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Does Economics Training Really Matter to Mitigate Money Illusion? Evidence from Experimental Study

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Abstract: Economists have no hesitation in assuming that economic agents are rational. The general intuition is that economic decision affects real outcome that directly determines agent's well being in question. One such aspect of rationality we often ascribe is that agents are free from money illusion indicating that agents are categorically caring about real magnitudes and not the nominal one. It is also argued that the problem of money illusion could be mitigated through learning and coordination among people. Money, thereby, theoretically, has no real effect in the long run. In this study, we attempt to investigate individual rationality in a sense whether, agents make decisions that are free from money illusion, particularly when subjects possess a sufficient economics background. We use empirical data with subjects all studying M.Sc in Economics at the University of Copenhagen. The experimental results show that even with such strong economics training subjects are individually prone to money illusion and even, at the aggregate level, locked in the Pareto inefficient outcome. Individual learning over time or coordination among people within the group could not lead them to correctly identify and obtain the rational decision at all.

Key words: Rational agents, money illusion, economics knowledge, experimental study, JEL classification codes, E31, C91

INTRODUCTION

An economic theorist can, of course, commit no greater crime than to assume money illusion (Tobin, 1972).

Economists have no hesitation, in deriving and explaining economic theories, to presume that agents are rational and self-interested. The common intuition is that economic decision affects real outcome that directly determines agent's well being in question. Therefore, economic agents are expected to be careful enough to rationally choose the courses of action that maximizes welfare. One such aspect of rationality, we often ascribe is that agents are free from money illusion indicating that agents are categorically caring about real magnitudes and not the nominal one. Money, thereby, has no real effect in the long run.

The rational expectations revolution in the 1970s provides further a solid ground to the economists not to invoke money illusion to explain the short-run non-neutrality of money. Accordingly, people are rational and since rational individuals do not exhibit illusions there is nothing to study. A powerful intuitive argument supports the view that money illusion is largely irrelevant for economics: the illusion has detrimental effects on peoples economic well-being and they thus, have a strong incentive to make illusion free decisions. Therefore, people will ultimately make illusion free decisions, implying that money illusion has little or no impact on aggregate outcomes, at least in the long run. No doubt, the notion of agent's rationality, the intuition behind it is well convincing. But, if further we consider that agents are heterogeneous, what is most likely being the case, then what about rationality? What about money illusion at the individual level and the aggregate level as well? What about its real effect, if any? More recently, however, some economists seem to be willing to reconsider the relevance of money illusion in economics, specially from the clear evidence that nominal wages and prices seem to be rigid (Akerlof, 2002; Bewley, 1999; Blinder *et al*., 1998; Campbell and Kamlani, 1997; Fehr and Tyran, 2001; Howitt, 2002; Kahn, 1997; Kahneman *et al*., 1986; Shafir *et al*., 1997). In this study, we attempt to investigate individual rationality in a sense whether agents can make decisions that are free from money illusion, particularly when subjects possess a sufficient economics background. But before going to further discussion we first need to explain, what we mean and how do we interpret money illusion perse.

Patinkin (1965) defined money illusion as any deviation from real decision making. Accordingly, an individual will be said to be suffering from such an illusion if his excess demand functions for commodities do not depend solely on relative prices and real wealth (Patinkin, 1965).

Leontief (1936) defined money illusion as a violation of the homogeneity postulates. This intuition says that if the real incentive structure, that is the objective situation, an individual faces remains unchanged, the real decisions of an illusion-free individual do not change either. Two crucial assumptions underly this intuition: first, the objective function of the individual does not depend on nominal but only on real magnitudes. Second, people perceive that purely nominal changes do not affect their opportunity set. For example, people have to understand that an equi-proportionate change in all nominal magnitudes leaves the real constraints unaffected. Whether people are, in fact, able to pierce the veil of money, i.e., whether they understand that purely nominal changes leave their objective circumstances unchanged is an empirical question. Fisher (1982) for example, was long days ago convinced that ordinary people are in general, prone to money illusion.

