL (low)	Yes
T8	Real Effort	20 LTL (high)	Yes

After the risk elicitation task, participants had to fill out a questionnaire (see Appendix A) including demographical, social capital, trust and subjective well-being questions. In our statistical analysis only trust had a significant impact and is, therefore, included in our regressions. To measure trust we used the General Social Survey (GSS) question, "Generally speaking, would you say that most people can be trusted or you can't be too careful in dealing with people?" where answers are recorded on a scale 1 to 10.

2.2 Participant Recruitment and Experimental Setup

Since there does not exist a subject pool for experiments at Vilnius University, we were not able to use standard recruitment tools such as ORSEE or hroot. Instead we advertised our experiment with posters. We used two types of posters, one for the real-effort treatments and the other for the windfall treatments. We are aware of the fact that using two types of posters might create some endogeneity as different types of people can respond to the two posters. Our reasons for this procedure were as follows. We wanted to make the real-effort treatments as realistic and natural

as possible, i.e. advertising a short-term job where subjects have not the impression that they are part of an experiment. Of course we could have also included the people who applied for the jobs in the windfall treatments but if they expect to do a job and then receive the money without work an even higher effect of windfall gains should have occurred.

All participants were randomly assigned to one of the four treatments they applied for and given full information about the procedure. The subjects in the windfall treatments were explained that they would participate in an economics experiment and are required to fill a questionnaire. We made it clear to all participants that the participation was totally voluntary and they would get paid a show up fee even if they did not participate. Those who were recruited for the real-effort treatments first completed the task on the computer and received their salary right afterwards, while those in the windfall treatments instantly obtained their endowment.

All sessions took place in a computer lab at the faculty. This insured the same conditions for the windfall as well as real effort treatments. While the windfall treatments constitute a standard lab experiment, the real-effort treatments have to be regarded as a field experiment - all in the same environment.

2.3 Real-Effort Task

In contrast with vast majority of the experiments using real effort tasks, we do not use a task that is especially designated to be used in experiments such as slider task (Gill & Prowse 2012). Likewise, we also wanted to avoid using artificial tasks such as solving mazes (Gneezy et al. 2003), mathematical equations (Sutter and Weck-Hannemann 2003) or filling envelopes (Konow 2000). Instead, we recruited our subjects in T5-8 for a real job and elicited risk preferences after they completed the task.

Due to the fact that Lithuania switched to the Euro in January of 2015, NCPO needed to collect data on consumer goods. The NCPO needed such data for two reasons: first, to monitor the fairness of retailers, because, up until the end of 2014, all prices had to be written in the Lithuanian Litas and the Euro. Unfortunately, not all retailers were fair and converted the prices correctly, stating a higher price in Euros than the equivalency of the price in Litas. Secondly,

there is a fear that prices will rise after the adoption of the Euro in the first months of 2015. Therefore, the NCPO needed data of the prices in September of 2014, in order to later compare them to those in 2015. Thus, we paired their need for data collection with our want of a real effort task in a field experiment.

The participants were invited to a one-time, short-term job where they had to collect data on products from the largest retailers in Lithuania. The data, i.e. price in Euros, Litas, manufacturer, distributer, retailer and weight (if applicable) had to be noted in an Excel document. Due to the fact that the task was monotonous and simple, each data point input took almost the same amount of time for everyone and did not depend on personal skills of subjects. Therefore, it was a unique opportunity to control for effort by assigning each subject 20 products to gather data on and giving as much time as needed to complete the task. This eliminated the possibility of shirking. All participants had to search for a different panel of products; this, along with no time control, excluded any possible competition among participants to finish their task faster.

2.4 Risk Elicitation Procedure

The risk elicitation task took place after the subjects got paid. After receiving their money, the participants could buy a lottery ticket, which offered the chance to win 20 LTL if the result of a roll of a die was 5 or 6 and nothing otherwise. Hence, the expected value of this lottery is 6.67 LTL. Following Vieider et al. (2015), each participant had to state her willingness-to-pay (WTP) for playing this lottery on a choice list. The choice list covered prices in the interval 2-10 LTL in 0.5 LTL steps. One of these prices war drawn randomly and if the subject indicated that she was willing to buy the lottery for this price she had to pay the price and could play out the lottery. If the subject indicated that she was not willing to buy the lottery for the randomly drawn price she could leave with her endowment.

