RELATIONSHIP BETWEEN SOCIAL VALUE ORIENTATION AND THE TENDENCY TO TRUST OTHERS

David Martinčík[1], Olga Šlechtová Sojková

[1] JUDr. Ing. David Martinčík, Ph.D., University of West Bohemia, Faculty of Economics, martinci@fek.zcu.cz

Abstract: Trust in others is essential for people's collaboration and has considerable economic effects. The current production in all sectors, especially those with the highest value-added, is complicated and requires the intensive cooperation of all participants. Trust is vital for a good-working team of employees; on the other hand, a low level of trust decreases the firm's performance, causes misunderstanding, mistakes, and results in low-end products, which is costly for the firm. We employ the experimental approach to investigate the relationship between trust in others and social attitude. Trust can be measured in many economic laboratory experiments. We conducted a series of experiments with the master's degree students of the business administration program. The first experiment was the sender-receiver game. The participants in the role of receiver revealed their willingness to trust or not the message delivered by the sender while taking action in their interest. The second experiment was the simple social value orientation test with six questions that measure social attitude on a continuous scale from altruism, over prosocial behavior, and individualism to competitive behavior. We performed the logistic regression between the dichotomous variable trust or non-trust and social attitude. Statistically significant result claims that altruistic people tend to trust more, while competitive people tend to trust less.

Keywords: laboratory experiments, sender-receiver game, social preferences, social value orientation, trust

JEL Classification: C91, D91

INTRODUCTION

Today's production in industry and services requires large teams of workers working together. Sophisticated productions with high added value for the customer need the specialization of individual team members who must work together. Mutual trust is necessary for successful work teams. Trust is, therefore, the basis of social capital and a pivotal contributor to well-being and economic development. Trust is the subject of several comprehensive surveys. The Pew Research Center asked people in 14 developed countries whether they trust most others. (*Social trust in advanced economies is lower among young people and those with less education*, 2020). Trust is generally lower among younger and less educated people. Research (Oritz-Ospina & Roser, 2016) shows significant heterogeneity between countries, with 60% of people in Northern European countries saying they trust other people, compared to only 10% in some Latin American countries. The following research shows a significant heterogeneity between countries (*Society at a Glance 2016: OECD Social Indicators*, 2016). Another study (Guiso et al., 2006) reported that trust between people strongly correlates with religious affiliation and upbring. The casual impact of trust on economic performance has been shown in (Algan & Cahuc, 2010). Our paper deals with the relationship between trust in others and social attitude. We used the experimental approach to confirm the hypothesis that more altruistic and prosocial people tend to trust others who are more competitive and individualistic.

1. EXPERIMENTAL DESIGN

We used traditional laboratory experiments to quantify trust in others and social attitudes – sender-receiver game and social value orientation. The participants were 87 master's degree students at the Faculty of Economics at the University of West Bohemia, study program Business Administration. We follow the induced value theory (Smith, 1976) and reward the students with extra credit points.

In the sender-receiver game (signaling game in Lewis 1969, (Lewis, 1969). The sender knows the true state of the world, sends the message to the receiver, and then the receiver takes action. The receiver does not know the word's state and only knows the message; the payoff reflects the true state. The sender can cheat, so the receiver cannot trust the message.

Tab. 1 Sender-receiver payoff matrix

	A1	A2
S1	(+10,+50)	(0,+10)
S2	(+10,-100)	(0,+10)

Source: own

Sender sends a message about the state of the world S1 or S2. The receiver selects the A1 or A2 action. The sender is profitable if the receiver takes action A1 with the reward +10. At the same time, action A2 gives a reward of 0. The receiver is in a different position, the action A2 gives her riskless +10 while action A1 gives her +50 or -100, depending on the true state of the word. So different situations can occur:

Tab. 2: Possible game situations

True state of the word	Sent message	Chosen action	The receiver revealed trust	Sender's gain	Receiver's gain
S1	S1	A1	yes	+10	+50
S1	S1	A2	no	0	+10
S1	S2	A1	no	+10	+50
S1	S2	A2	yes	+	+10
S2	S1	A1	yes	+10	-100
S2	S1	A2	no	0	+10
S2	S2	A1	no	+10	-100
S2	S2	A2	yes	0	+10

Source: Own

We used the strategy method (Brandts & Charness, 2011) to collect data on the decisions in all situations from all participants. By knowing which action was taken after receiving which message, we know whether the receiver trusts the sender or not.