Thus, the absence of money illusion means that an individual's preferences, perceptions and hence, choices simply reflect real magnitudes and are not affected by purely nominal changes. From this viewpoint, an individual exhibits money illusion if his or her decisions depend on whether, the same objective function is represented in nominal or real terms. There is a substantial experimental research that shows that alternative representations of the same situation may well lead to systematically different responses (Tversky and Kahneman, 1981; Fehr and Tyran, 2004). Representation effects seem to arise because people tend to adopt the particular frame that is presented and evaluate the options within this frame. For example, choice between risky prospects may be represented either in terms of gains and losses, which seems natural to most people or in terms of final assets, as recommended by normative theory. Money illusion, in this context is a bias in the assessment of the real value of economic transactions, induced by a nominal evaluation (Shafir *et al*., 1997).

It is important to note that the nominal representation of an economic situation is probably, the natural representation for most people (Fehr and Tyran, 2001). The nominal representation is simpler, more salient and often suffices for the short run (in the absence of hyperinflation), yet the representation in real terms is the one that captures the true value of transaction. People are generally aware that there is a difference between real and nominal values, but because at a single point in time, or over a short period, money is a salient and natural unit, people often think of transactions in predominantly nominal terms. A basic form of money illusion thus, occurs when people take nominal values or changes as the proxy for real values or changes in real values, respectively (Fehr and Tyran, 2001).

A natural question that remains is whether money illusion still matters after people receive proper economics training. Economists generally assume that money illusion is an error that can be easily eradicated through learning specially some extent of economics training is quite enough. This study attempts to address this question, whether a sufficient background in economics could eradicate money illusion at the individual level and whether, coordination among those people in fact could eliminate such illusion over time.

The study based on the idea of preceding experimental researches by Fehr and Tyran (2001), in which subjects were of heterogeneous educational background followed by Wong (2005), who studied whether, introductory economics training could generate better illusion free decisions than the others. These studies show that agents with no or intermediate economics training are significantly affected by money illusion even after repeated periods of experiment and with group coordination. But, they did not study whether, a solid economics training could essentially leads the agents to correctly pierce the veil of money. This study attempts to fill this gap as we did our experiments with subjects all graduate (M.Sc) students in Economics, at the University of Copenhagen, taking the study Behavioral and Experimental Economics. Being a Masters student in Economics and as a prerequisite to take the course Behavioral and Experimental Economics our subjects are all expected to have a solid background in the major areas of Economics like microeconomics, macroeconomics and game theory in general. The experimental results show that even with such strong economics training subjects are individually prone to money illusion and even at the aggregate level, locked in the Pareto inefficient outcome. Individual learning over time or coordination among people within the group could not lead them to correctly identify and obtain the rational decision at all.

MATERIALS AND METHODS

Experimental set-up: The experiment is conducted in the Laboratory for Experimental Economics in the Department of Economics, University of Copenhagen. In experiment 1, we chose students, who have no background in Economics, Statistics, Mathematics and Psychology. We consider this experiment as our benchmark treatment. Whereas in experiment 2, we take subjects who are graduate students in Economics taking the course Behavioural and Experimental Economics. Performance in the experiments are graded as part of the

final examination, thereby subjects have strong incentive to care for the correct decision each time. Furthermore, taking part in the experiment is a mandatory for the course. Z-tree program (Fischbacher, 1999) is used to set up this experiment. The experiment is based on a 30 by 30 payoff table (Fehr and Tyran, 2004), which has multiple Pareto-ranked equilibria. The experimental design we implement is a symmetric game where, each subject's real payoff depends only on her own price and on the average price of other (n-1) players. The payoff table and the structure of the pricing game are the same as used by Fehr and Tyran (2004).

Each of the experiments has 10 periods each. There are 6 and 4 groups, respectively in the first and second experiments, respectively with 4 subjects in each group. Subjects are explained about the rules of the experiment before the experiment is conducted. Subjects are shown the payoff table and described about the outcome of an action in the group. Finally, each subject is given a payoff table to keep in hand for the rest of the experiment and is allowed 7 min before the experiment to think about it. The subjects in a group are anonymous and remain unknown throughout the experiment. The experiment is designed in a form of a pricing game. Subject has to make her own price and to expect the average price of the others. Payoff is determined by the price she is choosing and the average price of the others in her group. The payoff calculation is summarized in the payoff table they are supplied. The payoff table shows only nominal payoffs and the calculation of the real payoff is described as:

$$\text{Real payoff} = \frac{\text{Nominal payoff}}{\text{Average price of other 3 members of the group}} \quad (1)$$

For one's performance, only real payoff matters. At the end of each period subjects are informed about their chosen price, average price of other members of her group and the resulting real payoff. All are displayed in the computer screen very shortly.

