



Hukou identity and trust—Evidence from a framed field experiment in China

Jun Luo^a, Xinxin Wang^{b,c,*}

^a School of Economics, Zhejiang University of Finance & Economics, Center for Economic Behavior and Decision-Making, 310021 Hangzhou, China

^b School of Economics, Zhejiang University of Finance & Economics, Center for Regional Economy & Integrated Development, China

^c School of Economics, Zhejiang University of Finance & Economics, Center for Regional Economy & Integrated Development, Center for Economic Theory and Sustainable Development Studies, 310021 Hangzhou, China



ARTICLE INFO

Keywords:

Hukou identity
Trust and trustworthiness
Field experiment

PsycINFO classification code:

2340
3040

JEL classification code:

J710
D910

ABSTRACT

Social integration between migrant and local populations is a major social issue in the development of Chinese society. The most direct impact is reflected in trust and trustworthiness between the local household registered population and the nonlocal household registered population. In this paper, using the framed field experiment method with local and nonlocal hukou pupils as subjects, hukou identity is exogenously introduced into the trust game through information disclosure and “priming” technology to investigate whether hukou identity affects trust between the two hukou identities. The experimental results show that the concept of hukou identity and its characterized cognition of different treatments have been implanted in people since childhood, thereby affecting their trust and trustworthiness in the process of social integration. Subjects will show more trust (more investment) towards local hukou pupils compared to nonlocal hukou pupils, and subjects will show higher trustworthiness (more return amount) towards partners who share hukou identity than those with a different hukou identity.

1. Introduction

The hukou system is the mandatory household registration system in China. This system assigns individuals a hukou type shortly after their birth, which entitles them to certain social benefits. In that sense, the hukou identity is similar to the social security number in the United States or the national insurance number in the United Kingdom since they are all institutionally imposed. The hukou system, however, is very different from the other two systems because an individual's hukou type is not randomly assigned. Furthermore, this system favors individuals with urban hukou and discriminates against those with rural hukou in a variety of ways, making it difficult for them to obtain education, employment, housing, health care, and other social benefits (Chan & Buckingham, 2008; Chan, 2009). Hence, the hukou identity is an institutionally imposed social identity assigned to Chinese at birth with a social rank.

On July 24, 2014, the China's State Council formally issued the “Opinions on Further Promoting the Hukou System Reform,” which proposed establishing a unified urban and rural household registration system, eliminating the distinction between agricultural and non-agricultural households and uniformly registering them as residents. The implementation of a unified resident household registration system could break the boundaries between farmers and citizens, eliminate the discrimination against farmers,

* Corresponding author at: Zhejiang University of Finance & Economics, No.206, #6 Building, No.18, Xueyuan, St.Hangzhou 310021, Zhejiang, China.

E-mail addresses: luojun@zufe.edu.cn (J. Luo), xxwang@zufe.edu.cn (X. Wang).

<https://doi.org/10.1016/j.chieco.2019.101383>

Received 28 January 2019; Received in revised form 1 October 2019; Accepted 17 November 2019

Available online 19 November 2019

1043-951X/ © 2019 Elsevier Inc. All rights reserved.

and promote labor migration from rural areas to cities. With the intensified trans-regional labor flow in China, a growing number of nonlocal household registered citizens are finding employment in the cities as long-term residents; however, a local hukou is the prerequisite for the rights to various public services within the city. Hence, a division naturally forms between the local household registered population and nonlocal household registered population within the city. Social integration between nonlocal and local household registered populations is a major social issue in the development of Chinese society. The most direct impact is reflected in trust between the local household registered population and nonlocal household registered population, where trust is a key indicator of social capital and is a basic characteristic of economic activities in modern society and the basis for cooperation and social interaction (Algan & Cahuc, 2013; Herreros, 2004). In particular, generalized trust in other people with whom the individual has never met or may never meet again, is an important prerequisite for a society featured by general cooperation and social interaction (Blau, 1964; Lindstrom & Rosvall, 2016). A large number of empirical studies also show that trust can boost economic prosperity (Fukuyama, 1995), increase economic growth (Knack & Keefer, 1997; Zak & Knack, 2001), improve the legal system and government regulation (Knack, 2002; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1997), prevent corruption (Uslaner, 2002), enhance education quality (Putnam, 2000), and promote social welfare (Helliwell, 2003). Without a doubt, trust plays an important role in the process of social and economic development.

Accordingly, research on the trust level of residents for strangers in China is also quite influential (Hazelzet & Bart, 2012; Li, Huang, He, & Zhou, 2008; Zhang & Rongzhu, 2002). Niu and Zhao (2018a) studied social integration in urban China and analyzed the relationship between hukou identities and trust towards local and central government. Niu and Zhao (2018b) concerned religion and trust in strangers among China's rural-urban migrants. In particular, study began to explore the trust between local household registered population and nonlocal household registered population (Wang, Chen, & Lu, 2009). These empirical studies mostly proceed from the macro perspective and judge people's trust level via questionnaires. Nevertheless, using a questionnaire about personal subjective feelings as a scientific basis to examine people's behavioral preferences is always questioned in terms of data validity (Carpenter, 2002).

As Berg, Dickaut, and McCabe (1995) applied the experiment method of trust game, the experimental economists provided a more effective way for measuring individual's trust level. Camerer (2003) held that in the controllable experimental environment with incentive mechanisms, social interaction between the game players is eliminated due to the two-party anonymous one-time trust game; thus, the derived data reflects a pure level of trust. At the same time, the trust game experiment conducted with Chinese samples as subjects has also gradually emerged (Cai, Chen, Fang, & Zhou, 2015; Charness, Du, & Yang, 2011; Özer, Zheng, & Ren, 2014; Qin, Shen, & Meng, 2011; Song, Bram Cadsby, & Bi, 2012).

In this context, this paper attempts to examine the trust and trustworthiness between the local household registered population and the nonlocal household registered population from individual micro level using the standard trust game method. The local household registered population and nonlocal household registered population represent two different social identities. Will being treated differently daily based on one's hukou identity change people's trust and trustworthiness in interaction, resulting in possible opposition and exclusion between different hukou identity groups as between different status, castes, and races, or make people show different level of trust for population with different hukou identities? Finding an answer to this question requires further empirical evidence to clarify whether the hukou system has introduced people's awareness towards different hukou identities, and whether such awareness will change people's trust and trustworthiness.

In view of the possible interaction between hukou identity and other personal traits and behavioral performance, endogeneity problems are often encountered in studies of the effect of hukou identity on personal feelings and behaviors using econometrics analysis. Therefore, to test whether there is a causal relationship between the introduction of hukou identity and the change in people's trust levels in the process of social interaction, a framed field experiment (Harrison & List, 2004) is adopted in this study to exogenously prime hukou identity to game experiments, and directly investigate the effect of hukou identity on trust.

To better avoid the interference from such factors as occupation, social class, income, etc., and isolate the effect of hukou identity on people's trust level, pupils from grades 3 to 6 are enrolled as experimental subjects. Meanwhile, "priming," a mature psychological research method (Bargh, 2006)¹ was adopted to introduce pupils' awareness of hukou identity and feelings towards different treatment for different hukou identities in daily life in an effort to examine whether such a cognitive experience will determine their choice in game decisions and change people's trust and trustworthiness.

The experimental results show that pupils have clear awareness of hukou identity and tend to regard local hukou pupils as superior to nonlocal ones. This perception being primed has directly led to different decision-making choices in the face of game players with different hukou identities in the trust game. Although the disclosure of hukou identity information will not induce the difference of subjects' trust and trustworthiness when they face game players with different hukou identities, after priming of the awareness towards hukou identity, participants will show more trust to local hukou pupils as compared to nonlocal hukou pupils, and participants will show higher trustworthiness (more return amount) to partners of same hukou identity than of different hukou identity.

The reminder of the paper is organized as follows: The second section contains the literature review, with a focus on reviewing the trust game, trust and social identity in the experiments, and hukou identity experiments. The third section introduces the

¹ Priming, a technique often used in psychology, introduces certain stimuli (including image, audio, or text such as a questionnaire and an article) to activate subjects' knowledge of social structures. As shown in a large literature in psychology (see Bargh, 2006 for a review) and a few recent economic studies (Hoff & Pandey, 2006; Benjamin, Choi, and Fisher, 2010; Benjamin, Choi, and Strickland, 2010; McLeish & Oxoby, 2011; Chen, Li, Liu, et al., 2014; Afridi et al., 2015; Luo, Chen, He, et al., 2019), priming social identities may influence behavior and attitudes.

experimental design and procedure, and the fourth section reports the experimental results and provides nonparametric test and quantitative regression analysis. The fifth section serves as the conclusion of the paper, discussing its theoretical and practical significance, limitations and future avenues for research.

2. Literature review

A recent important contribution of behavioral and experimental economics is the discovery of violations of the economic self-interest hypotheses, as demonstrated in the prevalence of prosocial behaviors such as fairness, altruism, cooperation and reciprocity (e.g. Berg et al., 1995; Fehr, Gächter, & Kirchsteiger, 1996; Forsythe, Horowitz, Savin, & Sefton, 1994; Güth, Schmittberger, & Schwarze, 1982). One important type of experiment in this field is testing trust behavior and trustworthiness behavior using the trust game.

2.1. Trust game

The trust game was first designed by Berg et al. (1995). There are two roles in the trust game: principal and agent. The principal is offered a certain amount of original endowment. First, the principal decides the amount to transfer to the agent. Then, the transferred amount is tripled, and the agent must decide how much of the tripled amount to transfer back to the principal. On the basis of self-interest hypothesis, the Nash equilibrium of the trust game should be that the agent does not return any money to the principal according to backward induction of the dynamic game. The principal can anticipate the agent's decision and will not offer any investment to the agent. The experimental results show, however, that most principals provide a certain amount of initial endowment to the agent, and the agent also returns a considerable amount of money to the principal.

Subsequent follow-up experiments conducted in various places (the United States, China, Japan, South Africa and Colombia, etc.) also show that the principal will generally offer half of initial endowment, while the agent will return an amount close to the principal's offer (Burks, Carpenter, & Verhoogen, 2003; Capra, Kelli, & Shireen, 2008; Cardenas & Carpenter, 2008). All these experimental data indicate that the behaviors of the principal and the agent do not fulfill the self-interest hypothesis. If trust behavior is measured by the principal's investment in the agent and trustworthiness behavior is measured by the agent's return decision, experimental results in the trust game suggest the presence of prosocial behaviors such as trust between people.

Experimental economists further found, however, that factors such as initial endowment, age, gender, and growth environment will determine the level of people's trust to some extent. The experimental study by Johansson-Stenman, Mahmud, and Martinsson (2005) shows that the trust level of the principal in the game will decrease as the initial endowment increases. Experiments by Ashraf, Bohnet, and Piankov (2006) found that men have higher levels of trust than women. Sutter and Kocher (2007) on differently aged groups showed that people's trust increases linearly with age. An experimental study by Cameron, Erkal, Gangadharan, and Meng (2013) on the one-child policy in China shows that the only child's trust level is significantly lower than that of non-only children.

2.2. Trust and identity in the experiment

If the concept of identity containing different treatment factors itself is introduced into the trust game, whether people's trust and trustworthiness behavior will change accordingly, and how it will change receives particular attention. On the one hand, researchers have worked to establish different group identities in the laboratory environment so that the effect of identity establishment in the experiment on the subjects' trust behavior can be investigated.

Chen and Li (2009) established group identity in the laboratory based on differences in artistic preferences and enhanced the identity cognition of the group members through online chat. It was found that subjects showed more trust and cooperation with intra group members than with inter group members. Güth, Levati, and Ploner (2008) conducted a public good game within the group before the trust game experiment to examine the effect of identity establishment on the internal trust level of the group. Tanis and Postmes (2005) found that the introduction of personal identification can simultaneously promote trustworthiness among inter group and intra group members. Experiments by Hargreaves and Zizzo (2009) indicated that subjects can obtain psychological benefits through group identities and thus exert a positive impact on trust behavior. Meanwhile, a significant reduction in subjects' trust towards members outside the group was observed. Smith (2011) also introduced group identities in the laboratory to examine the trust behavior and trustworthiness behavior of members within and outside the group. Heyes and List (2016) found in the laboratory that the subjects were willing to show their own photos to the game partners at a cost, thereby reducing their social distance and influencing the other's trust decisions.