2.5 Hypotheses

Our experimental design with the eight treatments gives rise to several hypotheses. While some factors of the 2x2x2 design have been studies before, in particular the interaction of factors is an

open question. The size of the endowment may obviously have an impact of risk preferences. The typical empirical observation is decreasing absolute risk aversion (DARA) which means that increasing wealth leads to lower degrees of risk aversion. According to DARA the WTP should be higher in the treatments with high endowments. According to the house money effect, WTP should be higher after prior unexpected gains. This could be the case if the windfall gain or the wage is higher than expected, so in particular in the high endowment treatments. The effect should be strong for high endowment subjects in the information treatments, as they were lucky on the coin-flip determining the endowment and, therefore, should experience a gain. As noted above, Jelschen and Schmidt showed that working for the endowment reduces the house money effect. Therefore, WTP of high endowment subjects should be lower in real-effort treatments and, in particular, lower in T8 than in T4. The main effect of the treatment variable information is to allow for social comparison of the low (high) endowment group with the opposite group having high (low) endowments. Given that social loss aversion was consistently found in previous studies (see introduction), we can hypothesize that the low endowment subjects take higher risks in the information treatments as this allows them to close the gap to the high endowment subjects. But also the high endowment subjects should take higher risks in the information treatments. This is because low endowment subjects who buy the lottery may overtake high endowment subjects while a high endowment subject who buys the lottery may not become worse off than a low endowment subject even if she does not win in the lottery.

3 Results

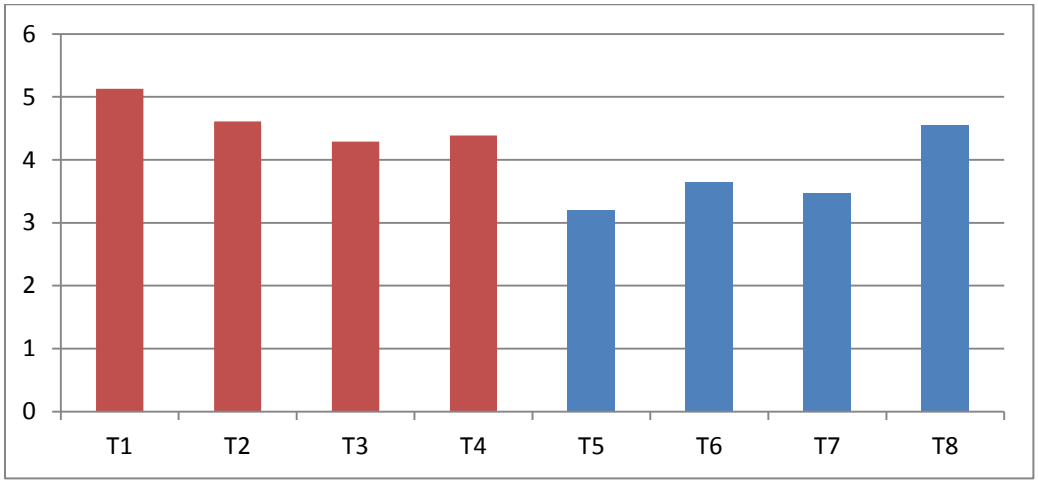
Figure 1 shows the average WTP for the eight treatments. Overall, the average *WTP* is *4.13* (*S.D.= 1.82*) for the whole sample. It is *4.61* (*S.D.=1.78*) in the windfall treatments and *3.70* (*S.D.= 1.75*) in the real effort treatments. A Wilcoxon-Ranksum test confirms that WTP is significantly higher in windfall treatments (*z=3.858, p= .0001*). Therefore, in line with Jelschen and Schmidt (2015), real effort reduces the house money effect.

