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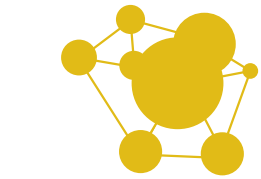

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GROUP-BASED TRUST, TRUSTWORTHINESS AND VOLUNTORY COOPERATION — EVIDENCE FROM EXPERIMENTAL AND SURVEY DATA IN CHINA

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ABSTRACT

Trust, trustworthiness and cooperation are important lubricants of a social system. They are crucial in achieving social goals when social network independence and interpersonal relations are required, and therefore become central components of social capital. In China, the economy grows at an astounding rate. However, this continuous growth is susceptible to interruption if the evolvement and accumulation of social capital are lagging behind. To have a better understanding of the level of social capital in China, especially in the growth catalyst metropolitan area, we conducted a series of lab and field experiments in Shanghai to evaluate some key indicators of social capital. The selected groups are junior high school students, university undergraduate students and community residents (excluding students). They are deemed to be important in the development and/or future development of the economy. A four-part-combination of public goods game and trust (investment) games were used in the experiments and the experimental results as well as post experiment survey are analyzed to shad lights on the level and quality of social capital. Data are analyzed by different age, gender and status, and main findings are as follows: the overall level of trust and age has a negative connection, while trusting behavior is also affected by other factors such as risk-taking; middle school students are more vulnerable for the trust exploitation. This study shows that the measurements of trust, trustworthiness and voluntary cooperation in different groups could be experimentally estimated. The results are more revealing when experiments are combined with survey. The unique attributes of social capital in Chinese metropolitan area also attests to the importance of social capital in a fast growing economy.

KEY WORDS：Trust，Trustworthiness, Voluntary Cooperation, Social Capital, Risk

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1. Introduction

Trust is the lubricant of the society (Arrow, 1974) and the foundation of the communication among people. The degree of trust has a high correlation with economic growth and the emergence and high efficiency of large-scale organization including government (Knack and Keefer, 1997; Fukuyama, 1995; La Porta et al., 1997). When members of a society are believed to be trustworthy, trust can emerge, and it then becomes the lubricant for the operation of many organizations in that society. In a society with high degrees of trust, transaction cost is relatively lower, large-scale production, credit, land and labor market transactions are frequent. People in that environment have strong incentives to innovate and make physical and human capital investment, thereby leading to the socio-economic prosperity and welfare improvement. The social trust relationship contributes to social capital.

Ever since Pierre Bourdieu formally proposed "social capital" concept in 1980, it quickly became an influential topic. There have been many literatures studying its definition, determinants, impact and effectiveness. But so far the definition of social capital has not reached a full consensus. Bourdieu (1986) defined social capital as the advantages and opportunities available for people through certain members of the community; Coleman (1990) described social capital as the resource available for individuals from social contacts; Putnam (1993) defined social capital as the trust, norms and social relations through coordinated action in order to improve the social efficiency. Woolcock (1998), Rauch and Evans (2000), Stiglitz (1999) and other economists conceptualized social capital as the economic analytical framework, and categorized it as a third form of capital following physical capital, and human capital.

The definitions of social capital are from two different visions, one is on the individual level, and the other is on the community level. Jeffrey et al. (2004) found the links between the two definitions. Two different definitions of social capital have led to different research approaches. At the individual level, scholars are looking for the behavior metrics for trust, trustworthiness and cooperation in the background of conflict between social welfare and personal well-being. These measurements are mainly from the behavior and attitude questionnaire survey, such as: “In general do you think most people can be trusted, or do you trust your neighbors, or you can’t be more careful?” Although the research on the community level depends mainly on the questionnaire too, the difference is that this kind of questionnaire has less hypothetical but more practical issues, such as "how many volunteer organizations have you participated in?"

For the measurement of trust, there are mainly two ways of analysis in the literature. First is the above general social survey (GSS), and the second is the design and implementation of laboratory and/or field experiment. Using survey to collect such information is known to be less reliable, despite the fact that it has been very popular and cost effective. The experimental methods on the other hand are costly, but more reliable. Experimental models measuring issues associated with trust are commonly used in the following forms: public goods game is used to measure the degree of voluntary cooperation, or the subject's willingness to cooperate multilaterally; trust or investment game is often used to measure the degree of trust and

trustworthiness of subjects to unfamiliar people (Glaeser et al., 2000); gambling game is used to test the subject's attitude towards risk. These experiments have been conducted in different countries, but usually they are done separately.

On the other hand, experiments aiming to explore trust measurement, the impact of social capital on economic development have been conducted in Southeast Asia slums, Russia, Japan and the United States. There are also cross-regional comparative studies, such as: investment game (Berg et al., 1995), cooperation (Ashraf et al., 2006; Croson and Buchan, 1999; Carter and Castillo, 2002; Barr, 2003), voluntary contribution experiment (Gachter et al., 2003) and so on.

In China, Wang and Yamagishi (2005) made a comparison of trust between different genders. It shows that stronger mutual trust among Chinese male strangers is based on high expectations of reciprocity, while lower level of trust among female strangers is due to the fear of being taken advantage by their partners. Other Chinese scholars studied social capital mainly by surveys in conjunction with macro-economic data. They usually investigate the links between the social capital and economic development as well as financial decision-making. Zhang and Ke (2002) showed that trust is an important factor affecting the economic development of various regions in China. The empirical study of Zhang and Zeng (2005) found that the social capital has significant positive effects on regional financial development. Zhang (2006) studied the relationship between China's social capital and financial development. Chen and Lu (2007) used survey data to study whether Chinese society has social capital defined as the behaviors at the level of social communication networks. They studied the newly established grass-roots self-government communities. The results showed that social capital is very rich in Chinese cities, and it has a long-term local implication on democratic self-government.

The current study of trust and cooperation is based on experiments. It aims to shed lights on the key components of the social capital in the study groups. The experiment consists of four parts. The first part is the voluntary cooperation model. It uses public goods experiment to study the degree of cooperation among different cohorts of subjects. The second part is the gambling game. It elicits the risk attitudes of the subjects. The third part is the trust or investment game. It studies the degree of trust and trustworthiness among subjects. And the fourth part is the same as the first part, which examines whether the level of voluntary cooperation changes after experiencing trust or betrayal. The current study has several innovative features:

I. The study tries to explore the characteristics of trust of different cohorts in a major economic power house in China.
II. Using within subject design, the study combines the voluntary cooperation game with trust / investment game and gambling game.
III. The study uses both the experimental results and general survey results, estimating the relationship between results from different inquires.
IV. Different from most previous studies, the subjects involved in this study were diversified, with different social characteristics and representativeness.