Market prediction: This is a symmetric n player pricing game and each of the n players in the group has the same payoff table. In this game each subject simultaneously chose a price Pi ϵ (1, 2, 3, …., 30). Each subject's real payoff depends on the subject's own price and on the average price of the other n-1 players, $\bar{P}_{-i}$. Since, the game is symmetric one, the equilibria in this game are located in the 45°C line of the payoff table. Any outcome not located in the 45°C line is simply no equilibrium in this symmetric game. Table 1 shows, the hypothetical equilibria in this game.

Table 1: Equlibria in the symmetric price-setting game

Equilibrium	Own price	Others' average price	Equilibrium payoff		Comment
			Nominal	Real	
A	4	4	112	28	Pareto efficient equilibrium
B	5	6	162	27	No equilibrium
C	10	10	50	5	Unstable equilibrium
D	27	27	567	21	Inefficient equilibrium

Subjects are given the payoff in nominal terms. To obtain the real payoff we have to deflate the nominal payoff by the prevailing level of $\bar{P}_{-i}$. If subjects have adaptive expectations and play a best reply to their expectation, equilibrium A and D are stable. Equilibrium B is no equilibrium, since it is a symmetric game, while equilibrium C is unstable one: subjects are not maximizing either the nominal or the real payoff here. Table 1 shows that equilibrium D gives a nominal payoff that is much higher than that of equilibrium A but, it is Pareto inefficient. Equilibrium A is Pareto efficient as it provides higher real payoff than equilibrium D.

Table 1 clearly shows that this pricing game is developed in a way to create a conflict between the principles of nominal payoff dominance and that of real payoff. If the agents are rational, the real payoff dominance predicts that equilibrium A would be selected regardless of whether payoffs are represented in nominal or real terms as it assumes that subjects can pierce the veil of money, when the presentation is nominal. While, the principle of nominal dominance predicts that equilibrium A would be chosen by the agents only if the presentation is in real terms but equilibrium D is selected in case of nominal representation. Thus, in this experiment, if we assume that subjects are choosing equilibrium D under this nominal representation, we could obviously conclude that there exists nominal payoff dominance and the subjects are prone to money illusion. Furthermore, if we find that the coordination of the subjects are locked in the inefficient equilibrium D, we can interpret that money illusion has permanent real effects, even though subjects are coordinating and have a good command over economics training.

The experiments have no treatment differentiation as Fehr and Tyran (2004) had. Instead we are just focusing on whether, the economic agents with solid economics training could pierce the veil of money comparing to the non-economics background benchmark, permitting coordination and in repeated periods of the games.

RESULTS AND DISCUSSION

In this pricing game, there are multiple equilibria. We see that the Pareto efficient equilibrium is A with price 4 and the resulting real ayoff is 28. Here we are presenting the experimental results and compare these with the theoretical prediction as we made earlier.

Table 2: The group average prices over time in experiment 1

	Groups					
Periods	1	2	3	4	5	6
1	17	21	17	19	26	27
2	20	24	17	18	27	28
3	22	26	19	17	26	28
4	23	28	21	17	27	28
5	26	28	22	19	27	27
6	27	24	23	20	28	27
7	27	26	24	21	28	27
8	27	27	26	22	27	27
9	27	28	27	25	26	27
10	26	28	28	27	27	27

Table 3: The group average prices over time in experiment 2

	Groups			
Periods	1	2	3	4
1	14	23	26	23
2	14	23	27	23
3	12	24	27	23
4	12	22	27	24
5	12	23	27	25
6	11	25	27	27
7	11	25	27	27
8	12	26	27	27
9	12	26	27	27
10	14	27	27	27

The evolution of prices: The evolution of prices, that is, the group average prices are shown in Table 2 and 3 for our 1st and 2nd experiments, respectively. Table 2 shows that for the non-Economics background there is a substantial deviation of prices from the Pareto efficient price. Neither of the groups is choosing the efficient price in a single period of time. Rather, there is a trend of gradual convergence to the inefficient price of 27. Some groups are much faster in converging to this inefficient equilibrium than the others but the overall trend is a convergence to the inefficient equilibrium instead of to the efficient one.