On the other hand, experimental economists attempted to directly introduce social identity in real life to field experiments to test the effect of the introduction of social identities on the level of individual's trust. Experiments by Buchan, Croson, and Johnson (2004), Buchan, Johnson, and Croson (2006), Ligon and Schechter (2012), Binzel and Fehr (2013) have found that the introduction of social identities can shorten the social distance between the trust party and trustworthiness party, thereby significantly affecting trust and trustworthiness levels. Experiments by Song et al. (2012) in China also showed that the social distance characterized by human relations is inversely proportional to trust level.

Similar studies have also found that the introduction of identity salient and differences into experiment, such as religion, race, and class, exert important influence on people's trust and trustworthiness behaviors. The experimental results of Tsutsui and Zizzo (2014) showed that lower status subjects will offer lower trust investment to other lower status subjects. The trust game experiment of Falk and Zehnder (2013) found that the principal would offer a higher investment amount if the agent comes from a high-income

community. [Koopmans and Veit \(2014\)](#) found that salient racial and cultural diversity in the game will reduce the principal's trust in game players of different races. The trust game experiment conducted by [Chuah, Fahoum, and Hoffmann \(2013\)](#) and [Gupta et al. \(2018\)](#) in India confirmed the hostility among different religious groups. Ethnic minority groups show positive intra group preferences in trust behavior, and most ethnic groups show positive inter group preferences for trustworthiness behaviors. [Bapna, Gupta, Rice, and Sundararajan \(2017\)](#) studied trust behavior among different social relationship groups in Facebook users.

2.3. Hukou identity experiment

Social identity experiments based on social reality also include research by [Hoff and Pandey \(2004, 2006, 2011\)](#) on the caste identity formed in India owing to its long-term historical context. It was found that caste identity affects people's self-confidence and trust. With reference to the experimental study on caste status in India, studies have attempted to introduce China's hukou identity into the experiment.

[Afridi, Li, and Ren \(2015\)](#) selected local hukou pupils and those of migrant workers' children in Beijing as the subjects and used "priming" questionnaires about pupils' feelings towards different experience owing to different hukou identities. The experimental results show that the priming of hukou identities induces the subjects' psychological perception of hukou identities, thereby lowering the performance of migrant pupils, and improving the performance of the local pupils under priming, which suggests that hukou identity may further increase the income gap between the two groups. [Dulleck, Fookan, and He \(2012\)](#) recruited nurses of local urban hukou and nonlocal rural hukou as subjects. The subjects in the two hukou identities were randomly arranged to act as employers and employees in the gift exchange game. The experimental results show that although there is no significant difference in individual behavioral characteristics between subjects of local urban hukou and nonlocal rural hukou, people still show more uncooperative behaviors to subjects of rural hukou.

In summary, the existence and change of interpersonal trust behavior has aroused wide concern among economists, and the specific measure of trust levels through the game experimental research methods is increasingly being adopted by researchers. Experimental economists are further concerned about whether people's trust behavior will change if identity concepts characterizing different treatment factors are introduced into the trust game. Nevertheless, as a social identity with Chinese characteristics, hukou identity is often fixed with such factors as region, social class, and income. Hence, how to isolate the effect of hukou identity itself and thereby test the direct impact of disclosure and salient of hukou identity information on trust behavior has not yet been completely solved by existing experimental research. In addition, there has not yet been any relevant research discussing whether people's awareness of different treatment owing to hukou identity will affect interpersonal trust. The starting point of this paper is to answer these questions.

3. Experimental design

We obtained consents from our participants' parents or legal guardians and agreement of each school prior to the experiment. The experiment protocol is approved by the Zhejiang University Ethics Committee. We first issued a notice of recruitment for pupils from Grades 3 to 6 in two primary schools in Zhejiang Province, and almost all pupils in the schools voluntarily enrolled our experiment due to sufficiently large rewards. Among all the pupils enrolled, we balanced gender, class and grade, and then we randomly screened 1056 subjects (half of the local hukou and half of the nonlocal hukou) to participate in the experiment. Then, 528 local hukou and 528 nonlocal hukou pupils were randomly assigned to 12 treatments. To achieve research purposes and conduct experiments in a scientific and standard manner, this study has the following design and considerations in the selection of experimental subjects, the arrangement of experimental procedures, the disclosure of hukou information and the priming of hukou identity.

3.1. Selection of experimental subjects

Pupils rather than adults are selected as the experimental subjects for the following considerations: First, adults of both local and nonlocal hukou have different education level, occupation, income, and social status to some extent. These differences may act on the subjects' trust behavior together with hukou identity. Second, focusing on pupils allows us to consider whether pupils have a perception of hukou identity from daily study and life, although students have not real experiences being treated differently due to different hukou types. Thus, selecting pupils can help directly examine effect of hukou as a social status on behaviors. Third, previous empirical studies mostly used adult data ([Dulleck et al., 2012](#); [Niu & Zhao, 2018a](#); [Wang et al., 2009](#)) and have confirmed the influence of hukou identity. This experiment can examine whether this effect has already taken place in the juvenile period, so that future studies can further separate the effect of hukou identity, institutions and experiences on individual behavior decisions by comparing juvenile and adult behavioral data.

Both primary schools are located in the Shangcheng District, Hangzhou City, namely, the Hangzhou Daxue Road Primary School and the Hangzhou Gaoyin Street Primary School. There are 1558 students in the Daxue Road Primary School, including 820 local residents (52.63%) and 738 foreign residents (47.37%), while Gaoyinxiang Primary School has a total of 1836 students, including 986 local residents (53.70%) and 850 foreigners (46.30%). This study decided to choose pupils at these two primary schools as experimental subjects based on the following requirements: First, the primary schools are municipal public primary schools, and a "nearby enrollment policy" for students can maximally guarantee no major differences between local and nonlocal hukou students in other personal characteristics (e.g., geographical areas) except hukou identity. Second, according to the student hukou information provided by the Education Bureau, the primary school students are composed of school-age children with urban permanent residence

Table 1
Basic information of experimental design.

Experiment treatment	Priming of hukou	Hukou information	Principal's hukou	Agent's hukou	Number of subjects
NNLL	Non-priming	No disclosure	Local	Local	88
NNLN	Non-priming	No disclosure	Local	Nonlocal	88
NNNL	Non-priming	No disclosure	Nonlocal	Local	88
NNNN	Non-priming	No disclosure	Nonlocal	Nonlocal	88
NDLL	Non-priming	Disclosure	Local	Local	88
NDLN	Non-priming	Disclosure	Local	Nonlocal	88
NDNL	Non-priming	Disclosure	Nonlocal	Local	88
NDNN	Non-priming	Disclosure	Nonlocal	Nonlocal	88
PDLL	Priming	Disclosure	Local	Local	88
PDLN	Priming	Disclosure	Local	Nonlocal	88
PDNL	Priming	Disclosure	Nonlocal	Local	88
PDNN	Priming	Disclosure	Nonlocal	Nonlocal	88

Note: The first “N” means “Non-priming” hukou cognition, “P” means “Priming” hukou cognition, the second “N” means “No disclosure” of hukou identity, “D” means “Disclosure” of hukou identity, the third “N” means “Nonlocal” hukou of principal, the first “L” means “Local” hukou of principal, the fourth “N” means “Nonlocal” hukou of agent, the second “L” means “Local” hukou of agent.

and children of migrant workers, and the two have very close proportion. Third, local and nonlocal hukou students are mixed in class grouping, which avoids possible effects on experimental results from human intervention (for instance, students with the same hukou identity are all enrolled in the same class).

3.2. Arrangement of experimental procedures

In this study, the trust game experiment was applied. There are two game roles in the experiment: principal and agent. The principal must decide how much investment to provide to the agent from the RMB 10 yuan initial endowment. The investment amount will be tripled before delivery to the agent. The agent must decide how much money to pay back to the principal. The subjects will receive a show-up fee of 5 yuan regardless of the choices they make.

The experiment sites are classrooms for extracurricular activities in the primary school. The subjects of the same hukou identity and game role under hukou information disclosure are arranged in the same classroom. That is, principals of local hukou, agents of local hukou, principals of nonlocal hukou, and agents of nonlocal hukou will make decisions in different classrooms; they do not know what happens in the other party, thus avoiding interference brought by game players. Principals must choose from all the integer allocation schemes within 10 yuan. Agents must make corresponding return decisions for all possible investment amounts (integer of 0–10 yuan) in the experiment so that agents' returns can be studied from a wider scope. Such strategic decision-making can help the study examine the subjects' trustworthiness behavior in the face of different endowments, in particular, how they will make decisions under the lure of high returns (Ashraf et al., 2006; Brandts & Charness, 2000).

The experimental design consists of four variables: whether to prime hukou identity cognition, disclose the hukou identity information of the two game players, principal's hukou identity (local or nonlocal), and agent's hukou identity (local or nonlocal). Since the priming of hukou identity cognition requires disclosure of game players' hukou information to play a role, there is no experiment procedure in which hukou identity cognition is primed, but no hukou identity information is disclosed. Table 1 reports the basic information of each experimental procedure design. The experiment adopts a between-subjects design. Each subject is only allowed to participate in one experiment and play one role. All subjects make game decisions anonymously.

3.3. Priming of hukou identity and disclosure of hukou information

In the experiment, the subjects' hukou identity needs to be introduced exogenously to examine the subjects' perception of hukou identity, and trust and trustworthiness of subjects in the face of different household registered populations. To achieve this aim, priming of hukou identity and disclosure of hukou information were applied in the experiment.

With regard to how to prime hukou identity cognition, before the start of game, the subjects' perceptions of the possible different treatment brought by hukou identity in daily life were “primed” via hukou identity investigation before the experiment. The questionnaire involves the subjects', classmates' and teachers' judgment of whether the subjects are local and the subjects' judgment on whether there are differences in tuition fee, praise, student cadre election, daily allowance amount between local and nonlocal hukou students. The method mainly refers to questionnaire design of Benjamin, Choi, and Fisher (2010), which aimed to arouse Asian Americans' awareness of differences in ethnic identity in daily life and that of Afridi et al. (2015), which aimed to investigate the influence of salient hukou identity on subjects' behavioral motivation.

With respect to how to disclose hukou identity information, the hukou identity of the game players is marked on the card during subjects' decision-making in the trust game to disclose hukou information. It should be noted that when questionnaires about difference in treatment based on local and nonlocal hukou identity were administered, we tried to use neutral language and statements related to hukou identity to avoid the possible experimenter demand effect (Zizzo, 2010).

Table 2
Comparison of local and nonlocal hukou students in individual characteristic variables.

Individual variable	Mean		Standard deviation		Sample number		P value
	Local	Nonlocal	Local	Nonlocal	Local	Nonlocal	
Gender	0.506	0.491	0.458	0.423	528	528	0.925
Nationality	1.000	1.000	0	0	528	528	1.000
Age	10.956	11.128	1.053	1.213	528	528	0.648
Grade	4.589	4.612	1.158	1.223	528	528	0.815
Student cadre or not	0.384	0.352	0.398	0.410	528	528	0.542
Number of siblings at home	1.422	1.815	1.125	1.134	528	528	0.005
Father's education level	4.530	3.798	0.912	0.958	528	528	0.006
Mother's education level	4.312	3.629	1.122	1.105	528	528	0.008
Achievement ranking	2.356	2.475	0.785	0.836	528	528	0.252
Daily allowance amount	3.362	3.371	1.586	1.782	528	528	0.891

Note: Gender = 0 means “male”, and gender = 1 means “female”. Nationality = 1 means “Han nationality”, and Nationality = 0 means “non-Han nationality”. Education = 1 means “illiterate”, education = 2 means “elementary school”, education = 3 means “middle school”, education = 4 means “high school”, education = 5 means “college”, and education = 6 means “graduate school”. Achievement ranking = 1 means “top tier”, achievement ranking = 2 means “above average”, achievement ranking = 3 means “average”, achievement ranking = 4 means “below average”, and achievement ranking = 5 means “bottom tier”. Allowance amount = 1 means “daily consumption < 1 yuan”, allowance amount = 2 means “daily consumption of 1–1.99 yuan”, allowance amount = 3 means “daily consumption of 2–2.99 yuan”, allowance amount = 4 means “daily consumption of 3–3.99 yuan”, allowance amount = 5 means “daily consumption of 4–4.99 yuan”, and allowance amount = 6 means “daily consumption of 5 yuan or more”.