Also the income level has the expected effect on risk taking. Consistent with DARA, average *WTP* in the low endowment treatments was *3.98* (*S.D.=1.80*) and *4.28* (*S.D.=1.83*) in the high income treatments (*z=1.726, p= .0844*). Yet, a closer look on the results shows that this effect is only due to real effort treatments. When we run the same non-parametric analysis within real

effort and windfall groups separately, we find that p-values are *.0135* and *.8351* (*z= 2.471* and *.208* respectively).

Table 2 presents OLS regression analyses where the dependent variable is *WTP* and p-values are given in the parentheses. We study the treatment effects by three dummy variables: *realeffort*, *high_w* and *info*. *Realeffort = 0* in the first four treatments and *realeffort = 1* in the latter four; *high_w = 1* in T2, T4, T6 and T8 and *high_w = 0* for the remaining treatments; likewise *info = 1* for T3, T4, T7 and T8, and *info = 0* otherwise. We study the treatment effects also by two way interaction variables: *realeffortxhigh*, *realeffortxinfo*, *highxinfo* and three way interaction variable *infoxhighxeffort* in the first 14 models. The remaining 12 models do not include interaction variables and focus on the treatments separately.

Figure 1: Average *WTP* by Treatments



The density of our analysis is increasing from model (1) to (26). For convenience we can see models (1) and (2) as a wide angle picture, including all the treatments and controlling for the treatment effects with three-way interaction variables. Models (3) to (14) are devoted to all possible two way interactions of our three treatment variables. Regressions (3) to (6) investigate the effects of *info* and *high_w* keeping *realeffort* fix, (7) to (10) keeps *high_w* fix to study the interaction between *realeffort* and *info* and finally the models (11) to (14) focus on *realeffort* and *high_w*. Second part of the table presents the zoomed-in picture of the analysis. Models (15) to (18) study the effect of *high_w* on *WTP*, (19) to (22) the effect of *realeffort* and (23) to (26) the

effect of *info*. Note that a number of participants either did not answer some of the questions or excluded from the study due to multiple switching points in the choice list. This is the reason why number of observations slightly varies along the analysis.

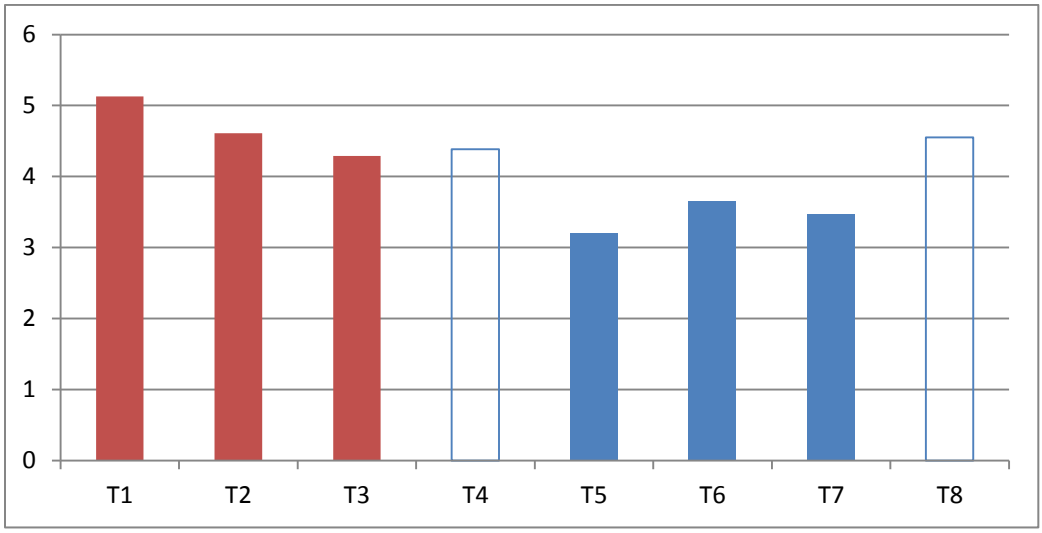
The first two models show that participants in the real effort treatments take significantly less risk since *realeffort* has a negative sign in both columns (*p=.000*). This is the only significant effect in the pooled analysis. In columns (3) and (4) we consider only real effort treatments and study *info* and *high_w* variables. Both coefficients have positive signs and are significant in the third model. Yet, when we include the interaction variable *highxinfo* the significance does not remain. Under windfall treatments (columns 5 & 6), we do not observe any significant effects of *info* or *high_w* on *WTP*.