The remainder of the paper is organized as follows. Section 2 provides a detailed description

of the procedures of the lab and field experiments, and Section 3 reports the results. Conclusion remarks and future implications are provided in Section 4.

2. Lab and Field Experiments

In December 2008, 6 sessions of lab experiment were conducted in Shanghai Jiao Tong University with a total of 60 subjects; in May 2009，4 sessions of lab style experiments were conducted in Chao Yang secondary school and Jiao Da Secondary School with 80 second year middle school subjects; in July and August 2009, 4 sessions of field experiments were conducted in four Shanghai communities, there are Fusi Community, Xinhua Community, Station Road Community, Liu Er Community with a total of 80 community subjects.

Experimenters arrived at the experiment sites in advance, waiting for the subjects to check in. The middle school and university experiments were conducted at regular classrooms, and the community experiments were conducted at the club houses of the respective communities.

Each session consists of four parts. Each subject was assigned with a random ID number and then put into a group. There are 10 subjects in each university student group and 20 subjects in each middle school group and community group. Part one experiment is a five-round public goods game. The subjects were provided with a written instruction, a recording sheet, a reporting sheet and a payoff illustration. In university, subjects used payoff table to calculate their earnings, and in middle schools and communities, payoff function instead of payoff table was used to calculate earnings. The payoff functions used in middle schools and communities are as follows:

In middle schools,

your earning = (the number of the seed in the public field*210) ÷ the number of subjects (20) + (10-your seeds that you put in the public field)*30

And in communities,

your earning = (the number of public investment*210) ÷ the number of subjects (20) + (10-your investment in the public pool)*30

The instructions to different groups are modified to make them easily understood by the different subject groups.

In the experiment instructions, certain words that are associated with intentions or suggestions are avoided, such as “contribution”, “community”, “assist” etc. First the subjects read the introduction, and then the experimenters read it for them to make sure that all subjects understood it. In part one experiment, subjects were asked to make five rounds of investment decision. They each had 10 tokens at first, and had to decide the amount to invest and save. They made decisions on the reporting sheets and recorded the investment amount and saving amount on their recording sheets. The experimenters summed up the total investment amount and announced that amount to all attending subjects. The subjects then calculated their individual

earnings. Before the real game, there were two rounds of exercise to familiarize the subjects with the procedure.

Part two experiment is a gambling game. Each subject had 10 tokens to begin with and decided the amount to invest. The experimenter then cast a dice. The number shown on the dice decided the return. Number 1 means the investment multiplied by 0, number 2 means the multiplier is 0.5, number 3 means the multiplier is 1, number 4 means the multiplier is 1.5, number 5 means the multiplier is 2 and number 6 means the multiplier is 2.5.

Part three experiment is a trust game. The subjects were assigned as role A and role B, and paired randomly and with the equal probability to take either role A or role B. Each subject had 10 tokens at first. Role A must decide the amount to transfer to the paired role B, and role A's transferred amount is multiplied by 3, and passed to role B. Role B should write down the amount he would give back to role A in advance based on different possible amounts transferred by role A.

Part four experiment is a one-shot public goods game, which is the same as part one except that the number of rounds is reduced from five to one.

Communication among subjects was prohibited during the experiments. The subjects were made clear that the experiment would be terminated immediately when communication among subjects were discovered. Each session lasted approximately 90 minutes. The average payment to each subject is about 65 RMB.

The two middle schools are located in opposite parts of Shanghai, and the four communities are scattered in four directions in Shanghai. The choice of experimental sites outside of Shanghai Jiao Tong University represents different areas and income levels.

At the end of each experiment, subjects were asked to fill out a questionnaire with their assigned ID numbers. The survey includes information about their personal background and social factors that are relevant to social capital.

3. Date Analysis and Discussion

Survey data and experimental data are categorized and analyzed by different subject groups. Survey questionnaires were collected after each session. 179 complete questionnaires were received out of the total of 220 subjects. There are three sections in the questionnaires: behavioral trust measurement, attitudinal trust measurement and voluntary activities. A series of hypothesis are tested by non-parametric tests and the tobit regression model.

3-1. Results of survey questionnaires

Some useful descriptive statistics from the completed survey are summarized as follows.

The distribution of Gender

The distribution and proportion of male and female in different subject groups are presented in Figures 1 and 2. As shown in the figures, the gender ratios are not the same for different subject groups, and the overall female subjects are more than male subjects.

The distribution of age

As it is shown in Table 1, the majority middle school subjects are from age 13 to 14. These age groups are believed to start developing key components of social capital, such as trust, trustworthiness and risk preferences.

Table 2 shows the age compositions of the university subjects. Most of these students were born in 1980s. University students are future back bones of the economic development in China. Their demonstrated degree of social capital will have profound impact on the future of the country.

Table 3 lists the birth year of the subjects in the selected communities where the experiments were conducted. For the subjects in communities, there are about 89% of subjects that were born in 1940s~1960s. Most of the community subjects have actively engaged in the social and economic development of the city.

The distribution of consumption levels

In order to have some information about the wellbeing of the subjects in the study, subjects in different groups are divided into 4 consumption levels, where level 1 is the lowest and level 4 is the highest. Based on interviews held in different subject pools, level 1 consumption for middle school students is less than 30RMB/month, for university students is less than 300RMB/month, and for community residents is less than 800RMB/month; level 2 consumption for middle school students is between 30RMB/month and 90RMB/month, for university students is between 300RMB/month and 900RMB/month, for community residents is between 800RMB/month and 1600RMB/month; level 3 consumption for middle school students is between 90RMB/month and 150RMB/month, for university students is between 900RMB/month and 1500RMB/month, for community residents is between 1600RMB/month and 2400RMB/month; and level 4 consumption for middle school students is over 150RMB/month, for university students is over 1500RMB/month, for community residents is over 2400RMB/month. The results are presented in Figure 3. It shows that middle school students cover a wide range of consumption levels. Most of them live with their parents, and their consumptions are mainly for leisure purpose. University students on the other hand often live by themselves. It is not easy to live in Shanghai with less than 300RMB/month, so there are not many poor subjects in the sample. However, there are not many rich university subjects either. It is possible that rich subjects do not care to participate in the “for money” experiments. In the communities where the experiments were conducted, about 92.7% of the subjects reported their consumption levels as low (level 1 and level 2). Only 1.8% of the subjects reported high

consumption level. This is a true reflection of those selected communities where most residents are ordinary wage earners and retired people.