4. Experimental results

The experimental results are reported from the following sections: First, a descriptive statistical analysis is conducted for the individual characteristics of local and nonlocal hukou students as well as the overall investment situation. Second, the subjects' cognition of hukou identity and whether the subjects have felt different treatment due to different hukou identities are judged through the pre-experimental questionnaire. Third, the differences in trust and trustworthiness behaviors between different experimental treatments are tested. Finally, further regression analysis is carried out on principal and agent decision-making in the game, including testing the relationship between the subject cognition of hukou identity and decision-making in the trust game, to further verify the experimental results.

4.1. Descriptive statistics

4.1.1. Personal characteristics of the subjects

To effectively control the difference in personal characteristics between local and nonlocal hukou students in the analysis of experimental results, the subjects' basic information was collected using a questionnaire survey at the end of the experimental process. A total of 1056 questionnaires were collected, including 528 local hukou students and 528 nonlocal hukou students. The basic information of the questionnaire mainly covers gender, nationality, age, grade, number of siblings at home, student cadre, highest degree of parental education, achievement ranking and daily allowance amount (see Table 2 for comparison of specific data).

Table 2 shows that there is no significant difference between local and nonlocal household registered subjects in such personal basic characteristics as gender, ethnicity, age, grade, student cadre, number of siblings at home, achievement ranking, and daily allowance, except that the number of siblings in local household registered subjects is significantly lower than that of nonlocal ones ($p < 0.01$), and the highest education degree of local household registered subjects' parents is significantly higher than that of nonlocal students' parents ($p < 0.01$; $p < 0.01$).

4.1.2. The overall situation of the investment amount (trust level)

Prior to the analysis of the association between hukou identity and trust decisions, we analyzed the overall trust level of our adolescent samples. Seen from the experiment results, the proportion of principals who choose to invest half of the initial endowment of 10 yuan (5 yuan) to the agent account is the highest (35.61% of the total). In addition, the principals who invest less than half of the endowment account for 32.58% of the total, and those who invest more than or equal to the half account for 67.42% of the total. It is worth mentioning that 32 principals (12.12% of the total) choose to invest all their initial endowment (10 yuan) to the agents.

The specific distribution of the ratio of the principal investment amount to the initial endowment is shown in Fig. 1.

The average investment of all subjects is 5.29 yuan (with a variance of 2.47). It can be preliminarily judged from such descriptive statistics that subjects have a high level of trust overall, and they fully believe that the other party will return their investment. This paper further summarizes and collects the investment ratio data of children and adolescents at different ages (see Table 3) in representative trust game experiments of various countries and regions, so that comparisons can be made with the pupil investment ratio data obtained in this experiment.

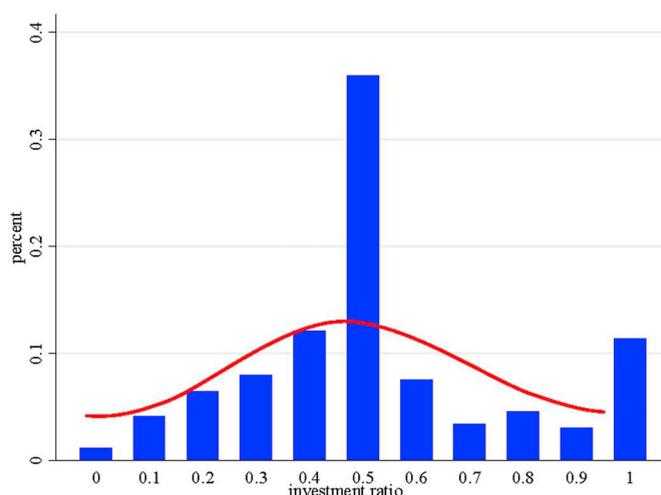


Fig. 1. Distribution of Investment Ratio (trust) of Overall Sample.

Table 3

Summary of investment ratio of children and adolescents at different ages in trust game.

Author	Region	Age	Grade	Sample	Mean	Standard deviation
Harbaugh, Krause, Liday, and Vesterlund (2003)	Oregon, USA	–	3rd	35	0.28	(0.31)
		–	6th	38	0.31	(0.22)
		–	9th	40	0.47	(0.31)
		–	12th	40	0.28	(0.26)
Sutter and Kocher (2007)	Salzburg, Austria	8	2nd	45	0.20	(0.06)
		12	6th	61	0.36	(0.16)
		16	10th	50	0.55	(0.28)
		22	College	110	0.66	(0.33)
Evans, Athenstaedt, and Krueger (2013)	Tilburg, Netherlands	4	–	32	0.23	(0.12)
		5	–	49	0.20	(0.10)
		9	–	24	0.73	(0.46)
		10	–	66	0.80	(0.51)
Li, Liu, and Zhu (2017)	Beijing, China	4	–	63	38	–
		5	–	62	45	–
		6	–	63	46	–
Zheng, Yu, and Zheng (2010)	Wenzhou, China	–	3rd	60	0.52	(0.25)
		–	4th	61	0.39	(0.12)
		–	5th	60	0.45	(0.14)
		–	6th	61	0.50	(0.22)
Chi (2013)	Jinan, China	–	7th	107	0.55	(0.25)
		–	8th	91	0.59	(0.30)

Note: The data in the above studies are investment ratio of trust game after conversion with 1 RMB as the initial endowment in equal proportion. The average data in Li et al. (2017) is the number of subjects willing to invest.

4.2. Subjects' perceptions and feelings towards hukou identity

After the exogenous introduction of hukou identity through experimental design, the study must also examine the pupil subjects' perceptions and feelings towards hukou identity, such as whether they are clear about their hukou identity, and whether they think that pupils of different hukou identities are treated differently in daily life. Therefore, this study analyzed the hukou identity-related questionnaires completed by the subjects before the experiment. As the pre-experiment questionnaire was to prime the subjects' cognition of hukou identity, only the subjects of priming treatments needed to complete the pre-experiment questionnaire.

4.2.1. Cognition of hukou identity

The subjects comprised children with local permanent residence (local hukou) and children of migrant workers (nonlocal hukou), so the questions regarding how much the pupils consider themselves to be “local”; further, what they think about others' judgment is also related to self-perception of hukou identity.

The questionnaire primes the pupil subjects' cognition of hukou identity through such questions as “Can you speak the local dialect,” “Do you think of yourself as a local person,” “Does your classmate think of you as a local person,” and “Does your teacher think you as a local person.” The basic information about questions answered by local and nonlocal hukou students is shown in Table 4.

Table 4
The cognition of local and nonlocal hukou students towards hukou identity.

	Local hukou subjects			Nonlocal hukou subjects		
	Yes	No	Unknown	Yes	No	Unknown
Can you speak local dialect	65.18%	34.72%	–	12.50%	87.50%	–
Do you think yourself as a local person	85.20%	5.75%	9.05%	12.12%	67.30%	20.58%
Does your classmate think you as a local	58.25%	9.50%	32.25%	12.50%	55.85%	31.65%
Does your teacher think you as a local	67.25%	9.25%	23.50%	8.20%	65.58%	16.22%

Subjects also answered questions about their household registration address, and most subjects (81% local and 73% nonlocal hukou) accurately wrote down their household registration address. As shown in the above table, local and nonlocal hukou students clearly have a certain degree of cognition of their hukou identity. Most local household registered subjects express that they can speak local dialect and that their classmates and teachers regard themselves as locals. Most nonlocal household registered subjects express that they cannot speak the local dialect and that they are not regarded by themselves, their classmates or their teachers as locals. Therefore, it can be considered that the pupil subjects in the experiment have a clear understanding of their hukou identity.

4.2.2. Cognition of differences in different hukou identities

After examining the subjects' overall cognition of their own hukou identities in the experiment, the study must examine whether the pre-experimental questionnaire has primed the subjects' perceptions of whether students with different hukou identities are treated differently in daily life as demonstrated in school fees, number of students elected as class cadres, teacher's praise and daily allowance amount. The questionnaire results show that most student subjects (local and nonlocal hukou students) tend to believe that local hukou students are superior to nonlocal hukou students when asked to answer questions about whether students of different hukou identities are treated differently (Fig. 2).

A more precise examination of the results of different options reveals that both local and nonlocal hukou students believe that significantly more local hukou students will become student cadres than nonlocal hukou students (Wilcoxon signed-rank test, nonlocal hukou subjects: local vs. nonlocal ($z = 2.564, p = 0.036$), local vs. unknown ($z = 2.013, p = 0.048$); local hukou subjects: local vs. nonlocal ($z = 3.988, p = 0.007$), local vs. unknown ($z = 3.105, p = 0.022$)). Both local and nonlocal hukou students believe that local hukou students receive significantly more daily allowance than nonlocal hukou students (Wilcoxon signed-rank test,

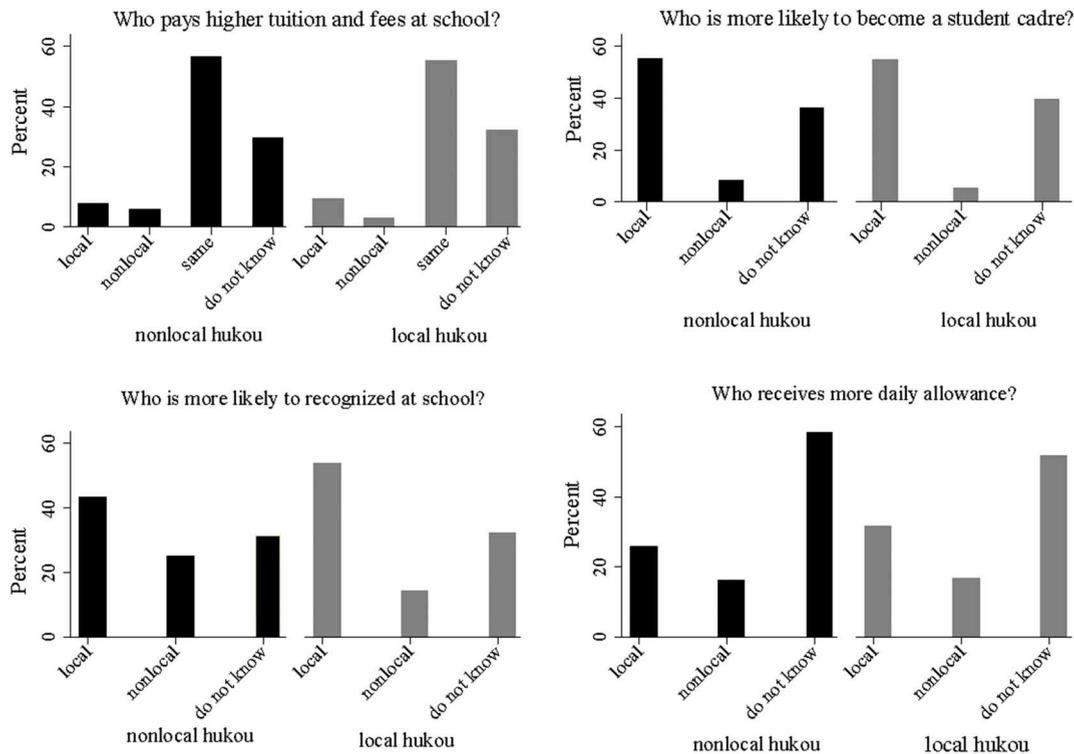


Fig. 2. Students with different hukou towards whether they are treated differently.

Table 5
Comparison results of principal data in different experimental groups.