The same scenario is seen in Table 3 for the 2nd experiment for the subjects having solid Economics background. Group 3 in this experiment reached to the inefficient equilibrium price in the very beginning followed by group 4 and the others later. Group 1, here is an example of discoordination where, there is no coordination at all. And the common thing is that neither of these groups is choosing the efficient price in a single period of time similar to the groups in the first experiment. The data in Table 2 and 3 also show that there is a lock-in possibility once a group reaches in an inefficient equilibrium.

In the Table 2 and 3, the straight thick dashed lines show the efficient equilibrium price, while the solid ones show the inefficient prices. The corresponding group

Variable	Observation	Rank sum
Experiment 1	10	100
Experiment 2	10	110
Combined	20	210

Ho: var2(var1==1) = var2(var1==2), z = -0.452, Prob > |z| = 0.6762

Fig. 1: Evolution of prices (two-sample wilcoxon rank-sum (mann-whitney) test)

average price lines exhibit a general and clear trend of convergence to the inefficient price, far from the efficient one. Furthermore, as time proceeds we see a continuous divergence of prices from the efficient price. These results clearly show that subjects are prone to money illusion and there exists nominal payoff dominance. Subjects are not looking for the real payoff rather just taking nominal payoff as the proxy for it. There is no evidence of learning over time and that coordination occurs only in form of inefficient outcome.

The results are further evidenced from the two-sample Wilcoxon rank-sum Mann-Whitney test given in Fig. 1. We have ten observations in each experiment, as shown in second column of the Fig. 1. According to the hypothesis of this study price evolution in experiment 2, for subjects with with solid Economics background should be more efficient than in treatment 1, for subjects having no Economics background. This implies that price in experiment 2 should converges to the efficient price of 4 very quickly. But the p-value of 0.6762 does not confirm this. The p-value here simply suggests that we cannot accept the hypothesis that the two distributions are significantly different http://www.graphpad.com/articles/interpret/Analyzing_two_groups/mann_whitney.htm. It thus, implies that the extent of money illusion is not significantly different in treatment 2 with adequate Economics background comparing to the treatment 1, where subjects do not have Economics training of their own.

The results are also clear from the descriptive statistics shown in Table 4. From Table 4, we can see that the two distributions are normally distributed and the differences in the distributions are not statistically significant. That is, there are no such differences among the subjects in two experiments and that subjects are all revealing the fact that they are equally affected by the illusion of money, whether they are trained and rich with the knowledge of Economics.

We can here also see the percentage of subjects choosing the efficient and inefficient equilibrium in different periods in Table 5 and 6 for the first and second experiments, respectively.

Table 4: Descriptive statistics of prices

Parameters	Experiment 1	Experiment 2
Mean	24.550000	22.250000
Median	24.833330	22.125000
Maximum	27.166670	23.750000
Minimum	21.166670	21.250000
SD	1.930985	0.824958
Skewness	-0.360470	0.449821
Kurtosis	2.071115	0.576076
Jarque-Bera	0.749733	1.988755
Probability	0.763322	0.682726
Sum	245.500000	222.500000
Sum^2 dev.	33.558330	6.125000
Observations periods	10	10

Table 5: Percentage of subjects choosing efficient and inefficient equilibrium in experiment 1

	Periods									
Equilibrium	1	2	3	4	5	6	7	8	9	10
Efficient	0	0	0	0	0	0	0	0	0	0
Inefficient	3.3	6.6	16.5	33	26.4	36.3	33	40.9	66	69.3

Table 6: percentage of subjects choosing the efficient and inefficient equilibrium in experiment 2

	Periods									
Equilibrium	1	2	3	4	5	6	7	8	9	10
Efficient	0	0	0	0	0	0	0	0	0	0
Inefficient	5	10	20	15	25	25	35	35	45	55

Table 5 and 6 show that throughout the experiments not a single subject choose the efficient equilibrium while, there is a gradual convergence to the inefficient equilibrium up to 70 and 55% of the subjects in the successive experiments. This result corresponds to the fact that subjects are taking nominal payoff as the proxy for their real payoff. As a result not a single subject is choosing the efficient price that might produce a lower level nominal payoff but efficient higher real payoff. Instead they are choosing and trying to attain the maximum of nominal payoff. This indicates a clear sign of money illusion at the individual level. Based on the figures in these tables we can not simply overrule money illusion from economic discussion even though the subjects are of with enough economics background. Nominal representation of the objective situation might have ruled over their economics training. And if this is the case, we can not ignore that money matters.