The distribution of grade

For the groups of middle school subjects and university subject, their academic performances were reported in the survey. The grades are divided into 4 levels, from the highest level 1(equivalent to A) to the lowest level 4 (equivalent to D and below).

Figure 4 shows that the academic performance of the sample is quite evenly distributed, indicating the representativeness of the subjects in middle schools and university.

Social network and trust measurements

As Figure 5 indicates, most subjects in all three groups have more than one close friend. That is a clear evidence of the existence of close bounds and social networks, and the extensive social network is a necessary condition for the development of social capital. Figure 6 aggregates the information about the number of close friends that subjects have by gender. It shows the numbers of close friends that male subjects have are almost identical to those of female subjects. This is echoed in Figure 7 by the number of people who the subjects believe would seek their help on private issues. Figure 8 indicates that both male subjects and female subjects have similar numbers of close friends who would seek their help on private issues.

Figure 9 shows that most subjects can turn to multiple persons for financial help. The majority of university subjects report that they can turn to 5 or more than 5 persons for financial help. It is probably because the earning potential of university students is far more than the earning potentials of middle school students and community residents, and higher earning potential warrants more extensive credits.

In all three groups, subjects are reportedly quite positive about the people around them. Table 4 summarizes the answers to the general questions about trust. The majority subjects in all three groups believe that people around them are trustworthy, fair and helpful. The middle school subjects are especially positive about the others. 81% of them say that the others are trustworthy, compared with 76% of university subjects holding that believe and 65% of community subjects sharing the same positive views about the others. It seems that the belief on the others' trustworthiness declines as people age. This might be explained by the fact that people would have to face up to more competitions when they grow up. Over 80% of subjects in all three groups believe that the others treat them fairly. Fairness is regarded as a virtue in China.

Over 89% of all subjects say that they are willing to help the others. Figure 10 shows over 95% of the middle school subjects claim that they are willing to help the others. This percentage is way above that of those who believe others are trustworthy. It indicates that in middle schools, most students are willing to extend help to the others, even to those who are not trustworthy.

The summary of the survey data has attested that there is a pro social environment in Shanghai. Subjects generally demonstrate a higher level of social capital. Furthermore, detailed

information about the subjects in different study groups are revealed by the experimental data.

Figure 11 shows the average investment of different subject groups in the public account in part one public goods game. The initial voluntary cooperation levels are almost identical in all three groups. While the middle school subjects and community subjects maintain a relatively stable investment amount around 50% of their endowments in the public account, the university subjects show quick decay in voluntary cooperation. Their investment amount in the public account decreases to about 30% of their endowments in round 5 from over 50% of their endowment in round 1 of the game. The university students are believed to be more capable of strategic thinking. They learn quickly the way to maximize individual earning by free riding in the public goods game. However, voluntary cooperation often requires that individual member sacrifice personal gain to improve the collective wellbeing of all members.

3-2. Results of statistical tests

For each subject group, the following hypotheses are tested:

a. H0: the level of cooperation has not changed from the first round of public goods game to the last round of public goods game for all groups.

b. H0: there is no difference between the transfer in the gambling game and Role A's transfer in the trust game for all groups.

c. H0: there is no difference between Role A's expected return in the trust game and the actual return to Role A from Role B.

d. H0: the levels of trusting and trustworthiness are dependent up the subjects' risk preferences and their perception about others' characteristics, such as fairness and willingness to help.

Table 5 is the non parametric test result of hypothesis a. The hypothesis that the level of cooperation has not changed from the first round of public goods game to the last round of public goods game cannot be rejected for the middle school subjects group and the community residents subjects group. It is rejected for the university subjects group.

The experimental evidence shows a "U"-shaped relationship between the level of voluntary cooperation and the age of subjects. When subjects are young (i.e. middle school students), they know how to cooperate, and they are willing to forgo personal gains to achieve collective wellbeing. When subjects are old (i.e. university students), their willingness to voluntarily cooperate declines, they care more about their immediate personal gains. When subjects are older (i.e. community residents), they probably learn by life experience the importance of cooperation, and thus show higher level of voluntary cooperation.

Figure 12 shows that the university subjects are risk seeking. They transfer on average over 70% of their endowments in the gambling game. The middle school subjects on the other hand are relatively risk averse. They transfer on average less that 58% of their endowments in the gambling game. The community subjects are in between. They transfer on average 61% of their

endowments in the gambling game. Risk seeking is a necessary condition for innovation. The university subjects lead in this index indicating their readiness to compete in the real world that requires risk taking.

Figure 12 also shows that the university subjects are more trusting. They transfer on average over 63% of their endowments to their partners in the trust game. The middle school subjects are the least trusting. They transfer on average less 33% of their endowments to their partners in the trust game. The community subjects are in between. They transfer on average about 39% of their endowments to their partners in the trusting game. The degree of trusting towards the unknown partners may be influenced by personal experience. Compare with other subjects, the middle school subjects have the least social experience, thus they show considerable reservation to trust the unknowns. Community subjects have the most social experience, and they may learn from their life experience that unconditional trusting does not always bring them the expected benefits. Thus, they show some reservations when it comes to trusting the unknown partners in the experiment.

Hypothesis b is tested using non parametric methods, and the result is reported in table 6. All three groups transfer significantly less in trust game than in gambling game. However, the more risk seeking subjects also seem to be relatively more trusting.

Figure 13 compares role As' transfer, expected return from role B and real return from role B. Table 7 reports the non parametric test results for hypothesis c. There is no statistical difference between the role As' expected return and role As' real return in middle school group. But there are significant differences between role As' expected return and role As' real return in university group and community group. Role As' expected return exceeds the real return in those cases. The trustworthiness of role Bs in university group and community group are not up to the expectations.

If the comparison is made between the amount of role As transfer and the real return role As get from role Bs, then the result would be different. 75% of role As real return from role Bs exceed role As' transfers in the middle school group, 67% of role As real return from role Bs exceed role As' transfers in the university group, and 83% of role As real return from role Bs exceed role As' transfers in the community group. If that could be used as an indicator of the level of trustworthiness, then the levels of trustworthiness in all three groups are quite high.

The trusting and trustworthiness of the subjects are primary focuses of the current study. Hypothesis d is tested using the analysis that combines both experimental results and survey results.