Realeffort is negative and significant at $p < .01$ in columns (8), (9) & (10) but not in (7). This tells us that subjects with low endowments take significantly less risk in real effort treatments than the windfall treatments. This is also true for the subjects with high endowments up to some extent, yet the significance of *realeffortxinfo* at p=.057 shows that there is an interaction between *info* and *realeffort*. *Realeffort* is negative and statistically significant at $p < .01$ in models (13) and (14) but not in (11) and (12). Summing up the results on realeffort, we have our first result:

Result 1: *Participants take less risk under real effort treatments except for those who are given a higher endowment (salary) and who are aware of it.*

Figure 2 illustrates the result. Recall that T1-4 are windfall treatments whereas T5-8 are real effort treatments. There is no significant difference between the risk preferences of the subjects in T4 and T8 (p = .634) but the effect is significant between T1-T5, T2-T6 and T3-T7 (p-values are *.001*, *.019* and *.018* respectively). Regressions (19-22) also present these findings.

Figure 2: Average *WTP* in Windfall and Real Effort Treatments

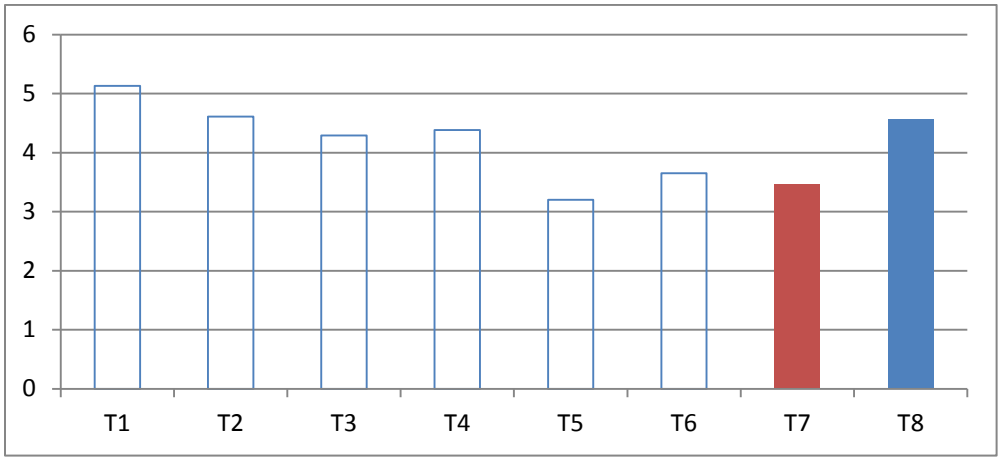


We also aim to find out if endowment heterogeneity has an effect on risk taking behaviour. Recall that *high_w* variable is positive and significant (*p=.018, coeff=.759*) in the third model in the regression analysis. Also we have a significant negative effect of *realeffort* in column (7) and a weak significant effect of *high_w* in column (11) (*p=.086, coeff=.620)*. Summing up, our result on endowment heterogeneity is:

Result 2: *Subjects with higher endowments take higher risks only in real effort treatments and when they are aware of the heterogeneity*.

This result can be seen in Figure 3. In addition to above explained regression analysis, in the second part of the table, *high_w* is positive and significant only in column (18) at *.009* but not in (15, 16 & 17). The p-values are *.319* for T1-T2, *.990* for T3-T4 and *.252* for T5-T6. Therefore the only effect of high_w is coming from T7-T8.