To measure the social attitude, we used the six items of social value orientation (Murphy et al., 2011). The participants had six times to decide what amount they wanted to leave and what amount receivers the other person.
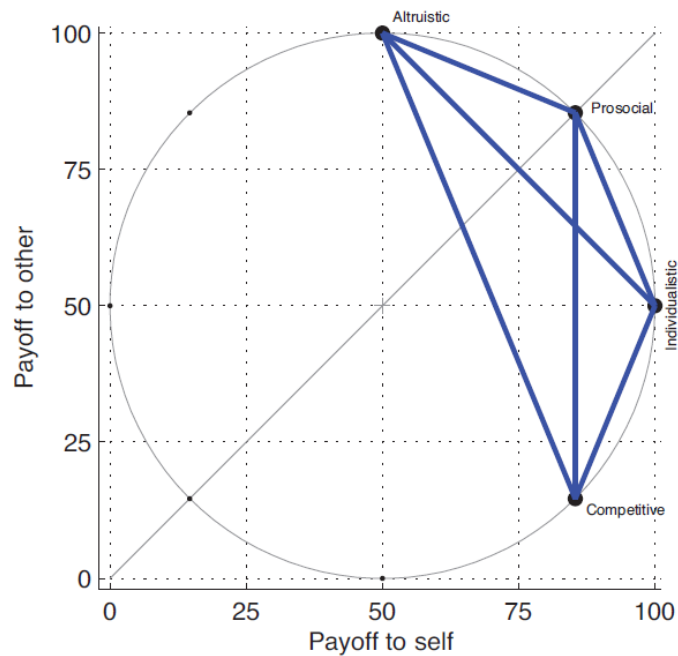
Fig. 1 Six items of social value orientation task
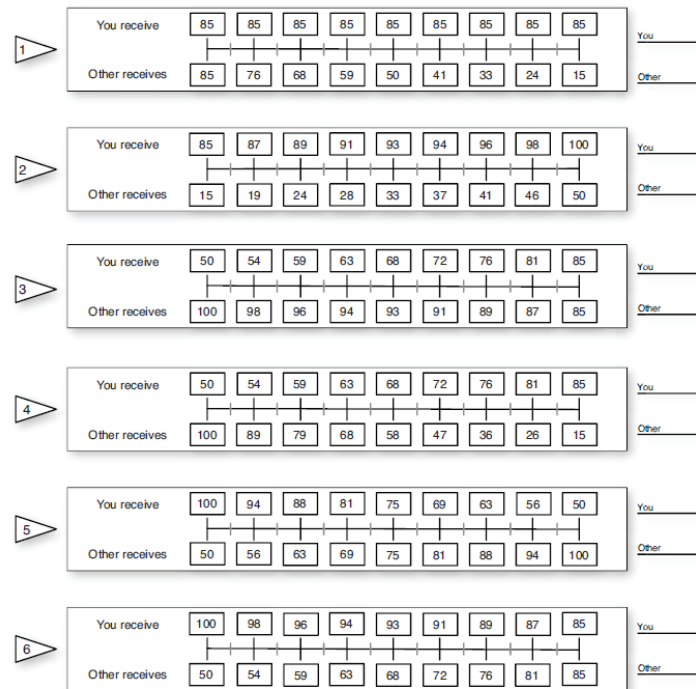
They revealed the social attitude on the scale from competitive, over individualistic, and prosocial to altruistic.