Hypothesis to be tested	Experimental treatment in comparison		Invest ratio mean	Non-parametric test
Subjects with different hukou status have different levels of trust	NNLL	NNNL	0.51 vs. 0.53	$z = -1.451 ; p = 0.1467$
	NNLN	NNNN	0.54 vs. 0.50	$z = -0.012 ; p = 0.9902$
Subjects have different trust levels in different hukou population	NDLL	NDLN	0.51 vs. 0.50	$z = -0.131 ; p = 0.8958$
	NDNL	NDNN	0.55 vs. 0.55	$z = 0.123 ; p = 0.9023$
Priming of hukou identity cognition will change trust level of different hukou-type principals	PDLL	PDNL	0.64 vs. 0.62	$z = -0.036 ; p = 0.9714$
	PDLN	PDNN	0.46 vs. 0.48	$z = -0.241 ; p = 0.8094$
Priming of hukou cognition will change the principals' levels of trust in different hukou population	PDLL	PDLN	0.64 vs. 0.46	$z = 2.546 ; p = 0.0109^{**}$
	PDNL	PDNN	0.62 vs. 0.48	$z = 1.754 ; p = 0.0793^*$

nonlocal hukou subjects: local vs. nonlocal ($z = 4.096, p = 0.005$), local vs. unknown ($z = 2.125, p = 0.042$); local hukou subjects: local vs. nonlocal ($z = 4.525, p = 0.003$), local vs. unknown ($z = 1.976, p = 0.052$)).

4.3. Analysis of trust decision data

The above data show that although local and nonlocal hukou students report basically the same individual social characteristics, they all believe that local hukou students have advantages in daily life. Then, whether young students with different hukou identities will have significantly different trust levels, whether local and nonlocal hukou identities will determine their trust and trust-worthiness behavior, and whether the psychological cognition that different hukou identities will be treated differently will in turn affect their trust decisions in the face of local and nonlocal household registered population are examined.

This paper will carefully examine how hukou identity, disclosure of hukou identity information, and priming of hukou identity recognition will affect the subjects' decision in the trust game.

4.3.1. Nonparametric test of trust behavior

In this paper, the nonparametric test method is used to compare and analyze the principals' trust behaviors (investment ratio data) in each experimental treatment to examine the effect of the hukou identity of the principal, the disclosure of the hukou information of both game players, and the priming of hukou identity cognition on the principal's decision-making behavior in the trust game (with results shown in Table 5).

First, whether there is a significant difference in investment ratio between the local household registered principals and nonlocal ones is analyzed using the Wilcoxon rank-sum test without disclosure of hukou identity information of the game players. The test results show that there is no significant difference in the level of trust shown by principals of local hukou and nonlocal hukou towards agents (NNLL vs. NNNL: $p = 0.1467$;>NNLN vs. NNNN: $p = 0.9902$).

Second, whether there is a significant difference in the principals' investment ratio for agents with local hukou and those with nonlocal hukou when the hukou identity information of game players are disclosed is examined. The results show that there is no significant difference in the level of trust displayed by the principals towards agents, regardless of their hukou identities (NDLL vs. NDNL: $p = 0.8958$; NDNL vs. NDNN: $p = 0.9023$).

Third, we examined whether the priming of hukou identity cognition will change trust level of different hukou-type principals. The results indicate that there is no significant difference in the level of trust shown by principals of local hukou and nonlocal hukou towards agents under the priming of the hukou identity cognition (PDLL vs. PDNL: $p = 0.9714$; PDLN vs. PDNN: $p = 0.8094$).

Finally, this paper analyzes whether the priming of hukou identity cognition will result in significant differences in principals' investment ratio for agents with local and nonlocal hukou. The results show that priming of the cognition that different hukou identities will be differently treated changes the principals' trust level towards agents with different hukou identities. Principals will show a higher level of trust in agents with local hukou than those with nonlocal hukou (PDLL vs. PDLN: $p = 0.0109$; PDNL vs. PDNN: $p = 0.0793$).

4.3.2. Econometric regression analysis of trust behavior

After nonparametric tests between the investment ratio data of the experimental groups, it is found that there is no significant difference between local and nonlocal household registered principals in trust behavior, and the disclosure of hukou identity information of the game players will not change principals' trust in agents with different hukou. The priming of hukou identity-related cognition, however, will increase principals' trust in the local household registered agents.

To more robustly analyze the effect of hukou identity of game players, disclosure of hukou identity information, and priming of hukou identity cognition on principals' trust behavior, the following regression model is built:

$$INV_i = C + \beta_1 PRIM_i + \beta_2 PUB_i + \beta_3 PRIC_i + \beta_4 AGE_i + \beta_5 X_i + u_i + \varepsilon_i \tag{1}$$

In the model, the principals' investment amount in the trust game is the dependent variable, and priming hukou identity cognition, disclosure of hukou identity information and hukou identities of principals and agents serve as explanatory variables. The priming of hukou identity cognition is a dummy variable, $PRIM = 1$ indicates the priming hukou identity cognition, and $PRIM = 0$

indicates the non-priming hukou identity cognition. Disclosure of hukou identity information is a dummy variable, $PUB = 1$ indicates the disclosure of hukou identity information, and $PUB = 0$ indicates the nondisclosure of hukou identity information. $PRIC = 1$ indicates that the principal has local hukou identity, and $PRIC = 0$ indicates that the principal has nonlocal identity. $AGE = 1$ indicates that the agent has local hukou identity, and $AGE = 0$ indicates the agent has nonlocal identity. X denotes the individual social characteristics such as gender, age, student cadre, number of siblings, parental education level, and achievement ranking; u denotes the unobserved effect, and ε denotes stochastic disturbance. It was noted that since $PRIM = 1$ implies $PUB = 1$, β_1 captures the effect of priming and disclosure of hukou identity compared to nonpriming hukou identity on trust behavior, and β_2 captures the effect of disclosure of hukou identity compared to nonpriming and no disclosure of hukou identity on trust behavior.

Based on model (1), this paper constructs model (2), model (3) and model (4) by the respective introduction of the interaction items between variables of priming hukou identity cognition, disclosure of hukou identity information, and hukou identity of principals and agents.

$$INV_i = C + \beta_1 PRIM_i + \beta_2 PUB_i + \beta_3 PRIC_i + \beta_4 AGE_i + \beta_5 PUB_i * PRIC_i + \beta_6 PRIM_i * PUB_i * PRIC_i + \beta_7 X_i + u_i + \varepsilon_i \tag{2}$$

$$INV_i = C + \beta_1 PRIM_i + \beta_2 PUB_i + \beta_3 PRIC_i + \beta_4 AGE_i + \beta_5 PUB_i * AGE_i + \beta_6 PRIM_i * PUB_i * AGE_i + \beta_7 X_i + u_i + \varepsilon_i \tag{3}$$

$$INV_i = C + \beta_1 PRIM_i + \beta_2 PUB_i + \beta_3 PRIC_i + \beta_4 AGE_i + \beta_5 PRIM_i * PRIC_i + \beta_6 PRIM_i * AGE_i + \beta_7 PRIC_i * AGE_i + \beta_8 PRIM_i * PRIC_i * AGE_i + \beta_9 X_i + u_i + \varepsilon_i \tag{4}$$

$$INV_i = C + \beta_1 PRIM_i + \beta_2 PUB_i + \beta_3 PRIC_i + \beta_4 AGE_i + \beta_5 PUB_i * PRIC_i + \beta_6 PUB_i * AGE_i + \beta_7 PRIC_i * AGE_i + \beta_8 PUB_i * PRIC_i * AGE_i + \beta_9 X_i + u_i + \varepsilon_i \tag{5}$$

The principal's investment amount is limited to an integer distributed within 0–10 yuan. Therefore, the OLS model is used for regression analysis of the principal's investment amount data. The data in Table 6 below are the regression results of models (1)–(5).

The regression results show that, under the controlled individual social characteristics, the hukou identities of principals and agents, disclosure of hukou identity information, and the priming of hukou identity cognition will not directly affect the principal's trust decision. Importantly, it is in model (3) that under priming hukou identity cognition and disclosure of players' hukou identity information, principals will significantly increase the investment amount by 1.45 yuan to local hukou agents compared to nonlocal ones. In model (4), the significant coefficient of the interaction term between priming hukou identity and the hukou identities of agents also shows that principals will provide more investment to local hukou agents than nonlocal ones under priming and disclosure of hukou identity, since $PRIM = 1$ implies $PUB = 1$. In addition, the coefficient of the interaction term of priming and hukou identity of principal and agent is positive (1.12) and significant at the 5% level, which indicates that local hukou proposers invest 1.12 yuan more to their local hukou agents under conditions of priming and disclosure of hukou identity.

4.3.3. Correlation analysis of hukou identity cognition and trust decision

According to the results of the pre-experiment questionnaire, pupils have some cognition that students with different hukou identities will be differently treated. Moreover, it has been found through both nonparametric tests and regression analysis that priming hukou identity-related cognition, combined with the disclosure of hukou identity information and the agent's hukou identity, will affect the principal's trust behavior to some extent. To further verify this conclusion, the principals' answers in the hukou identity cognition priming questionnaire, including whether there is a difference between local and nonlocal hukou students in the amount of daily allowance, number of student cadres, teacher's praise, and school fees, are regressively analyzed with their investment data in

Table 6
OLS regression results of principal investment data.

Model	(1)	(2)	(3)	(4)	(5)
Priming hukou identity	0.36 (0.36)	0.22 (0.30)	-0.35 (0.15)	-0.19 (0.15)	0.37 (0.26)
Disclosure of hukou identity	0.02 (0.35)	0.13 (0.21)	-0.08 (0.18)	0.02 (0.06)	-0.15 (0.25)
Local principal	-0.18 (0.28)	-0.12 (0.37)	-0.19 (0.20)	0.06 (0.22)	0.27 (0.10)
Local agent	0.43 (0.29)	0.43 (0.25)	-0.16 (0.26)	0.19 (0.13)	0.22 (0.16)
Public * local principal		-0.23 (0.45)			-0.56 (0.39)
Priming * public * local principal		0.27 (0.51)			
Public * local agent			0.21 (0.26)		0.41 (0.34)
Priming * public * local agent			1.45*** (0.17)		
Priming * local principal				-0.41 (0.26)	
Priming * local agent				0.97*** (0.21)	
Local principal * local agent				-0.57 (0.31)	-0.81 (0.16)
Priming * local principal * local agent				1.12** (0.47)	
Public * local principal * local agent					0.99 (0.56)
Individual characteristics	Control	Control	Control	Control	Control
_cons	5.43*** (1.60)	5.39*** (1.62)	5.56*** (1.52)	5.15*** (1.58)	5.48 (1.62)***
N	528	528	528	528	528

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively, and that in parentheses is the clustered standard errors at the experiment room level.

Table 7
OLS regression of the correlation between hukou identity cognition and trust decision.

Models	(1)	(2)	(3)	(4)
Principal's hukou	-0.13 (0.07)	-0.41 (0.18)	-0.39 (0.46)	-0.67 (0.06)
Agent's hukou	2.42** (0.38)	1.52*** (0.73)	2.02** (1.61)	2.56* (0.85)
Principal * agent	0.04 (0.25)	0.52 (0.26)	0.31 (0.45)	0.37 (0.07)
Who receive more daily allowance				
Local students	1.80* (0.68)			
Unknown	-0.95 (1.11)			
Daily allowance * of agent's hukou	0.62** (0.29)			
Who is more likely to become a student cadre				
Local students		1.61* (1.30)		
Unknown		-0.56 (0.49)		
Student cadre * agent's hukou		0.25** (0.37)		
Who is more likely to be recognized				
Local students			1.87* (1.07)	
Unknown			-0.48 (1.40)	
Praise * agent's hukou			0.64** (0.82)	
Who pays higher tuition and fees				
Local students				2.82** (0.71)
Same				0.85 (0.94)
Unknown				-1.25 (1.12)
Tuition fees * agent's hukou				0.74 (0.36)
_cons	4.31*** (0.21)	4.74*** (0.45)	4.80*** (0.58)	4.70*** (0.33)
N	176	176	176	176

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively, and that in parentheses is the clustered standard errors at the experiment room level. The sample is only subjects in the priming treatments. "Principal's hukou" = 1 represent local hukou, and "agent's hukou" = 1 represent local hukou. The baseline category is nonlocal students. Daily allowance means the pocket money students receive from parents on a typical day. "Daily allowance * of agent's hukou" represents the interaction term between "believing local students receive more daily allowance" and "agents with local hukou", "student cadre * agent's hukou" represents the interaction term between "believing local students is more likely to become a student cadre" and "agents with local hukou", "praise * agent's hukou" represents the interaction term between "believing local students is more likely to be recognized" and "agents with local hukou", and "tuition fees * agent's hukou" represents the interaction term between "believing local students pays higher tuition and fees" and "agents with local hukou".

the game (e.g., Models 1–4 in Table 7), in an attempt to further examine the influence of subjects' cognition of hukou identity on their trust decisions.