Figure 3: Average *WTP* and Endowment Heterogeneity



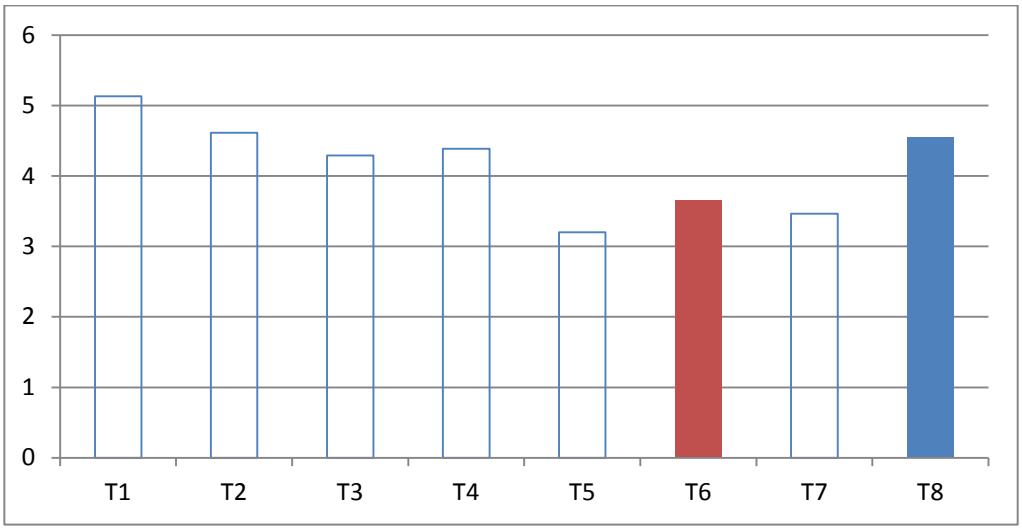
Our final analysis regards the effect of social comparison effect on risk taking behaviour. In other words: Are subjects' risk preferences affected by the knowledge of being endowed with higher or lower amounts of money?

We have already mentioned that *info* is positive and marginally significant (*p=.067*) in the third column of the regression table. Furthermore, the interaction variable *realeffortxinfo* is also significant at *p=.057* (*coeff=1.152*). Finally, the analysis of *info* in models (23) to (26) reveals that the *info* is only significant in model (26), which yields:

Result 3: *Receiving social information leads to higher risk taking for those who earn more in the real effort treatments.*

Info is insignificant in models 23, 24 and 25 with p-values of *.260* (T1-T3), *.660* (T2-T4) and *.516* (T5-T7). It is positive and significant only in T6-T8, when subjects of real effort treatments earn more (p=*.031*). Figure 4 shows this visually.

Figure 4: Average *WTP* and the Social Information



4 Discussion and Conclusion

This paper presented a real-effort field experiment on the impact of income inequality on risk taking. Our experiment was designed to control for income effects, the impact of social comparison, and the house money effect. Apart from the results highlighted in the preceding section, two further points seem to be noteworthy. First, there is no pure income effect, i.e. if people are not aware of the inequality rich and poor subjects do not differ in their risk taking decisions. Second, as Jelschen and Schmidt (2015) we find clear evidence that real effort reduces the house money effect, as risk taking is lower in the real effort treatments.

For drawing conclusions to the world outside the laboratory our real-effort treatments seem to be most relevant. Here we have a clear impact of income inequality on risk taking. Compared to a world without inequality – i.e. in the treatments without information since people should behave there as under perfect equality – income inequality leads to higher risk taking of rich subjects whereas the decisions of poor subjects are unaffected. Consequently, poor subjects do not strive for balance in the sense that they try to break even with rich individuals. The behavior of the rich can be explained by two hypotheses. First, they may be afraid of being over taken by poor subjects who buy the lottery. Second, they may regard risk taking as some kind of conspicuous consumption in the sense of Veblen (1899) which gives them additional utility. In any case, our results point into a direction that inequality can be beneficial for economic growth and prosperity

as in particular higher risk taking of the rich leads to the availability of more venture capital in the economy.