Fig. 2 Possible results of six items social value orientation task

The social value orientation is measured as an angle determined by the ratio of mean allocation for self and means allocation for the other. If the participant chooses the option that maximizes the allocation for the other in each of the six items, it is perfectly altruistic, and the result is 61.39. A consistent competitor always chooses the minimum for the other, and the result is -16.26. The practical results are not usually extreme. An angle greater than 57.15 refers to altruism; angles between 22.45 and 57.15 refer to prosocial; angles between -12.04 and 22.45 refer to individualists; and competitive have an angle less than -12.04.

2. Obtained data and results

Regarding the social value orientation, there were 12 perfectly competitive participants (with a value -16.26), three imperfectly competitive, 41 participants were individualists, 31 were prosocial (maximum value 47.83), and nobody was altruistic. The histogram of the data can see below.

Fig. 3 Histogram of social value orientation
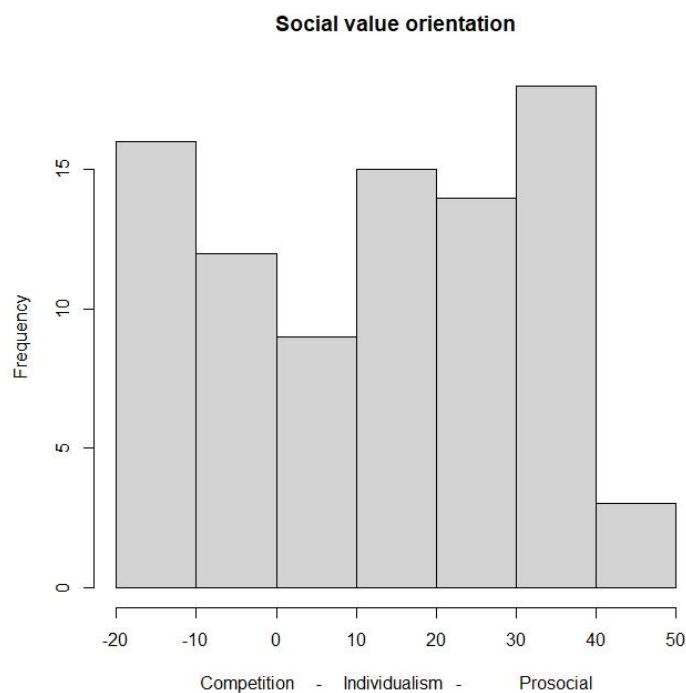
Source: own processing

We can see the difference by dividing the whole sample into two groups according to the behavior in the sender-receiver game. The participants who revealed the trust had higher social value orientation than those who did not.

Fig. 4 Box plots of social value orientation for two samples – trusting and mistrustful participants
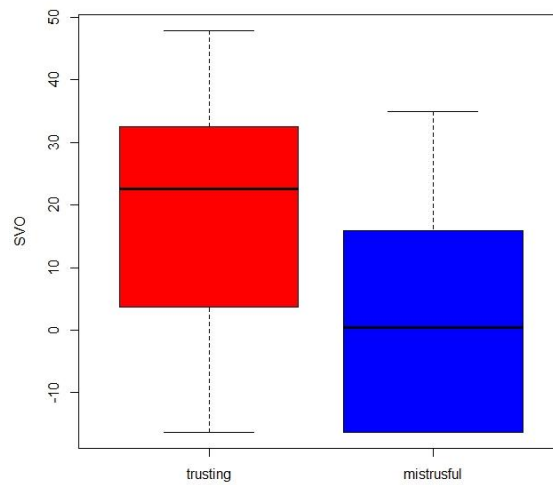
Source: own processing

We employ logistic regression to study whether exists a significant connection between social value orientation and trust or mistrust. We found that the regression coefficient is positive (trust = 1 and mistrust =0) at the significance level of 99.9%. Higher social value orientation can predict trust. The R statistical software was used, and the details of the results are in figure 5.