3-3. Regression results

Table 8 lists the main estimations based on tobit models. The variable *Amount_gamble* denotes the amount transferred in gambling game. The variable *Invest_1st_publicgoods* denotes average amount put in the public account in the part one public goods game. The variable *Expected_from_B* indicates Role A's expected amount sent by Role B in the trust game. The

variable *Amount_from_A* indicates the transfer from Role A to Role B in the trust game. The dummy variable *GSS_trust*=1 if 'most people can be trusted' is chosen for the question in the survey "Generally speaking, would you say that most people can be trusted or that you cannot be too careful in dealing with people", otherwise 0. The dummy variable *GSS_help*=1 if 'most of the time people try to be helpful' is chosen for the question in the survey "Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves", otherwise 0. The dummy variable *GSS_fair*=1 if 'most people would try to be fair' is chose for the question in the survey "Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair", otherwise 0.

The regression of the amount transferred by truster (role A) on the *GSS_trust*, *GSS_help*, *GSS_fair*, *Amout_gamble*, Investment_1st_publicgoods, expected return from B (*Expected_from_B*), show that trust of role A's transfer has a significant positive correlation with risk, voluntary cooperation , and expected return from B and *GSS_trust.* That is, the more risk seeking that subjects are, the more the subject are opt for voluntary cooperation, the more trustworthy the subjects think their partners are, the more they are willing to trust their parters. Also the significant and positive sign for the coefficient of *GSS_trust* shows that the more subjects incline to trust others, the more they more they will transfer.

The second regression shows that the amount sent by trustee (role B) has a positive correlation with *GSS_trust*, *GSS_help*, *GSS_fair*, *Amout_gamble*, *Investment_1st_publicgoods* and amount sent by A (*Amount_from_A*). The more they are willing to believe that "most people are fair", the more their partners are trusting, the more they are inclined to award trust. It also shows that subjects that are opt for voluntary cooperation are more trustworthy.

The part four experiment is another public goods game. Figure 14 shows that after the gambling game and the trust game, some subjects may feel disappointed or even shortchanged, but the level of voluntary cooperation has not collapsed. That is a clear sign of optimism. Also the "U"-shaped relationship between the level of voluntary cooperation and age remains similar to that of part one.

4. Conclusion

The definition of social capital varies, but the general consensus is that its main components include cooperation, trust, trustworthiness, and risk preference. The current study focuses on subjects of different cohorts in Shanghai, a major metropolitan in China. The subjects in this study are representative in their respective population. Both data obtained from questionnaires and experiments are analyzed independently as well as jointly. The main findings help to reveal the levels of social capital in the study groups.

In the first public goods game, the level of voluntary cooperation in university groups decreased quickly, the number of "free rider" increased. The middle school group and the community group did not show decline in voluntary cooperation. The level of voluntary cooperation exhibits a "U"-shaped relationship with age. The young (middle school subjects) and

the older (community subjects) all show higher levels of voluntary cooperation while the old (university subjects) show relatively low level of voluntary cooperation.

In the gambling game which attempts to elicit the subjects' risk preferences, the university subjects turn out to be the most risk seeking, and the middle school subjects and community subjects all appear to be less risk seeking. The high risk tolerance is a necessary condition for innovation, and the university students in Shanghai have the potential to be highly innovative in the future. The risk preferences are positively correlated with trusting. It is possible that trusting the unknown partners has similar elements of taking risks, and trusting may also be affected by personal experience. The university subjects are the most trusting, the community subjects are the second, and the middle school subjects are least trusting. The community subjects may draw lessons from real life experience that trusting others sometime is beneficial, and sometime such behavior is not duly reciprocated.

The regression analysis on trusting proves a positive correlation with voluntary cooperation, risk preferences, opinions on others' trusting behavior, while the regression analysis on trustworthiness shows a positive correlation with voluntary cooperation, risk preferences, opinions on others' fairness. Trusting is closely linked with expectation, and trusting behavior is affected more by risk preference and other factors. Risk preference affects trusting more than trustworthiness means that those who are more inclined to take risks are more likely to trust others, rather than being more trustworthy.

Drawn from the post experiment survey, university students are found to be more willing to trust others on finance than on privacy. University students begin to live independent lives. They start to build up their social network. However, most of university students cannot be financially independent yet. They need to have close friends that they can turn for help in case of financial needs. Along with the university subjects, both community subjects and middle school subjects are willing to believe that "most people are willing to help the others".

The current study of trust, trustworthiness, risk preference and voluntary cooperation of different groups in Shanghai is the first attempt to experimentally explore the impotent components of social capital in a major metropolitan area in China. As China continues to grow economically, its sustainability may require more investment in social capital.

Future research can extend the current study to include more different regions in China. The same methodology of combining experiments with survey could be employed in areas which represent different levels of economic development and social environment. Eventually, the hope is to construct a measurable and comparable index of social capital to estimate its impact on economic prosperity and social harmony.

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Table1.The birth year of the subjects in junior middle school

Year of birth	1993	1994	1995	1996
Number of subjects	4	24	40	1

Table2.The birth year of the subjects in University

Year of birth	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Number of subjects	1	2	8	6	15	7	5	7	3	1

Table3.The birth year of the subjects in community

Year of birth	1920s	1930s	1940s	1950s	1960s	1970s
Number of subjects	2	3	14	18	17	1

Table 4. The Percentage of Answers on General Trust

	You believe that others are		You believe that others treat you		You believe that others are	
	Trustworthy	Cautious to others	Unfairly	Fairly	Helpful	Selfish
Middle school subjects	81%	19%	17%	83%	61%	39%
University subjects	76%	24%	20%	80%	64%	36%
Community subjects	65%	35%	15%	85%	82%	18%

Table 5. Test Result for Hypothesis

Round 5 Investment versus Round 1 Investment in Part One Public Goods Game	Middle School Subjects	University Subjects	Community Subjects
Z	-.934	-3.536	-.210
Asymp. Sig. (2-tailed)	0.35	0	0.834

Table 6. Comparison between Transfers in Gambling Game and in Trust Game

Comparison Between Transfers in Gambling Game and in Trust Game	Middle School Subjects	University Subjects	Community Subjects
Z	-4.764	-3.994	-1.676
Asymp. Sig. (2-tailed)	0	0	0.094

Table 7. Differences between Role As' Expected Return and Role As' Real Return in the Trust Game

Expected Return versus Real Return	Middle School Subjects	University Subjects	Community Subjects
Z	-1.034	-2.978	-3.525
Asymp. Sig. (2-tailed)	0.3	0.003	0

Table 8. Tobit Estimation for Amount Transferred by Role A and Role B in the Trust Game

Independent variables	Dependent variables	
	Amount sent by A	Amount sent by B
Constant	-2.748(1.075)	-4.393(1.913)**
Amount_gamble	0.298(0.111)***	0.350(0.191)*
Investment_1st_publicgoods	0.238(0.099)**	0.493(0.205)**
Expected_from_B	0.330(0.038)***	
Amount_from_A		0.780(0.157)***
GSS_trust	1.555(0.559)***	-0.826(1.142)
GSS_help	0.450(0.605)	-0.433(1.146)
GSS_fair	-0.301(0.704)	2.946(1.421)**
LR chi2(6)	92.95***	42.55***
Log likelihood	-209.694	-275.007
Observations	107	107

Notes: Standard errors are given in parentheses. *, **, and *** denote that the parameter is significantly different from zero at the 10%, 5%, and 1% level, respectively.