Payoffs of the groups: As we have already learned from previous discussion that subjects are not converging to the efficient equilibrium rather there is a gradual convergence to the inefficient outcome, which necessarily results payoffs much lower than the efficient one. This can be seen in Table 6 and 7. In Table 6 and 7, we see that groups in both of the experiments are earning a very low level of payoffs in the begining with a gradual increase in

Table 7: The group average real payoffs over time in experiment 1

	Groups					
Periods	1	2	3	4	5	6
1	1.4	2.2	1.2	3.4	6.6	4.2
2	3.4	4.0	2.6	2.8	5.6	10.2
3	10.6	6.4	4.4	4.2	15.4	13.4
4	12.4	17.4	7.4	3.8	14.2	15.4
5	4.2	7.4	6.4	2.6	19.0	17.0
6	17.8	2.0	7.4	5.2	15.0	19.0
7	17.0	3.4	7.2	9.8	16.4	17.8
8	17.0	10.6	11.0	8.4	17.0	21.0
9	15.8	17.4	19.0	10.6	17.4	21.0
10	15.2	17.4	15.8	13.0	21.0	21.0

Table 8: The group average real payoffs over time in experiment 2

	Groups			
Periods	1	2	3	4
1	3.4	1.8	14.6	2.0
2	2.0	4.6	17.0	7.6
3	2.8	10.6	19.0	8.6
4	2.6	2.0	17.0	11.2
5	2.0	8.8	21.0	12.2
6	4.2	11.2	21.0	19.0
7	3.6	9.2	21.0	19.0
8	5.0	9.0	21.0	19.0
9	3.4	12.0	21.0	21.0
10	6.0	13.4	21.0	21.0

the following periods. The highest payoff earned in a single period by the groups is 21, which is the outcome of the inefficient equilibrium D stated in Table 1. Neither of these groups is able to secure the efficient payoff 28, as there are no groups making the efficient equilibrium A. These results are shown in Table 7 and 8, respectively for the corresponding first and second experiment data sets. The gradual increase in payoffs seems to reflect that subjects are coordinating over time. Since, the game is symmetric one, the principal diagonal of the payoff table corresponds to the respective equlibria.

Futhermore, since the game has multiple equilibria and the subjects have adaptive expectations, each t+1 period outcome reflects group efforts for stable equilibrium learning from the outcome in period t. In this game, we see in Table 1 that there are two stable equilibriums: A and D, with resulting payoffs of 28 and 21, respectively. From the Table 2 and 3, we also learn that subjects are converging to the inefficient stable equilibrium D instead of A, thus, we find a lower level of payoffs in Table 7 and 8, respectively. The solid thick lines in the Table 7 and 8 represent the efficient payoff if subjects were choosing the efficient equilibrium. The deviation of group average payoff lines from it simply represents the payoffs forgone due to money illusion.

As the evolution of prices is not statistically different across two treatments, the same is equally manifested in earning payoffs from this pricing game. This is shown in Fig. 2. The p-value of 0.6350 again confirms that the two

distributions are not significantly different that is, subjects, whether endowed with economics training or not are equally prone to money illusion in this pricing game.

This goes in line with the findings of the evolution of prices in Table 2 and 3, where we see that subjects in both experiments are converging to the inefficient prices, producing a low level of payoffs as shown in Table 7 and 8. Table 5 and 6 show us that subjects, whether having Economics knowledge, have failed to yield any efficient outcome. The rank-sum Wilcoxon (Mann-Whitney) test exactly confirms us here that in emanating inefficiency, there are no such differences across two experiments we have in the study and both of the experiments evidenced to earn a similarly smaller amounts of payoff thereby. The similarity of inefficiency of the 2 experiments is further evidenced, when we look into the descriptive statistics, as shown in Table 9.

The descriptive statistics in Table 9 shows that the two distributions are normally distributed and the differences in the distributions are not statistically significant. That is, there are no such differences among the subjects in two experiments and that subjects are all equally prone to money illusion irrespective of their endowment in Economics training.

Efficiency: Efficiency in this game simply corresponds to the maximization of real payoff. Any deviation from the efficient outcome is simply regarded as inefficiency: a potential loss for the particular subject, her groups as well as the market as a whole.