Fig. 5 Logistic regression between social value orientation and trust (=1) and mistrust (=0)
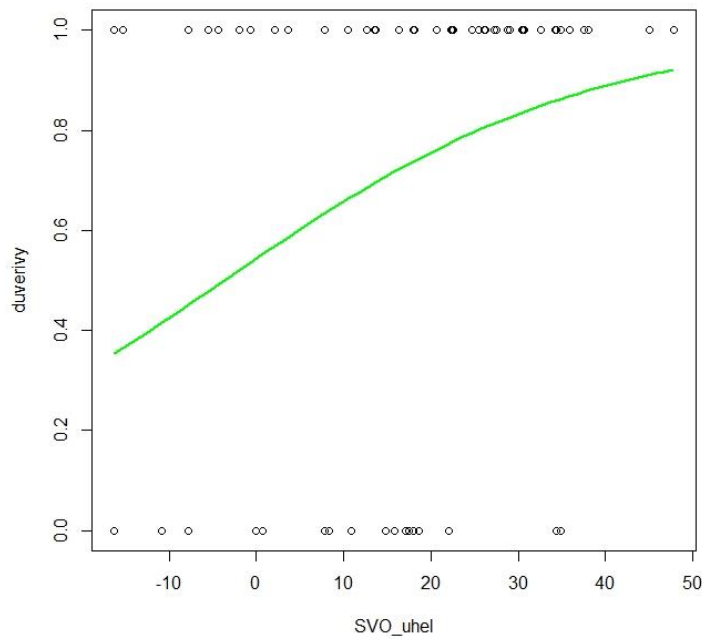
```
glm(formula = duverivy ~ SVO_uhel, family = binomial(link = "logit"),
    data = my_data)

Deviance Residuals:
    Min      1Q   Median      3Q      Max
-1.9926  -0.9844   0.5512   0.8295   1.4413

Coefficients:
            Estimate Std. Error z value Pr(>|z|)
(Intercept)  0.17376    0.26702   0.651  0.51522
SVO_uhel     0.04770    0.01366   3.491  0.00048 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Source: own processing

CONCLUSION

People who don't trust each other are harder to work with. High economic performance at present is dependent on cooperation. This effect is known at the firm level but has macroeconomic implications. Many studies in recent years show that trust between people is one factor that influences well-being and economic development. This paper deals with the experimental evidence of the relationship between social value orientation and the tendency to trust others. Social value orientation is a respected way of measuring social attitude that expresses social preferences from competitive to altruistic. We used the sender-receiver game as a measure of trust in other people. The experiments were conducted with master's degree students of the Faculty of Economics of the University of West Bohemia in Pilsen. The logistic regression significantly shows that people with higher social value orientation tend to trust others and vice versa; people with lower social value orientation tend to mistrust.

ZDROJE / REFERENCES

Algan, Y., & Cahuc, P. (2010). Inherited Trust and Growth. *American Economic Review*, *100*(5), 2060-2092. https://doi.org/10.1257/aer.100.5.2060

Brandts, J., & Charness, G. (2011). The strategy versus the direct-response method: a first survey of experimental comparisons. *Experimental Economics*, *14*(3), 375-398. https://doi.org/10.1007/s10683-011-9272-x

Guiso, L., Sapienza, P., & Zingales, L. (2006). Does Culture Affect Economic Outcomes? *Journal of Economic Perspectives*, *20*(2), 23-48. https://doi.org/10.1257/jep.20.2.23

Lewis, D. (1969). *Convention: A Philosophical Study* (1 ed.). Cambridge, MA.

Murphy, R., Ackermann, K., & Handgraaf, M. (2011). Measuring social value orientation. *Judgment and Decision*, *6*(8), 771-781.

Oritz-Ospina, E., & Roser, M. (2016). *Trust*. Our World In Data. Retrieved 2023-02-13, from https://ourworldindata.org/trust

Smith, V. (1976). Experimental Economics: Induced Value Theory. *The American Economic Review, 66*(2), 274-279.

Social trust in advanced economies is lower among young people and those with less education. (2020). Retrieved 2023-02-13, from https://www.pewresearch.org/fact-tank/2020/12/03/social-trust-in-advanced-economies-is-lower-among-young-people-and-those-with-less-education/

Society at a Glance 2016: OECD Social Indicators. (2016). Retrieved 2023-02-13, from https://doi.org/10.1787/9789264261488-en