The regression results in the above table show a close correlation between principals' cognition of hukou identity and their decision in the trust game. Principals who believe that local hukou students receive more daily allowance will show more trust in agents with local hukou. Principals who believe that more local hukou students are elected as class cadres will show more trust in agents with local hukou. Principals who believe that local hukou students receive more praise and pay more tuition will show more trust in agents with local hukou. All of these conclusions show that priming subjects' cognition of different treatment in daily life towards students with different hukou identities will directly determine their trust in agents with different hukou identities in the game.

4.4. Analysis of trustworthiness behavior data

After careful analysis of principals' trust decisions, it is necessary to emphatically examine the agents' return decisions in the trust game after receiving the principals' investment amounts. Such return decisions reflect the agents' trustworthiness behavior. Since the agent in the experiment must make corresponding return decisions for all possible investment amounts, the agents' average return amount in all strategic choices² and the proportion of their returns in the face of various possible investment amounts will be simultaneously considered in this paper.

4.4.1. Nonparametric test of trustworthiness level

In this paper, the nonparametric test method is adopted to compare principals' trustworthiness behaviors between each experimental treatment (with return value data shown in Fig. 3) to test the effect of agents' hukou identity, the disclosure of players' hukou identity information and priming of hukou identity cognition on agents' trustworthiness level in the trust game (with test results shown in Table 8).

² The strategy method is used to elicit second mover decisions in many studies (Ashraf et al., 2006; Cox, 2009; Eckel & Petrie, 2011; Ortmann, Fitzgerald, & Boeing, 2000; Solnick, 2007; Song, 2008). The strategy method makes it possible to get at some of the potential virtues in a simpler way. It may lead subjects to make more thoughtful decisions and may lead to better insights into the motives. At the same time, it allows for a more economical data-collection process (Brandts & Charness, 2010). In a meta-analysis of trust game, Johnson and Mislin (2011) posit that the strategy method does not lead to different experimental results than the standard direct-response method.

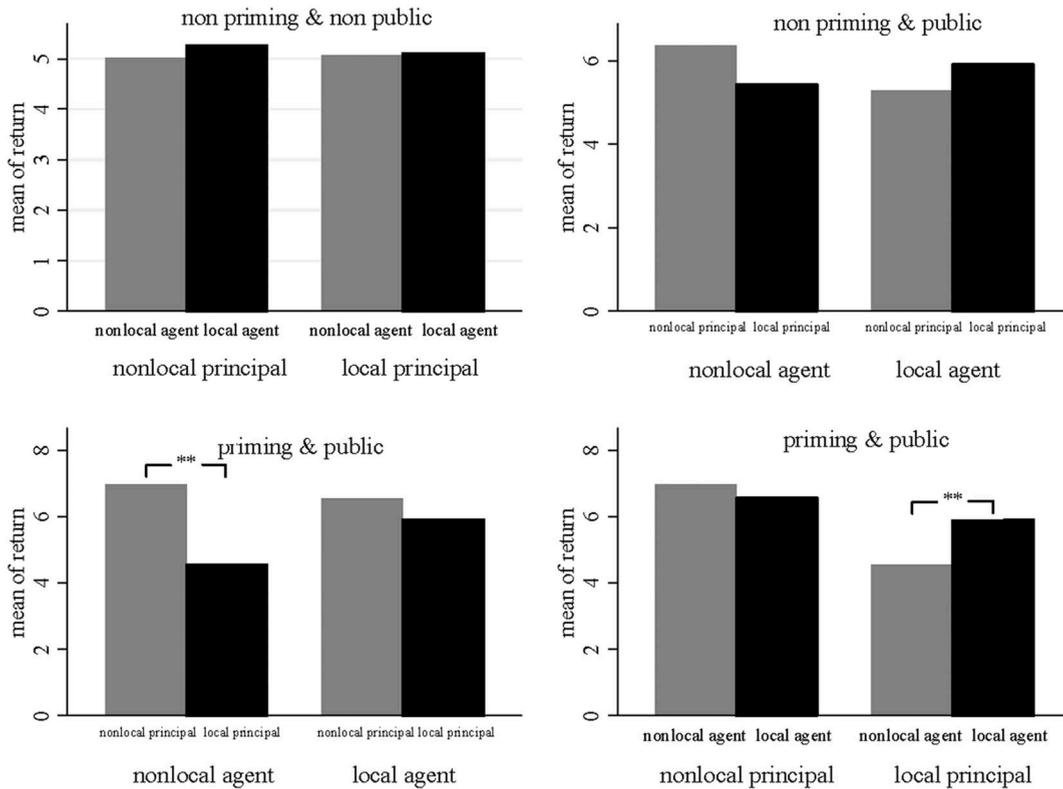


Fig. 3. Comparison of the average return amount between experimental treatments.

Table 8

Comparison results of agent data in different experimental groups.

Hypothesis to be tested	Experimental treatments in comparison		Mean return amount	Non-parametric test
Agents of different hukou-type have different trustworthiness level	NNLL	NNLN	5.11 vs. 5.07	$z = -0.271 ; p = 0.7868$
	NNNL	NNNN	5.26 vs. 5.01	$z = 0.165 ; p = 0.8691$
Agents have different trustworthiness towards different hukou-type principals	NDLL	NDNL	5.91 vs. 5.44	$z = 1.000 ; p = 0.3172$
	NDLN	NDNN	5.29 vs. 6.36	$z = -0.613 ; p = 0.5397$
Priming hukou identity will change agents' trustworthiness towards different hukou-type principals	PDLL	PDNL	5.89 vs. 6.56	$z = -0.981 ; p = 0.3267$
	PDLN	PDNN	4.57 vs. 6.91	$z = -2.509 ; p = 0.0121^{**}$
Priming hukou identity will change trustworthiness level of different hukou-type agents	PDNN	PDNL	6.91 vs. 6.56	$z = 0.333 ; p = 0.7391$
	PDLN	PDLL	4.57 vs. 5.89	$z = -1.990 ; p = 0.0466^{**}$

First, whether there is a significant difference in return amount between local hukou agents and nonlocal ones is compared using the Wilcoxon rank-sum test when the hukou identity information of game players is not disclosed. The test results show that there is no significant difference in the level of trustworthiness displayed by local hukou agents and nonlocals ones in the face of the principal's investment amount (NNLL vs.>NNLN: $p = 0.7868$;>NNNL vs.>NNNN: $p = 0.8691$).

Second, whether there is a significant difference in the return amount to local hukou principals and nonlocal ones is compared under the disclosure of players' hukou identity information. The test results show that there is no significant difference in the level of trustworthiness displayed by agents in the face of local and nonlocal hukou principals (NDLL vs.>NDNL: $p = 0.3172$;>NDLN vs.>NDNN: $p = 0.5397$).

Finally, this paper analyzes whether priming hukou identity cognition will lead to significant differences in agents' return amounts in the conditions containing either local and hukou principals. The test results show that the priming hukou cognition that different hukou identities will be differently treated will change the agents' trustworthiness level in the face of different hukou principals. Agents show a higher level of trustworthiness to nonlocal household registered principals than local ones, but such a difference is only statistically significant for nonlocal agents (PDLL vs.>PDNL: $p = 0.3267$;>PDLN vs.>PDNN: $p = 0.0121$). In addition, we also found that agents with local hukou show a significantly higher level of trustworthiness than agents with nonlocal hukou in the face of local hukou principal, but there is no significant difference between local and nonlocal hukou agents when they faced a nonlocal hukou principal (PDLN vs.>PDLL: $p = 0.0466$;>PDNN vs.>PDNL: $p = 0.333$).

Table 9
OLS regression results of agents' return amount.

Model	(1)	(2)	(3)	(4)	(5)
Priming hukou identity	0.26 (0.38)	0.80 (0.45)	0.03 (0.71)	1.13*** (0.31)	0.24 (0.22)
Disclosure of hukou identity	0.64** (0.27)	0.80* (0.39)	0.82** (0.32)	0.64*** (0.18)	1.63*** (0.21)
Local principal	-0.59* (0.31)	-0.01 (0.15)	-0.59* (0.31)	-0.41 (0.34)	0.11 (0.09)
Local agent	0.17 (0.29)	0.17 (0.23)	0.26 (0.34)	-0.17 (0.34)	0.38 (0.13)
Public * local principal		-0.32 (0.43)			-0.82 (0.36)
Priming * public * local principal		-1.11** (0.66)			
Public * local agent			-0.36 (0.52)		-1.07 (0.29)
Priming * public * local agent			0.45 (0.87)		
Priming * local principal				-2.01** (0.37)	
Priming * local agent				-0.48 (0.38)	
Local principal * local agent				0.51 (0.43)	-0.17 (0.18)
Priming * local principal * local agent				1.47*** (0.52)	
Public * local principal * local agent					1.82 (0.48)
Individual characteristics	Control	Control	Control	Control	Control
_cons	6.76*** (1.22)	6.39*** (1.09)	6.64*** (1.32)	6.56*** (1.22)	6.40 (1.31)***
N	528	528	528	528	528

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively, and that in parentheses is the clustered standard errors at the experiment room level.

4.4.2. *Econometric regression analysis of trustworthiness level*

The nonparametric test showed that no significant difference is found in trustworthiness level between the local hukou and nonlocal agents, nor has it been found that the disclosure of players' hukou identity information will change agents' return amount towards principals with different hukou. After priming hukou identity cognition, however, nonlocal hukou agents will show higher trustworthiness to nonlocal hukou principals than local ones.

The following regression model is further constructed to more robustly analyze the effect of such factors as players' hukou identities, disclosure of hukou identity information, and priming of hukou identity cognition, etc., on the agents' return behavior:

$$RET_i = C + \beta_1 PRIM_i + \beta_2 PUB_i + \beta_3 PRIC_i + \beta_4 AGE_i + \beta_5 X + u_i + \varepsilon_i$$

In the model, the agents' return amount in the game is the dependent variable, and the priming of hukou identity cognition, disclosure of hukou identity information and hukou identities of principals and agents serve as explanatory variables under the condition of controlled individual social characteristics. Based on model (1), this paper constructs the following models (2), (3), (4), and (5) by the respective introduction of the interaction items between variables of priming of hukou identity cognition, disclosure of hukou identity information, and hukou identities of principals and agents. The data in Table 9 are the OLS regression results for models (1)–(5).

The regression results show that under controlled individual characteristics, agents will significantly reduce the return amount to local hukou principals compared to nonlocal ones when hukou identity information is primed. The regression result of model (2) further reveals that local hukou principals will receive a significantly lower return amount (1.11 yuan) from agents compared to nonlocal principals under the priming of hukou identity cognition and disclosure of hukou identity information of game players. In model (4), the significant coefficient of the interaction term between priming hukou identity and the hukou identities of principals also shows that local hukou principals will receive a significant lower return amount (2.01 yuan) from agents than nonlocal principals under the priming of hukou identity and disclosure of hukou identity information, since $PRIM = 1$ implies $PUB = 1$. In addition, the coefficient of the interaction term of priming and the hukou identity of principal and agent is positive, which indicates that local hukou agents return 1.47 yuan more to their local hukou principals under priming and disclosure of hukou identity. The results are consistent with previous nonparametric analysis.