Table 10 and 11 summarize, the efficiency magnitude attained by the groups in different periods in both of the experiments. Total payoff in these tables simply sums up payoff actually earned by each group over time in respective experiment, this is simply the respective column sum from Table 7 and 8. The efficient total payoff is the potential amount of the payoff if the groups were really choosing the efficient equilibrium all the time. The discrepancy between the two measures the loss in payoffs resulting from the deviation of actual outcome to the efficient one.

In Table 10, we see the striking result that groups with no Economics training are suffering efficiency losses in a considerable amount-as high as up to 77% of potential real income.

The best performing group in this experiment even suffer a loss in efficiency by 43%. The efficiency loss in the market as a whole is 61%, that is 3-5 of the potential market income is forgone and wasted! However, the data in Table 11 for the subjects having Economics knowledge and training creates a further surprise: group 1 is losing 88% of its potential income! The market suffers a loss of 60% on an average, similar to the first experiment.

Variable	Observation	Rank sum
Experiment 1	10	109.5
Experiment 2	10	100.5
Combined	20	210

Ho: var2(var1==1) = var2(var1==2), z = 0.576, Prob > |z| = 0.6350

Fig. 2: Payoffs from the pricing game (two-sample wilcoxon rank-sum (mann-whitney) test)

Table 9: Descriptive statistics of payoffs

Parameters	Experiment 1	Experiment 2
Mean	10.946670	8.445000
Median	11.416670	7.875000
Maximum	17.233330	13.500000
Minimum	3.166667	4.750000
SD	4.608478	3.738274
Skewness	-0.270696	0.253353
Kurtosis	2.200390	1.371643
Jarque-Bera	0.388534	1.211790
Probability	0.823438	0.545586
Sum	109.466700	84.450000
Sum^2 Dev.	191.142700	125.772200
Observations	10	10

Table 10: Total payoffs earned and the efficiency losses by the groups in experiment 1

	Groups						Grand/ market
Variables	1	2	3	4	5	6	total
Total payoff earned	114.8	88.2	82.4	63.8	147.6	160	657
Efficient total	280	280	280	280	280	280	1680
Loss in efficiency	165.2 (59%)	191.8 (68.5%)	197.6 (70.6%)	216.2 (77.2%)	132.4 (47.3%)	120 (42.9%)	1023 (60.9%)

Table 11: Total payoffs earned and the efficiency losses by the groups in experiment 2

	Groups				Grand/ market
Variables	1	2	3	4	total
Total payoff earned	35	82.6	193.6	140.6	451.8
Efficient Total	280	280	280	280	1120
Loss in efficiency	245 (87.5%)	197.4 (70.5%)	86.4 (30.9%)	139.4 (49.81%)	668.2 (59.7%)

CONCLUSION

In this game, the potential source of efficiency loss is due to deviation from efficient equilibrium, resulting from subjects' inability to pierce the veil of money. If the subjects were able to perceive the neutrality of money, or if there exists real payoff dominance instead of nominal dominance, subjects would correctly choose the efficient outcome A as described in Table 1. Any deviation from it thus, is due to money illusion among the subjects and any loss in efficiency is thus, simply the costs of money illusion. A market loss of 60 or 61% as evidenced in Table 10 and 11 thus, reflects undoubtedly higher costs of money illusion, leaving 3-5 of the income on table.

The experiments thus, show that money illusion has permanent real effect over time. Since, the subjects in experiment 1 are of well-equipped with Economics training and still suffer from money illusion as evidenced from rank-sum Mann-Whitney tests in Fig. 1 and 2 and corresponding descriptive statistics presented in Table 4 and 9 and are conceding huge efficiency loss as well evidenced in Table 10, we can not conclude based on the experimental result that real world people are necessarily free from money illusion and money is certainly and surely neutral even if, they have strong knowledge in Economic phenomenon. Rather our experimental evidences suggest the non-neutrality of money, at least in the short run, with strong real and permanent effect irrespective of peoples' knowledge in Economics. Furthermore, recalling Fehr and Tyran (2001) and Wong (2005), we can extend their results by saying that we do not find any strong support that people with strong Economics background have better foresight to pierce the veil of money. Equivalently, we can say that we do not find any clear evidence from the experiments that the problem of money illusion at the individual level is mitigated by the process of coordination and learning over time in a short period of time. Rather the results suggest that the delusion of money is so fascinating that even Economists can do wrong.

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