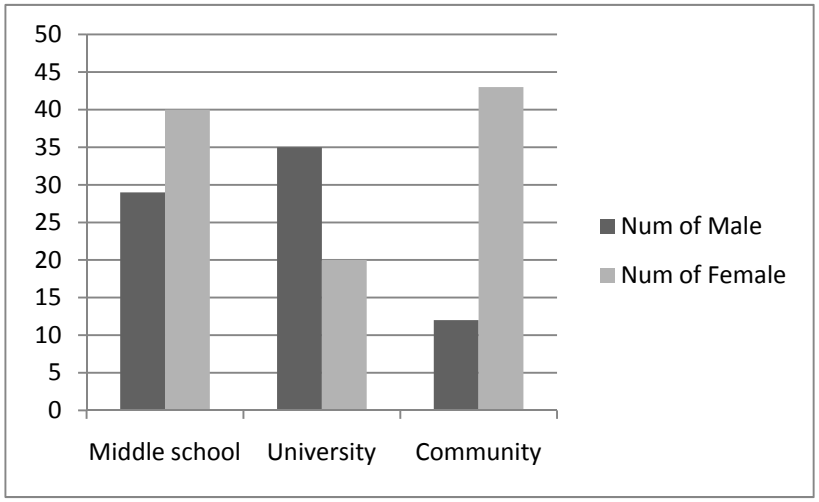

Figure1.The Distribution of Gender

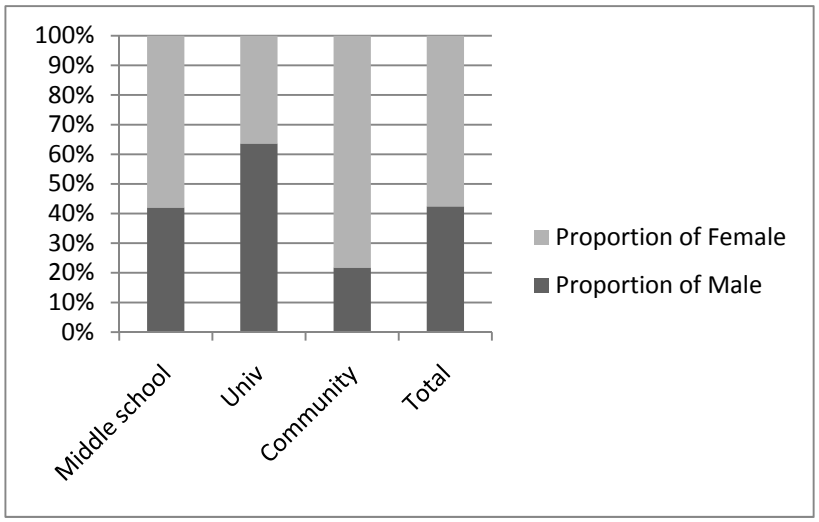

Figure 2.The proportion of gender

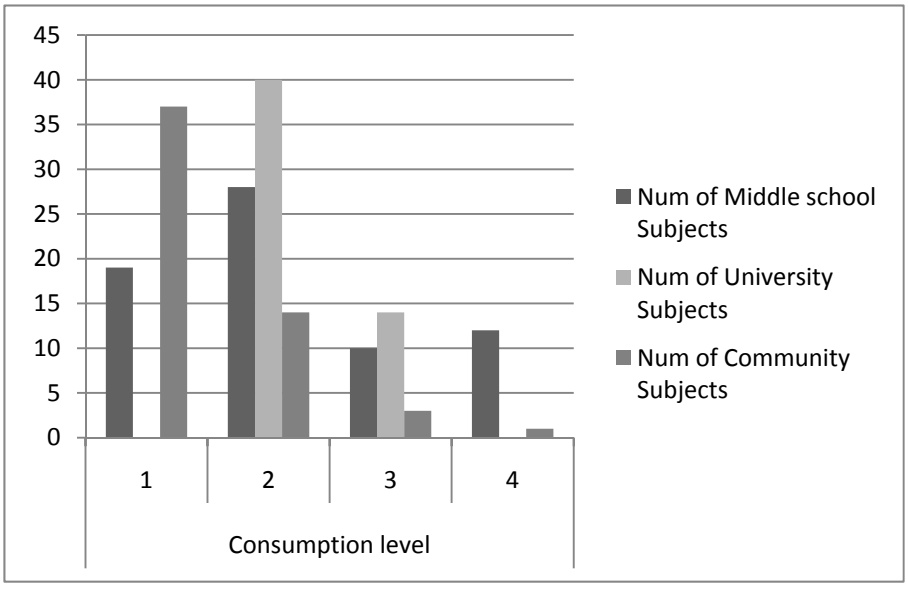

Figure3. The distribution of daily expense (by absolute value)