4.4.3. *Analysis of trustworthiness levels under different investment amounts*

To verify the robustness of the test results of agents' trustworthiness, the strategic return decisions in different experimental groups are further compared for different investment amounts (1 yuan, 2 yuan ... 10 yuan) (see Table 10). The test results show that there is no significant difference between local and nonlocal hukou agents in trustworthiness, regardless of the principals' initial investment amount. Disclosure of hukou identity information will not result in significantly different levels of agent trustworthiness in the face of different household registered principals; only priming hukou identity will change agents' trustworthiness level in the face of different household registered principals. The test results of return ratio under different investment amounts are exactly the same as those of the average return amount.

4.4.4. *Correlation analysis of hukou identity cognition and trustworthiness behavior*

To further explore the action mechanism of priming of hukou identity cognition on agents' trustworthiness behavior, a correlation analysis is carried out for agents' answers on the questionnaire on priming of hukou identity cognition before the game experiment and their return amount in different experimental treatments to explain the correlation between the two. The former includes whether there is a difference between local and nonlocal hukou students in daily allowance amount, elected student cadres, teacher praise, school fees, etc.

Table 10
Comparison of return ratios^a of experimental groups under different investment amounts.

Investment amounts	NNLL vs. NNLN	NNNL vs. NNNN	NDLL vs. NDNL	NDDL vs. NDDN	PDLL vs. PDNL	PDLN vs. PDNN
1 ^b	$z = -0.590; p = 0.5553$	$z = 0.144; p = 0.8859$	$z = -0.263; p = 0.7929$	$z = -0.473; p = 0.6366$	$z = 0.317; p = 0.7512$	$z = -2.273; p = 0.0230^{**}$
2	$z = -0.476; p = 0.6338$	$z = -0.470; p = 0.6382$	$z = 0.555; p = 0.5791$	$z = -0.754; p = 0.4508$	$z = -0.905; p = 0.3655$	$z = -2.135; p = 0.0328^{**}$
3	$z = 0.287; p = 0.7741$	$z = -0.361; p = 0.7181$	$z = 0.637; p = 0.5241$	$z = -0.973; p = 0.3305$	$z = -0.904; p = 0.3659$	$z = -2.466; p = 0.0137^{**}$
4	$z = 0.108; p = 0.9138$	$z = -0.542; p = 0.5876$	$z = 0.758; p = 0.4482$	$z = -0.338; p = 0.7350$	$z = -1.611; p = 0.1072$	$z = -2.798; p = 0.0051^{***}$
5	$z = -0.655; p = 0.5123$	$z = -1.129; p = 0.2587$	$z = 1.171; p = 0.2909$	$z = 0.089; p = 0.9291$	$z = -1.356; p = 0.1752$	$z = -2.132; p = 0.0330^{**}$
6	$z = -0.119; p = 0.9052$	$z = -0.598; p = 0.5497$	$z = 1.493; p = 0.1355$	$z = -0.344; p = 0.7312$	$z = -0.890; p = 0.3733$	$z = -2.586; p = 0.0097^{***}$
7	$z = 0.298; p = 0.7660$	$z = 0.204; p = 0.8383$	$z = 0.360; p = 0.7191$	$z = -1.073; p = 0.2832$	$z = -0.563; p = 0.5736$	$z = -2.229; p = 0.0258^{**}$
8	$z = -0.284; p = 0.7762$	$z = 0.594; p = 0.5528$	$z = 0.328; p = 0.7432$	$z = -1.095; p = 0.2736$	$z = -0.780; p = 0.4356$	$z = -2.859; p = 0.0042^{***}$
9	$z = -0.391; p = 0.6959$	$z = 0.744; p = 0.4570$	$z = 0.800; p = 0.4238$	$z = -0.805; p = 0.4206$	$z = -0.864; p = 0.3874$	$z = -2.572; p = 0.0101^{**}$
10	$z = -0.283; p = 0.7768$	$z = 1.166; p = 0.2436$	$z = 0.543; p = 0.5874$	$z = -0.258; p = 0.7964$	$z = -0.963; p = 0.3354$	$z = -2.742; p = 0.0061^{***}$

^a Return ratio = return amount/triple investment.

^b Investment amount is in unit yuan.

Table 11
Correlation test of hukou identity cognition and return amount data.

	PDLL	PDLN	PDNL	PDNN
Daily allowance	$r = -0.245; p = 0.2717$	$r = 0.587; p = 0.0354^{**}$	$r = -0.352; p = 0.1078$	$r = -0.657; p = 0.0229^{**}$
Student cadre	$r = -0.148; p = 0.5116$	$r = 0.278; p = 0.2573$	$r = -0.088; p = 0.6962$	$r = -0.453; p = 0.0612^*$
Praise	$r = -0.087; p = 0.6988$	$r = 0.053; p = 0.8141$	$r = -0.250; p = 0.2681$	$r = -0.544; p = 0.0478^{**}$
School tuition	$r = -0.227; p = 0.3105$	$r = -0.380; p = 0.0811^*$	$r = -0.475; p = 0.0254$	$r = 0.129; p = 0.5656$

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Daily allowance = 1 means “subjects think that the nonlocal hukou students receive more the pocket money from parents”, daily allowance = 2 means “subjects think that the local hukou students receive more the pocket money from parents”, and daily allowance = 3 means “subjects can't make sure which students of hukou-types receive more the pocket money from parents”. Student cadre = 1 means “subjects think that the nonlocal hukou students are more likely to become a student cadre”, student cadre = 2 means “subjects think that the local hukou students are more likely to become a student cadre”, and student cadre = 3 means “subjects can't make sure which students of hukou-types are more likely to become a student cadre”. Praise = 1 means “subjects think that the nonlocal hukou students are more likely to be recognized at school”, praise = 2 means “subjects think that the local hukou students are more likely to be recognized at school”, and praise = 3 means “subjects can't make sure which students of hukou-types are more likely to be recognized at school”. School tuition = 1 means “subjects think that the nonlocal hukou students pay more tuition and fees at school”, school tuition = 2 means “subjects think that the local hukou students pay more tuition and fees at school”, school tuition = 3 means “subjects think that the local hukou and nonlocal hukou students pay the same tuition and fees at school”, and school tuition = 4 means “subjects can't make sure which students of hukou-types pay more tuition and fees at school”.

To quantitatively analyze the correlation between the agents' choices in the questionnaire before the experiment and their return decisions during the experiment, this paper classifies the agents' choices on the questionnaire before the experiment; namely, the belief that the local household registered population is preferentially treated and belief that nonlocal household registered population is preferentially treated are respectively denoted as different values of categorical variables. Then, the Spearman correlation test was performed between the categorical variable and returned amount data (Table 11).

The test results show that after the priming of cognition that different hukou identities are differently treated, nonlocal hukou agents who believe that local hukou students are preferentially treated will return less to local hukou principals (in PDLN, and in terms of daily allowance, tuition treated), and they will return more to nonlocal hukou principals (in PDNN, and in terms of daily allowance, elected student cadre, praise treated) than nonlocal hukou agents with regard to others.

The above conclusions clearly demonstrate that the agents' cognition of hukou identity directly determines their different trustworthiness behavior in the face of game players with different hukou identities.

5. Conclusion

Using the framed field experiment method, this paper exogenously introduces hukou identity to the trust game to investigate whether pupils' cognition of and feelings about hukou identity and their actual hukou identity will affect people's trust levels. The results show that the concept and characterized inequality of hukou identity has been implanted in people's youth and affects their trust level. Although the disclosure of hukou identity will not cause differences in subjects' trust and trustworthiness when they face partners with different hukou identities, the priming of cognition that differently registered household populations are treated differently will make principals trust more in local hukou agents than nonlocal ones and result in nonlocal hukou agents' higher trustworthiness to nonlocal hukou principals than local ones. This implies that principals may believe that local hukou agents (the superior side) are more generous compared to nonlocal hukou agents (the weaker side) because they get better treatment, so principals expect a higher return amount from local hukou agents than from nonlocal ones. Moreover, when hukou identity is made salient, local hukou agents return a higher amount to the local hukou principals than to nonlocal hukou principals, and nonlocal hukou agents return a higher amount to the nonlocal hukou principals than they do to local hukou principals. We interpret this result as in-group favoritism and more monetary compensation to weaker social group.

In addition, this paper also finds that the pupils have a certain psychological cognition of the different treatment of different hukou identities. This cognition directly causes subjects to make different decisions when faced with game partners with different hukou identities in the trust game. It is often found that in-group bias in the trust game experiments (Chen & Li, 2009; Falk & Zehnder, 2013; Chuah et al., 2013; Gupta et al., 2018). However, in this experiment non-local hukou students have not more trust on their non-local counterparts than local counterparts that is consistent with the finding of an inter-ethnic trust game field experiment (Tsutsui & Zizzo, 2014). It may be that local hukou students are considered to have more pocket money from parents, so they may be more generous, more investment-conscious, and more likely to return in the trust game. That is, principals who believe that local hukou students are preferentially treated in daily life are more likely to trust more in local hukou agents. Nonlocal hukou agents who believe that local hukou students are preferentially treated in daily life are more likely to return more to nonlocal hukou principals. It can thus be inferred that pupils' psychological cognition that different hukou identities are differently treated makes them more willing to take care of the weaker side (nonlocal hukou students) and trust in the superior side (local hukou students) in the game.

This paper attempts to make the following innovations in theoretical research. First, with pupils from grades three to six as experimental subjects, it investigates pupils' behavior in the trust game experiment, which can enrich the sample database of domestic experimental economics research. Second, this study tests the influence of the introduction of hukou social status on subjects'

pro-social behaviors (trust and trustworthiness behaviors) and can thus broaden research ideas for prosocial behavior in the context of Chinese society. Third, by using a framed field experiment (Harrison & List, 2004; Levitt & List, 2007), the experimental site is changed from a university laboratory to daily life and abstract experimental information is changed into social context, so that real world social problems can be tested more effectively.

This paper may also provide certain practical significance. Although the experiment reveals pupils' awareness of hukou identity and their different cognitions for different hukou, the subjects show relatively stable trust levels overall. Meanwhile, there is no exclusion and opposition between subjects with different hukou identities under the disclosure of players' hukou identities information. It is only after the artificial priming of cognition of hukou identity that the subjects' trust decisions are correspondingly affected. In other words, the gradual differentiation of groups with different hukou identities may be a result of differential policies in hukou that limits nonlocals and treats them differently.

Of course, there is still room for further improvement and extension in this paper. For instance, the trust game can reflect substantial aspects of trust and trustworthiness, but cannot measure pure trust and involve other preferences, such as reciprocity, altruism, and risk preference (Ashraf et al., 2006; Bohnet, Greig, Herrmann, & Zeckhauser, 2008; Bohnet & Zeckhauser, 2004; Cox, 2004). Other experiments must be conducted to separate pure trust and trustworthiness from decision making. Because adults' occupations and experiences are highly associated with hukou status and hukou can also be endogenous, care must be taken in drawing conclusions about the relationship between trust and hukou status for the general population. Therefore, future studies can also analyze whether there are differences in prosocial behavior between adults and pupils (such as parents and their children) of the same geographical area and background under the introduction of hukou identity to test whether the increase in age and different experience will give rise to the opposition and exclusion between subjects who have different hukou identities.

Funding

This work was supported by the China's Ministry of Education Humanities and Social Sciences Youth Program (17YJCZH120), China's National Natural Science Program (grant numbers 71703145, 71773108) and Zhejiang's National Natural Science Program (LY17G030023).

Declaration of Competing Interest

We have no conflicts of interest to disclose.

Acknowledgements

We thank the youth league committee and education bureau of shangcheng district of hangzhou for their support and assistance to the experiment. We thank Qing Yu, Shengshan Zhao, Han Lin, Wenyan Zhang, Yifan Niu, Jiexuan Gong, Shengnan Deng providing help during the survey and field experiments.

Appendix A

The following appendixes are the English translations of our experiment instructions, decision cards, pre-experiment survey, and post-experiment survey. The original documents are written in Chinese.

A.1. Experiment Instructions (for principals)

Your game ID:__

Greetings! Welcome to this experiment conducted by Zhejiang University of Finance and Economics. This experiment will take about 30 min of your time.