Table 2: Regression Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
			Real Effort==1		Real Effort==0		high_w==1		high_w==0		info==1		info==0	
realeffort	**-.905**	**-1.048**	--	--	--	--	-.411	**-1.138**	**-1.405**	**-1.54**	-.319	-.579	**-1.445**	**-1.54**
	(.000)	**(.000)**	--	--	--	--	(.240)	**(.007)**	**(.000)**	**(.000)**	(.375)	(.174)	**(.000)**	**(.000)**
info	.054	-.697	**.584**	.264	-.526	-.697	.364	-.628	-.251	-.697	--	--	--	--
	(.820)	(.104)	**(.067)**	(.522)	(.135)	(.81)	(.297)	(.148)	(.436)	(.092)	--	--	--	--
high_w	.288	.048	**.759**	.45	-.224	-.048	--	--	--	--	.620	.117	-.009	.048
	(.228)	(.907)	**(.018)**	(.268)	(.521)	(.900)	--	--	--	--	(.086)	(.789)	(.978)	(.905)
highxinfo	--	.068	--	.639	--	.068	--	--	--	--	--	--	--	--
	--	(.909)	--	(.313)	--	(.902)	--	--	--	--	--	--	--	--
realeffortxhigh	--	.402	--	--	--	--	--	--	--	--	--	.592	--	.402
	--	(.476)	--	--	--	--	--	--	--	--	--	(.323)	--	(.470)
realeffortxinfo	--	.961	--	--	--	--	--	**1.152**	--	.961	--	--	--	--
	--	(.097)	--	--	--	--	--	**(.057)**	--	(.084)	--	--	--	--
infoxhighxeffort	--	.191	--	--	--	--	--	--	--	--	--	--	--	--
	--	(.815)	--	--	--	--	--	--	--	--	--	--	--	--
cons	4.442	4.74	3.046	3.2	4.982	4.74	4.321	4.788	4.853	4.74	4.018	4.043	4.875	4.74
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
N	220	213	116	114	104	99	111	107	109	106	106	102	114	111
R2	.0688	.1221	0.0590	.0491	.0262	.0583	.0227	.0688	.1578	.1557	.0362	.0399	.0162	.1886

	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
	Endowment Heterogeneity				Real effort vs.Windfall Endowment				Social Information			
	Endowment		Real effort		Low_w		High_w		Endowment		Real effort	
	No info	Info	No info	Info	No info	Info	No info	Info	Low_w	High_w	Low_w	High_w
realeffort	--	--	--	--	**-1.918**	**-1.060**	**-1.030**	.260	--	--	--	--
	--	--	--	--	**(.000)**	**(.018)**	**(.019)**	(.634)	--	--	--	--
high_w	-.468	-.006	.470	**1.283**	--	--	--	--	--	--	--	--
	(.319)	(.990)	(.252)	**(.009)**	--	--	--	--	--	--	--	--
info	--	--	--	--	--	--	--	--	-.587	-.243	.244	**1.094**
	--	--	--	--	--	--	--	--	(.260)	(.606)	(.516)	**(.031)**
trust	.081	**.292**	**.203**	.200	.131	**.275**	.157	.199	**.312**	.101	.155	**.258**
	(.471)	**(.025)**	**(.039)**	(.070)	(.275)	**(.006)**	(.093)	(.153)	**(.030)**	(.332)	(.068)	**(.037)**
cons	4.653	2.808	2.024	2.276	4.360	2.893	3.785	3.303	3.293	4.079	2.300	2.174
	(.000)	(.000)	(.002)	(.003)	(.000)	(.000)	(.000)	(.000)	(.001)	(.000)	(.000)	(.006)
N	54	50	60	56	57	52	57	54	51	53	58	58
R^2	.0341	.1035	.0907	.1438	.2708	.1989	.0982	.0413	.1395	.0233	.0672	.1274

Notes: All OLS regressions, p-values are indicated in the parentheses. Dependent variable is *Risk*. Independent variables: realeffort=1 for the real effort treatments, realeffort=0 for the windfall treatments; high_w=1 if endowment is 20, high_w=0 if endowment is 10; info=1 for the social information treatments, info=0 for no-info treatments, trust is a variable obtained by standard GSS trust question [1,10]. The rest are interaction variables. Models (1) and (2) include the whole sample, models (3) to (14) analyze the effects of real effort, endowment level and information separately, and regressions (15) to (26) focus treatment effects more thoroughly.