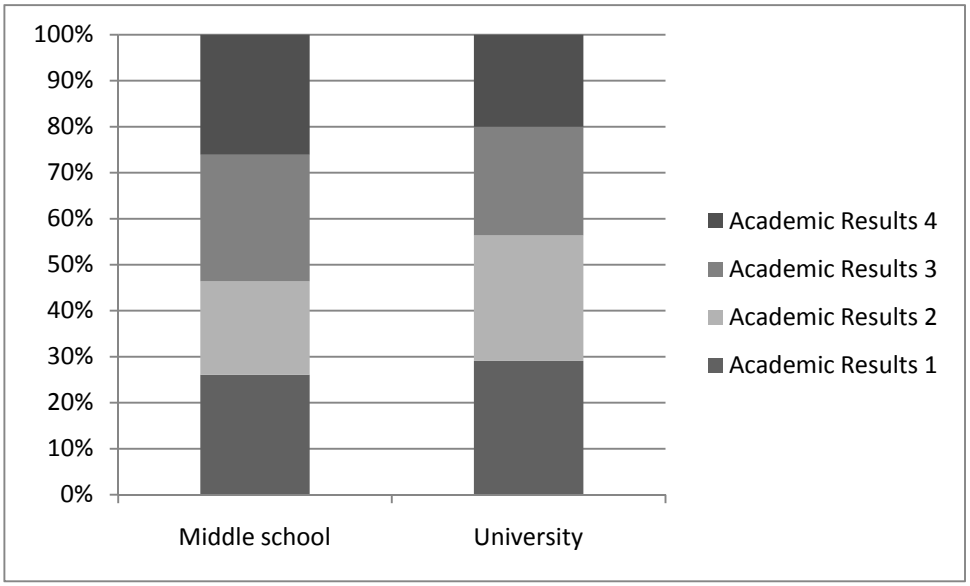

Figure 4. The distribution of academic levels

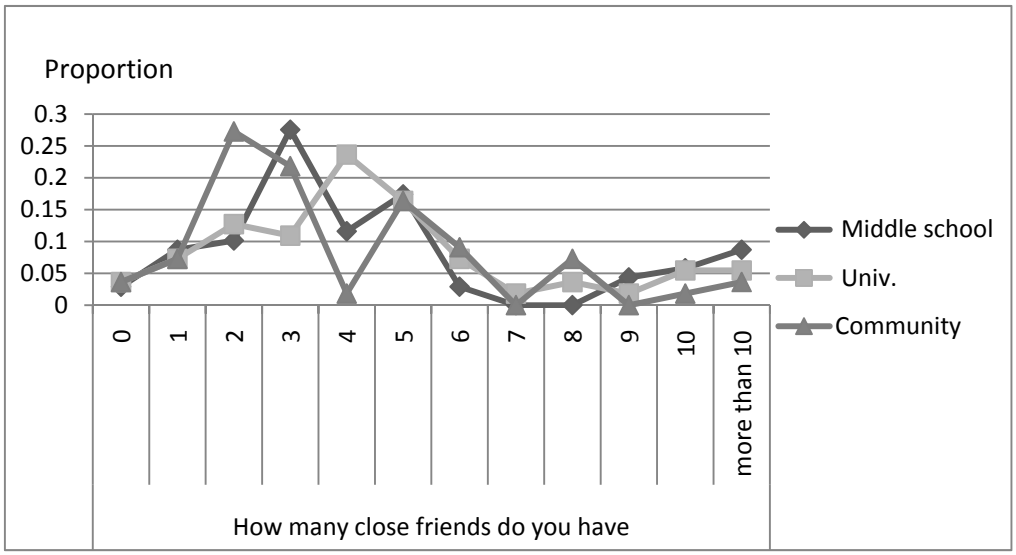

Figure5. The number of close friends that subjects have

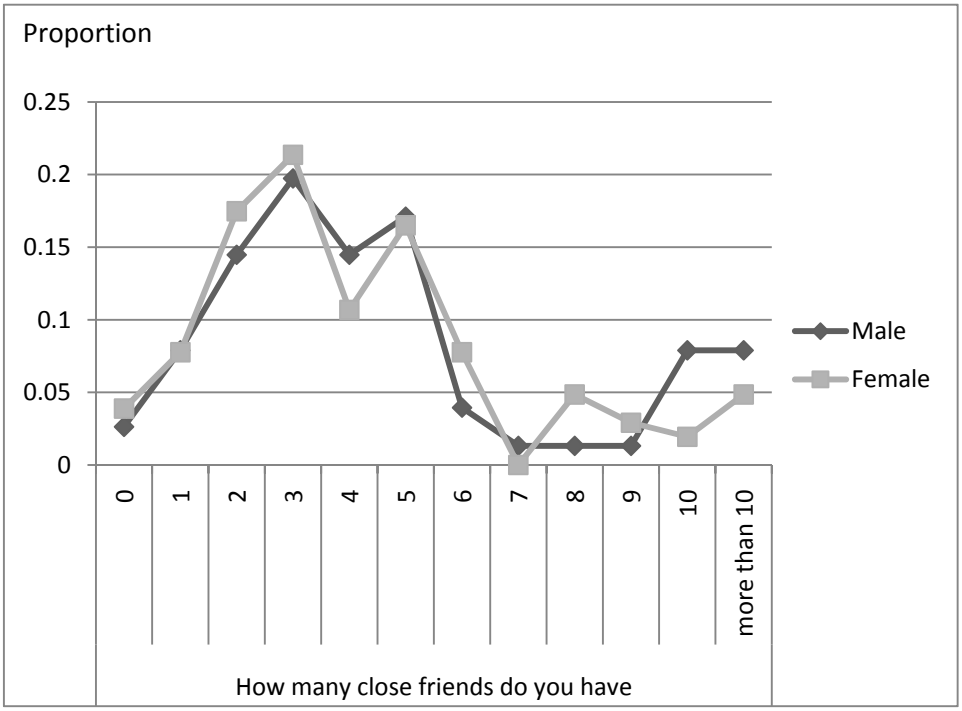

Figure 6. By gender: the number of close friends that subjects have

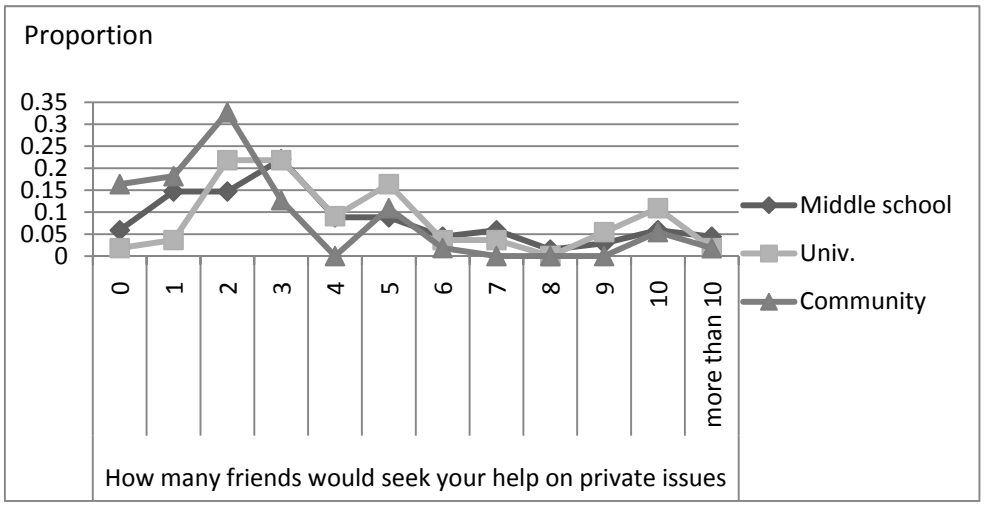

Figure 7. The number of persons who trust the subjects on private issues

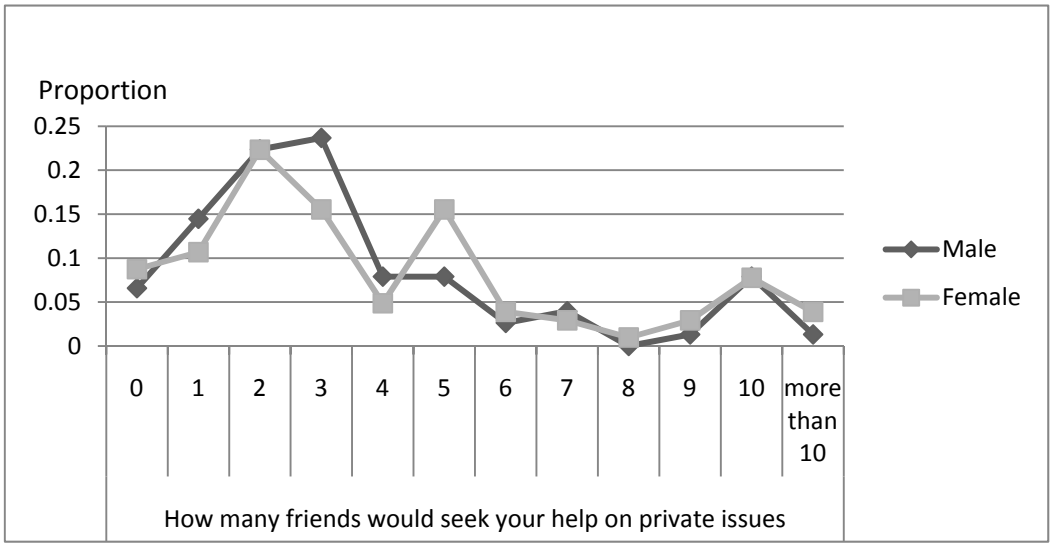

Figure 8. By gender: The number of people who trust the subjects on private issues