General instructions

- You will play a game and earn cash in this experiment. Please read the following instructions carefully and make sure you understand all of them before you make your decision. The decision you make will determine the amount of money you receive at the end of this experiment.
- You will be paid 5 yuan for your participation, in addition to whatever you make in the game. In other words, your total earnings of today's experiment will equal to whatever you make in the game, plus 5 yuan participation fee.
- You are not allowed to talk during the game. If you have any question, please raise your hand and an experimenter will come and answer your question in private. You will be asked to terminate the game and leave the room if you speak with another participant, and we will not be able to pay you in such situation.
- All your personal information, including your game decision, answers to the survey questions, and the amount you earn from this game will be kept private.
- Please do not share your decision with any other participants throughout the experiment.
- You will do two practice questions before the game starts. You have to answer both of them correctly to proceed with the game. The purpose of these practice questions is to make sure you fully understand the game instructions and know how to calculate

your earnings correctly.

Game procedures

1. You will pick one card out of a deck of cards. The number on the card will be your game ID.
2. You will be paired with one person in the other classroom to play this game. Your partner will be the person who has the same card number (game ID). You will not meet your partner throughout this experiment. You may or may not have met your partner before.
3. You will receive 10 yuan from us. You have to decide how to invest this money to your partner. You will be given a list of choices. Please indicate your decision by checking the box in front of the choice you make. The investment amount will be tripled before delivery to your partner.
4. Your partner will decide how much money to pay back to you after receiving this investment. The return amount can't exceed the tripled investment amount.
5. You have 5 min to make a decision. When time is up, we will collect your decision card and pass it to your partner. After your partner has made his or her decision, we will give your decision card back to you. You will have the chance to confirm your final payment.
6. You will receive a questionnaire after you hand in your decision card. Your answers to these questions will be kept private. Please respond carefully and truthfully. You have 5 min to answer these questions.
7. Please remain seated after completing the questionnaire. The experimenter will call your game ID one by one and pay you privately. Only you and the experimenter will know your earnings. No other participant will know how much you have made in the game.

Practice questions

You have to answer both of these questions correctly to proceed.

1. For example, in the game, you choose to keep 8 yuan for yourself and invest 2 yuan to your partner. The amount your partner is willing to pay back is 5 yuan. In this case, you will get_yuan, and your partner will get_yuan.
2. For example, in the game, you choose to keep 2 yuan for yourself and give 8 yuan to your partner. The amount your partner is willing to pay back is 10 yuan. In this case, you will get_yuan, and your partner will get_yuan.

A.2. Experiment instructions (for agents)

Your game ID:___

Greetings! Welcome to this experiment conducted by Zhejiang University of Finance and Economics. This experiment will take about 30 min of your time.

General instructions

- You will play a game and earn cash in this experiment. Please read the following instructions carefully and make sure you understand all of them before you make your decision. The decision you make will determine the amount of money you receive at the end of this experiment.
- You will be paid 5 yuan for your participation, in addition to whatever you make in the game. In other words, your total earnings of today's experiment will equal to whatever you make in the game, plus 5 yuan participation fee.
- You are not allowed to talk during the game. If you have any question, please raise your hand and an experimenter will come and answer your question in private. You will be asked to terminate the game and leave the room if you speak with another participant, and we will not be able to pay you in such situation.
- All your personal information, including your game decision, answers to the survey questions, and the amount you earn from this game will be kept private.
- Please do not share your decision with any other participants throughout the experiment.
- You will do two practice questions before the game starts. You have to answer both of them correctly to proceed with the game. The purpose of these practice questions is to make sure you fully understand the game instructions and know how to calculate your earnings correctly.

Game procedures

1. You will pick one card out of a deck of cards. The number on the card will be your game ID.
2. You will be paired with one person in the other classroom to play this game. Your partner will be the person who has the same card number (game ID). You will not meet your partner throughout this experiment. You may or may not have met your partner before.
3. Your partner will receive 10 yuan from us, and she/he have to decide how to invest this money to you. The investment amount will be tripled and delivery to you.
4. You will be given a list of all possible investment amounts (integer of 0–10 yuan). You need to make decisions how much money to

return for these investment amounts from your partner. The return amount can't exceed the tripled investment amount.

5. You have 5 min to make a decision. When time is up, we will collect your decision card and pass it to your partner. After your partner has made his or her decision, we will give your decision card back to you. You will have the chance to confirm your final payment.
6. You will receive a questionnaire after you hand in your decision card. Your answers to these questions will be kept private. Please respond carefully and truthfully. You have 5 min to answer these questions.
7. Please remain seated after completing the questionnaire. The experimenter will call your game ID one by one and pay you privately. Only you and the experimenter will know your earnings. No other participant will know how much you have made in the game.

Practice questions

You have to answer both of these questions correctly to proceed.

1. For example, in the game, your partner chooses to keep 8 yuan for herself/himself and invest 2 yuan to you. The amount you are willing to pay back is 5 yuan. In this case, you will get_yuan, and your partner will get_yuan.
2. For example, in the game, your partner chooses to keep 2 yuan for herself/himself and give 8 yuan to you. The amount you are willing to pay back is 10 yuan. In this case, you will get_yuan, and your partner will get_yuan.

A.3. Principal's decision card (for control groups with private hukou identity)

Your game ID:

Your partner's game ID:

You are a principal. You have to allocate 10 yuan between you and your partner. Please make your decision by checking one of the brackets below.

- Keep 10 yuan for yourself, invest 0 yuan to your partner.
- Keep 9 yuan for yourself, invest 1 yuan to your partner.
- Keep 8 yuan for yourself, invest 2 yuan to your partner.
- Keep 7 yuan for yourself, invest 3 yuan to your partner.
- Keep 6 yuan for yourself, invest 4 yuan to your partner.
- Keep 5 yuan for yourself, invest 5 yuan to your partner.
- Keep 4 yuan for yourself, invest 6 yuan to your partner.
- Keep 3 yuan for yourself, invest 7 yuan to your partner.
- Keep 2 yuan for yourself, invest 8 yuan to your partner.
- Keep 1 yuan for yourself, invest 9 yuan to your partner.
- Keep 0 yuan for yourself, invest 10 yuan to your partner.

A.4. Principal's decision card (for treatment groups with disclosure of hukou identity)

Your game ID:

Your hukou type: Local hukou.

Your partner's game ID:

Your partner's hukou type: Nonlocal hukou.

You are a principal. You have to allocate 10 yuan between you and your partner. Please make your decision by checking one of the brackets below.

- Keep 10 yuan for yourself, invest 0 yuan to your partner.
- Keep 9 yuan for yourself, invest 1 yuan to your partner.
- Keep 8 yuan for yourself, invest 2 yuan to your partner.
- Keep 7 yuan for yourself, invest 3 yuan to your partner.
- Keep 6 yuan for yourself, invest 4 yuan to your partner.
- Keep 5 yuan for yourself, invest 5 yuan to your partner.
- Keep 4 yuan for yourself, invest 6 yuan to your partner.
- Keep 3 yuan for yourself, invest 7 yuan to your partner.
- Keep 2 yuan for yourself, invest 8 yuan to your partner.
- Keep 1 yuan for yourself, invest 9 yuan to your partner.
- Keep 0 yuan for yourself, invest 10 yuan to your partner.

A.5. Agent's decision card (for control groups with private hukou identity)

Your game ID:

Your partner's game ID:

You are an agent. You have to make decisions how much money to return for these investment amounts from your partner. Please

make your decision by filling in the numbers on the underlines below.

If your partner invests 0 yuan to you, you receive 0 yuan. You will pay back_yuan to her/him.

If your partner invests 1 yuan to you, you receive 3 yuan. You will pay back_yuan to her/him.

If your partner invests 2 yuan to you, you receive 6 yuan. You will pay back_yuan to her/him.

If your partner invests 3 yuan to you, you receive 9 yuan. You will pay back_yuan to her/him.

If your partner invests 4 yuan to you, you receive 12 yuan. You will pay back_yuan to her/him.

If your partner invests 5 yuan to you, you receive 15 yuan. You will pay back_yuan to her/him.

If your partner invests 6 yuan to you, you receive 18 yuan. You will pay back_yuan to her/him.

If your partner invests 7 yuan to you, you receive 21 yuan. You will pay back_yuan to her/him.

If your partner invests 8 yuan to you, you receive 24 yuan. You will pay back_yuan to her/him.

If your partner invests 9 yuan to you, you receive 27 yuan. You will pay back_yuan to her/him.

If your partner invests 10 yuan to you, you receive 30 yuan. You will pay back_yuan to her/him.

A.6. Agent's decision card (for treatment groups with disclosure of hukou identity)

Your game ID:

Your hukou type: Local hukou.

Your partner's game ID:

Your partner's hukou type: Nonlocal hukou.

You are an agent. You have to make decisions how much money to return for these investment amounts from your partner. Please make your decision by filling in the numbers on the underlines below.

If your partner invests 0 yuan to you, you receive 0 yuan. You will pay back_yuan to her/him.

If your partner invests 1 yuan to you, you receive 3 yuan. You will pay back_yuan to her/him.

If your partner invests 2 yuan to you, you receive 6 yuan. You will pay back_yuan to her/him.

If your partner invests 3 yuan to you, you receive 9 yuan. You will pay back_yuan to her/him.

If your partner invests 4 yuan to you, you receive 12 yuan. You will pay back_yuan to her/him.

If your partner invests 5 yuan to you, you receive 15 yuan. You will pay back_yuan to her/him.

If your partner invests 6 yuan to you, you receive 18 yuan. You will pay back_yuan to her/him.

If your partner invests 7 yuan to you, you receive 21 yuan. You will pay back_yuan to her/him.

If your partner invests 8 yuan to you, you receive 24 yuan. You will pay back_yuan to her/him.

If your partner invests 9 yuan to you, you receive 27 yuan. You will pay back_yuan to her/him.

If your partner invests 10 yuan to you, you receive 30 yuan. You will pay back_yuan to her/him.

A.7. Pre-experiment survey (for priming treatment groups only)

1. Your sex: _.
2. Your age: _.
3. Your ethnic group: _.
4. Your grade level: _.
5. Your hukou location: _Province _City _County/District.
6. Check here () if you do not know your hukou location.
7. How long have you been living in this county/city? _.
8. Can you speak the local dialect? () Yes () No
9. Do you consider yourself a local? () Yes () No () Do not know
10. Do your classmates consider you a local? () Yes () No () Do not know
11. Do your teachers consider you a local? () Yes () No () Do not know
12. Who pays higher tuition and fees at school, a local hukou student or a nonlocal hukou student? () A nonlocal hukou student () A local hukou student () They pay the same amount () Do not know.
13. Who is more likely to become a student cadre, a local hukou student or a nonlocal hukou student? () A nonlocal hukou student () A local hukou student () Do not know
14. Who is more likely to be recognized at school, a local hukou student or a nonlocal hukou student? () A nonlocal hukou student () A local hukou student () Do not know
15. Who receives more daily allowance from parents, a local hukou student or a nonlocal hukou student? () A nonlocal hukou student () A local hukou student () Do not know.

A.8. Post-experiment survey (for all subjects)

1. Your sex: _.
2. Your age: _.
3. Your ethnic group: _.
4. Your grade level: _.

5. Are you a student cadre? () Yes () No
6. How many siblings do you have? () 0 () 1 () 2 () 3 () more than 3
7. What is your father's education level? () Illiterate () Elementary school () Middle school () High school () College () Graduate school
8. What is your mother's education level? () Illiterate () Elementary school () Middle school () High school () College () Graduate school
9. What is your current academic standing? () Top tier () Above average () Average () Below average () Bottom tier
10. How much money do your parents give you on a typical day, excluding the amount for transportation and meals? () < 1 yuan () 1-1.99 yuan () 2-2.99 yuan () 3-3.99 yuan () 4-4.99 yuan () ≥5 yuan.