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Appendix A: Questionnaire

Part 1

1,1 Year of birth: _____

1,2 Gender

Male Female

1,3 Place of birth: _____

1,4 Marital status:

a Married
b Single
c Been in a relationship more than a year
d Been in a relationship less than a year
e Divorced
f Widow

1,5 Do you have any children?

Yes No if yes, how many? _____

1,6 If you have children, do you live together with your children?

Yes No

1,7 Do you consider your health:

a Very bad
b bad
c regular
d good
e very good

1,8 Are you a student?

Yes No

1,9 What describes your professional status?

a Not working because of school/university
b Unemployed
c Working part time
d Employed in the private sector
e Employed in the public sector
f Running a business of own

1,10 Last graduated level of studies:

a No education
b Primary school
c Secondary school
d High school
e University degree - bachelor
f University degree – master or PhD

1,11 Father‘s last graduated level of studies:

a No education
b Primary school
c Secondary school
d High school
e University degree - bachelor
f University degree – master or PhD
g I don't know

1,12 Mother‘s last graduated level of studies:

a No education
b Primary school
c Secondary school
d High school
e University degree - bachelor
f University degree – master or PhD
g I don't know

1,13 Your mean income:

a Less than 1000Lt
b 1001-2000Lt
c 2001-3000Lt
d 3001-4000Lt
e 4001-5000Lt
f More than 5000Lt

1,14 If you are catholic, do you go to church:

a Yes – at least once a week
b Yes – at least once a month
c Yes – during holidays
d No

1,15 Which of these is more important in life:

a Luck
b Effort

1,18 Are you a member of any organizations? (Example: UNICEF, Greenpeace, political party, student union, etc.)

Yes No

1,19 In the past 3 months have you bought a lottery ticket?

Yes No

1,20 Has anyone you know won something in a lottery in the past 6 months?

Yes No

Part 2

2,1 Generally speaking, how satisfied are you with your life?

1 2 3 4 5 6
Not satisfied

2,2 Generally speaking, how much satisfied do you think the other people are?

1 2 3 4 5 6
Not satisfied

2,3 How happy are you today?

1 2 3 4 5 6
Not happy

Part 3

3,1 Generally speaking, can you trust people or do you think one should be very careful when dealing with them?

1 2 3 4 5 6

Should be careful

3,2 Do you think people would try to take advantage of you if they have the option or will they try to be fair?

1 2 3 4 5 6

Take advantage

3,3 Would you say the majority of the people try to benefit the society or do they only mind themselves?

1 2 3 4 5 6

Mind only themselves

Part 4

4,1 Please select today or tomorrow in each option:

4,1a Receive 10 litas today or 10 litas tomorrow?

Today Tomorrow

4,1b Receive 10 litas today or 12 litas tomorrow?

Today Tomorrow

4,1c Receive 10 litas today or 14 litas tomorrow?

Today Tomorrow

4,1d Receive 10 litas today or 16 litas tomorrow?

Today Tomorrow

4,1e Receive 10 litas today or 18 litas tomorrow?

Today Tomorrow

4,1f Receive 10 litas today or 20 litas tomorrow?

Today Tomorrow

4,2 Please select today or **in 6 months** in each option.

4,2a Receive 300 litas today or 300 litas in 6 months?

Today In 6 months

4,2b Receive 300 litas today or 360 litas in 6 months?

Today In 6 months

4,2c Receive 300 litas today or 420 litas in 6 months?

Today In 6 months

4,2d Receive 300 litas today or 480 litas in 6 months?

Today In 6 months

4,2e Receive 300 litas today or 540 litas in 6 months?

Today In 6 months

4,2f Receive 300 litas today or 600 litas in 6 months?

Today In 6 months

4,3 Are you bored with this questionnaire?

Yes No