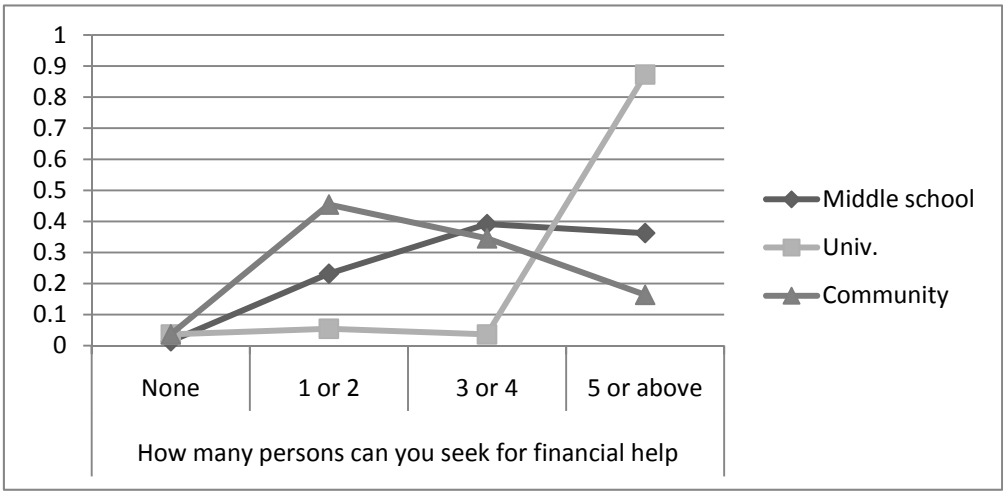

Figure 9. The number of people whom the subjects can seek for financial help

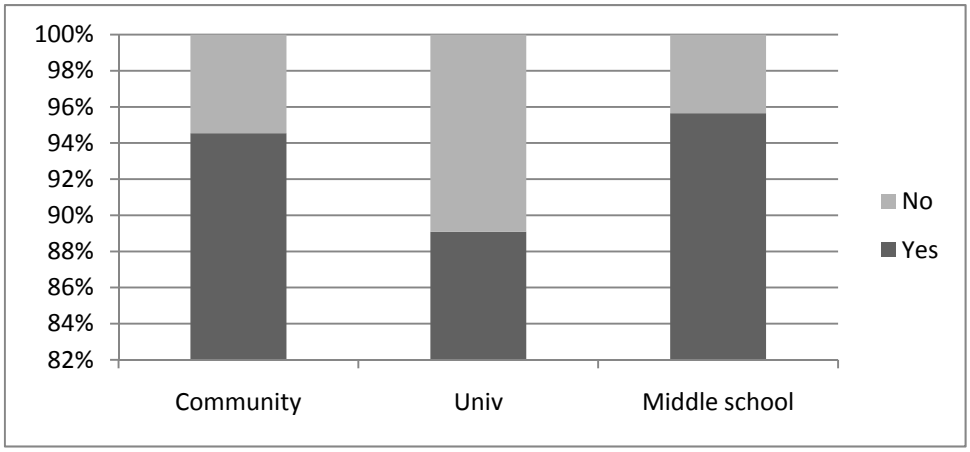

Figure 10. the Proportion of the Helping Behavior

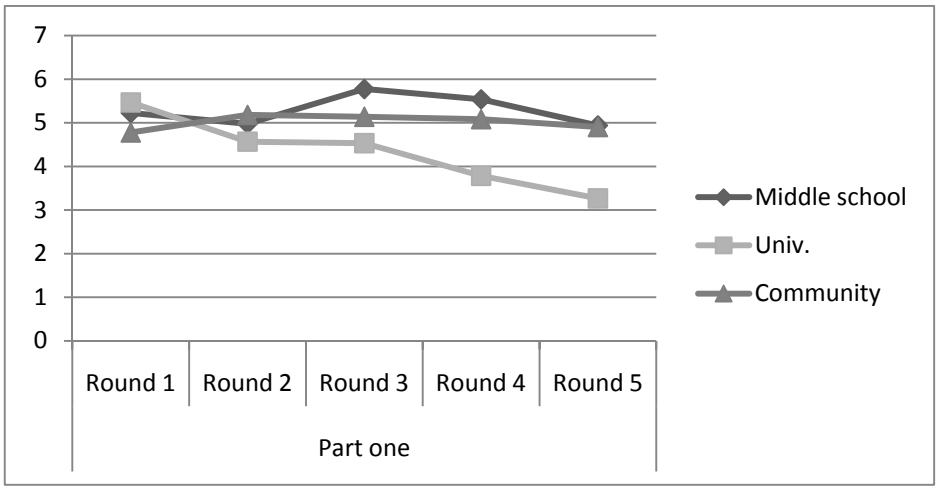

Figure 11. The Average Investments in the Part One Public Goods Game

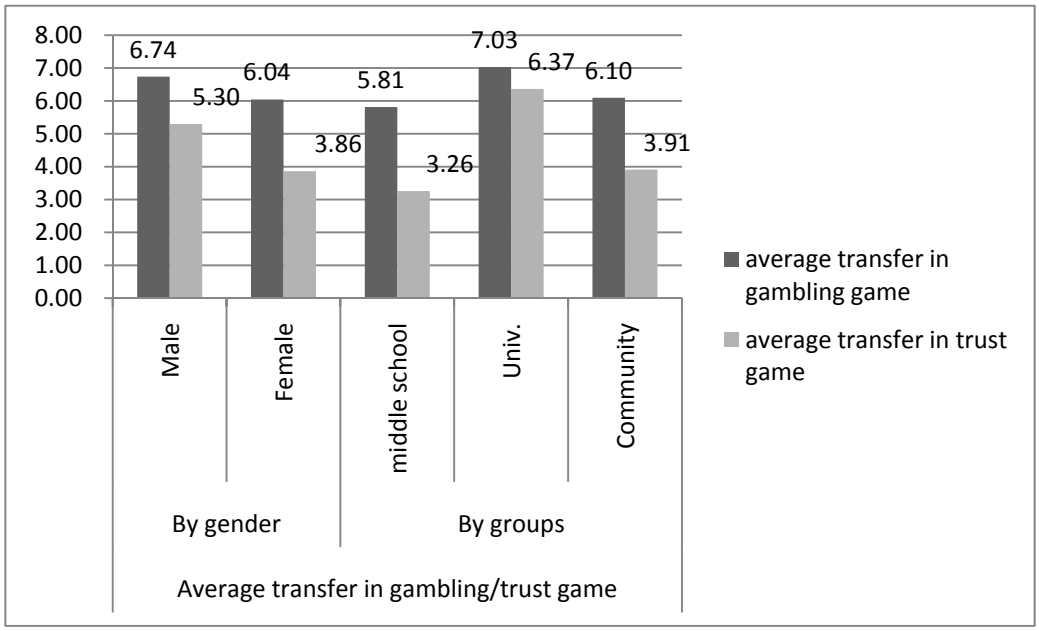

Figure 12. Comparison of Average Transfer in Gambling Game and Trust Game

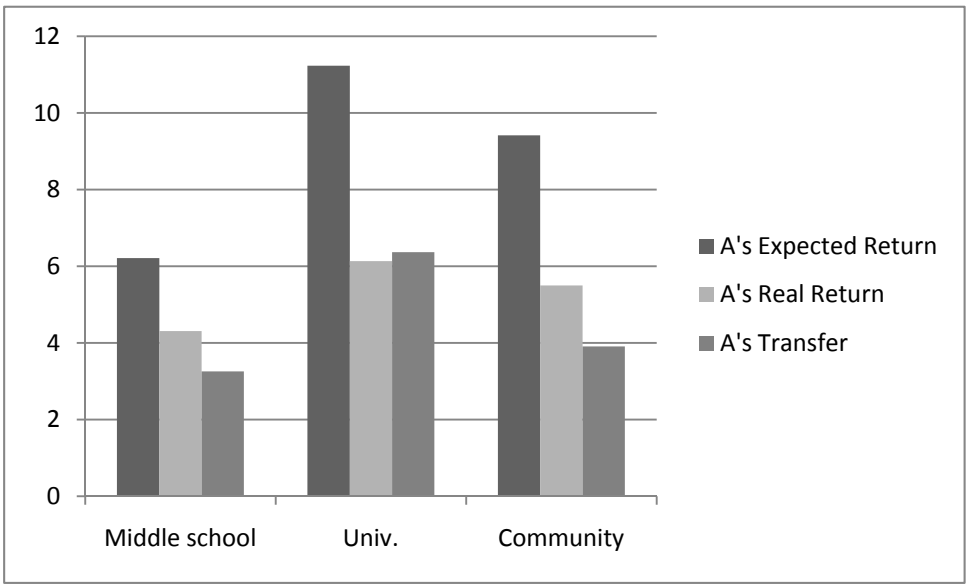

Figure 13. The Comparison of Role A's transfer, Role A's Expected Return from Role B and Role A's Real Return

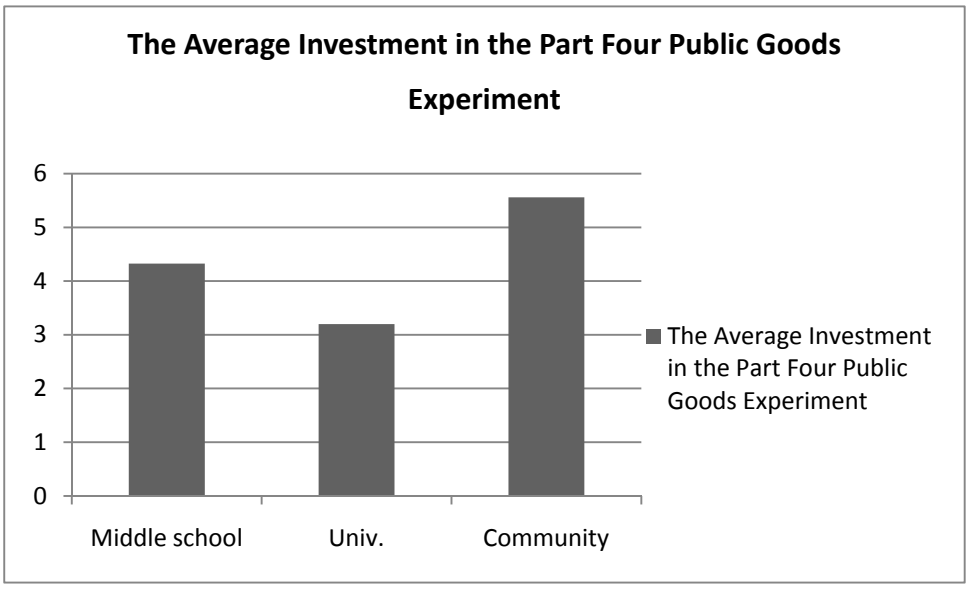

Figure 14. The Investment in the Part Four Experiment