A.9. OLS regression results for migrants from rural to urban

Table A.1

OLS regression results of principal investment data. (Nonlocal subjects are only migrants from rural to urban)

Model	(1)	(2)	(3)	(4)	(5)
Priming hukou identity	0.33 (0.32)	0.28 (0.29)	-0.32* (0.18)	-0.16* (0.14)	0.33 (0.22)
Disclosure of hukou identity	0.03 (0.36)	0.15 (0.23)	-0.06 (0.12)	0.05 (0.10)	-0.12 (0.19)
Local principal	-0.15 (0.22)	-0.17 (0.28)	-0.12 (0.22)	0.08 (0.27)	0.21 (0.12)
Local agent	0.45 (0.28)	0.40 (0.32)	-0.12 (0.36)	0.24 (0.19)	0.15 (0.18)
Public * local principal		-0.18 (0.38)			-0.47 (0.32)
Priming * public * local principal		0.20 (0.33)			
Public * local agent			0.15 (0.16)		0.35 (0.29)
Priming * public * local agent			1.35** (0.15)		
Priming * local principal				-0.36 (0.19)	
Priming * local agent				0.91*** (0.25)	
Local principal * local agent				-0.52 (0.36)	-0.72 (0.33)
Priming * local principal * local agent				1.19** (0.52)	
Public * local principal * local agent					0.87 (0.62)
Individual characteristics	Control	Control	Control	Control	Control
_cons	5.47*** (1.55)	5.42*** (1.58)	5.49*** (1.58)	5.26*** (1.47)	5.52 (1.61)***
N	422	422	422	422	422

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively, and that in parentheses is the clustered standard errors at the experiment room level.

The regression results show that, under priming hukou identity cognition and disclosure of hukou identity information of game players, principals will significantly increase investment amount to local hukou agents as compared to nonlocal ones, and that local hukou proposers invest more to their local hukou agents. These findings are consistent with the results in the full sample.

Table A.2

OLS regression results of agents' return amount. (Nonlocal subjects are only migrants from rural to urban)

Model	(1)	(2)	(3)	(4)	(5)
Priming hukou identity	0.29 (0.32)	0.78 (0.42)	0.05 (0.68)	1.22*** (0.45)	0.29 (0.28)
Disclosure of hukou identity	0.70** (0.35)	0.71** (0.42)	0.76** (0.44)	0.68*** (0.32)	1.46*** (0.58)
Principal's hukou	-0.61 (0.33)	-0.05 (0.17)	-0.61 (0.33)	-0.38 (0.36)	0.15 (0.12)
Agent's hukou	0.21 (0.31)	0.19 (0.27)	0.25 (0.32)	-0.15 (0.28)	0.32 (0.19)
Public * principal		-0.26 (0.33)			-0.82 (0.36)
Priming * public * principal		-1.30*** (0.71)			
Public * agent			-0.38 (0.56)		-1.12 (0.35)
Priming * public * agent			0.56 (1.01)		
Priming * principal				-1.95*** (0.35)	
Priming * agent				-0.56 (0.44)	
Principal * agent				0.55 (0.46)	-0.15 (0.10)
Priming * principal * agent				1.45** (0.30)	
Public * principal * agent					1.67 (0.51)
Individual characteristics	Control	Control	Control	Control	Control
_cons	6.73*** (1.25)	6.45*** (1.17)	6.62*** (1.30)	6.58*** (1.32)	6.45 (1.35)***
N	422	422	422	422	422

Note: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively, and that in parentheses is the clustered standard errors at the experiment room level.

The regression indicates that local hukou principals will receive significant less return amount from agents as compared to nonlocal principals, and local hukou agents return more to their local hukou principals under priming and disclosure of hukou identity. The conclusions consist with the results in the full sample.

References

- Afridi, F., Li, S. X., & Ren, Y. (2015). Social identity and inequality: The impact of China's Hukou system. *Journal of Public Economics*, 123, 17–29.
- Algan, Y., & Cahuc, P. (2013). Trust and growth. *Annual Review of Economics*, 5(1), 521–549.
- Ashraf, N., Bohnet, I., & Piankov, N. (2006). Decomposing trust and trustworthiness. *Experimental Economics*, 9(3), 193–208.
- Bapna, R., Gupta, A., Rice, S., & Sundararajan, A. (2017). Trust and the strength of ties in online social networks: An exploratory field experiment. *MIS Quarterly*, 41(1), 124–139.
- Bargh, J. A. (2006). What have we been priming all these years? On the development, mechanisms, and ecology of nonconscious social behavior. *European Journal of Social Psychology*, 36(2), 147–168.
- Benjamin, D. J., Choi, J. J., & Fisher, G. W. (2010). "Religious identity and economic behavior" (no. w15925). National Bureau of Economic Research.
- Benjamin, D. J., Choi, J. J., & Strickland, A. J. (2010). Social identity and preferences. *American Economic Review*, 100(4), 1913–1928.
- Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity and social history. *Games and Economic Behavior*, 10, 122–142.
- Binzel, C., & Fehr, D. (2013). Social distance and trust: Experimental evidence from a Slum in Cairo. *Journal of Development Economics*, 103, 99–106.
- Blau, P. (1964). *Exchange and power in social life*. New York: Wiley.
- Bohnet, I., Greig, F., Herrmann, B., & Zeckhauser, R. (2008). Betrayal aversion: Evidence from Brazil, China, Oman, Switzerland, Turkey, and the United States. *American Economic Review*, 98(1), 294–310.
- Bohnet, I., & Zeckhauser, R. (2004). Trust, risk and betrayal. *Journal of Economic Behavior and Organization*, 55(4), 467–484.
- Brandts, J., & Charness, G. (2000). Hot vs. cold: Sequential responses and preference stability in experimental games. *Experimental Economics*, 2(3), 227–238.
- Brandts, J., & Charness, G. (2010). *The strategy versus the direct-response method: A survey of experimental comparisons*. Barcelona, Spain: Mimeograph. Universidad Autònoma de Barcelona.
- Buchan, N., Croson, R., & Johnson, E. (2004). When do fair beliefs influence bargaining behavior? Experimental Bargaining in Japan and the United States. *Journal of Consumer Research*, 31, 181–190.
- Buchan, N. R., Johnson, E. J., & Croson, R. T. A. (2006). Let's get personal: An international examination of the influence of communication, culture and social distance on other regarding preferences. *Journal of Economic Behavior and Organization*, 60(3), 373–398.
- Burks, S. V., Carpenter, J. P., & Verhoogen, E. (2003). Playing both roles in the trust game. *Journal of Economic Behavior and Organization*, 51(2), 195–216.
- Cai, H., Chen, Y., Fang, H., & Zhou, L. A. (2015). The effect of microinsurance on economic activities: Evidence from a randomized field experiment. *Review of Economics and Statistics*, 97(2), 287–300.
- Camerer, C. (2003). *Behavioral game theory: Experiments in strategic interaction*. Princeton: Princeton University Press.
- Cameron, L., Erkal, N., Gangadharan, L., & Meng, X. (2013). Little emperors: Behavioral impacts of China's one-child policy. *Science*, 339(6122), 953–957.
- Capra, C., Kelli, L., & Shireen, M. (2008). *Attitudinal and Behavioral measures of trust: A new comparison*. Mimeo: Department of Economics, Emory University.
- Cardenas, J. C., & Carpenter, J. (2008). Behavioural development economics: Lessons from field labs in the developing world. *Journal of Development Studies*, 44(3), 311–338.
- Carpenter, J. (2002). *Measuring social capital: Adding field experimental methods to the analytical toolbox*. Social Capital and Economic Development: Well-Being in Developing Countries 119–137.
- Chan, K. W. (2009). Chinese hukou system at 50. *Eurasian Geography and Economics*, 50(2), 197–221.
- Chan, K. W., & Buckingham, W. (2008). Is China abolishing the Hukou system? *The China Quarterly*, 195, 582–606.
- Charness, G., Du, N., & Yang, C. L. (2011). Trust and trustworthiness reputations in an investment game. *Games and Economic Behavior*, 72(2), 361–375.
- Chen, Y., Li, S., Liu, X., et al. (2014). Which hat to Wear? Impact of natural identities on coordination and cooperation. *Games and Economic Behavior*, 84, 58–86.
- Chen, Y., & Li, S. X. (2009). Group identity and social preferences. *American Economic Review*, 99(1), 431–457.
- Chi, L. (2013). Trust level of adolescents and their parents and its intergenerational transmission. *Psychological Development and Education*, 5, 491–499.
- Chuah, H., Fahoum, R., & Hoffmann, R. (2013). Fractionalization and Trust in India: A field-experiment. *Economics Letters*, 119(2), 191–194.
- Cox, J. C. (2004). How to identify trust and reciprocity. *Games and Economic Behavior*, 46(2), 260–281.
- Cox, J. C. (2009). Trust and reciprocity: Implications of game triads and social contexts. *New Zealand Economic Papers*, 43(2), 89–104.
- Dulleck, U., Fookien, J., & He, Y. M. (2012). *Public policy and individual labor market discrimination: An Artefactual field experiment in China*. (Working Paper).
- Eckel, C. C., & Petrie, R. (2011). Face Value. *American Economic Review*, 101(4), 1497–1513.
- Evans, A. M., Athenstaedt, U., & Krueger, J. I. (2013). The development of trust and altruism during childhood. *Journal of Economic Psychology*, 36, 82–95.
- Falk, A., & Zehnder, C. (2013). A City-wide experiment on trust discrimination. *Journal of Public Economics*, 100, 15–27.
- Fehr, E., Gächter, S., & Kirchsteiger, G. (1996). Reciprocal fairness and noncompensating wage differentials. *Journal of Institutional and Theoretical Economics*, 152, 608–640.
- Forsythe, R., Horowitz, J. L., Savin, N. E., & Sefton, M. (1994). Fairness in simple bargaining experiments. *Games and Economic Behavior*, 6(3), 347–369.
- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. New York: The Free Press.
- Güth, W., Levati, V., & Ploner, M. (2008). Social identity and trust—an experimental investigation. *The Journal of Socio-Economics*, 37(4), 1293–1308.
- Güth, W., Schmittberger, R., & Schwarze, B. (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior and Organization*, 3(4), 367–388.
- Gupta, G., Mahmud, M., Maitra, P., Mitra, S., & Neelim, A. (2018). Religion, minority status, and trust: Evidence from a field experiment. *Journal of Economic Behavior & Organization*, 146, 180–205.
- Harbaugh, W. T., Krause, K., Liday, S. J., & Vesterlund, L. (2003). *Trust in Children*. Trust and Reciprocity: Interdisciplinary Lessons from Experimental Research 302–322.
- Hargreaves, S., & Zizzo, J. (2009). The value of groups. *American Economic Review*, 99(1), 295–323.
- Harrison, G. W., & List, J. A. (2004). Field experiments. *Journal of Economic Literature*, 42(4), 1009–1055.
- Hazelzet, A., & Bart, W. (2012). Neighborhoods, social networks, and Trust in Post-Reform China: The case of Guangzhou. *Urban Geography*, 33(2), 204–220.
- Helliwell, J. (2003). How's life? Combining individual and national variables to explain subjective well being. *Economic Modeling*, 20, 331–360.
- Herreros, F. (2004). *The problem of forming social capital: Why trust?* New York, NY: Palgrave Macmillan.
- Heyes, A., & List, J. A. (2016). Supply and demand for discrimination: Strategic revelation of own characteristics in a trust game. *American Economic Review*, 106(5), 319–323.
- Hoff, K., & Pandey, P. (2004). *Belief systems and durable inequalities: An experimental investigation of Indian caste*. Vol. 3351. World Bank Working Paper.
- Hoff, K., & Pandey, P. (2006). Discrimination, social identity, and durable inequalities. *American Economic Review: Papers and Proceedings*, 96(2), 206–211.
- Hoff, K., & Pandey, P. (2011). *Making up people: Experimental evidence on identity and development from caste India*. World Bank Mimeo.
- Johansson-Stenman, O., Mahmud, M., & Martinsson, P. (2005). Does stake size matter in trust games? *Economics Letters*, 88(3), 365–369.
- Johnson, N. D., & Mislin, A. A. (2011). Trust games: A meta-analysis. *Journal of Economic Psychology*, 32(5), 865–889.
- Knack, S. (2002). Social capital and the quality of government: Evidence from the U.S. States. *American Journal of Political Science*, 46, 772–785.
- Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *Quarterly Journal of Economics*, 112(4), 1251–1288.
- Koopmans, R., & Veit, S. (2014). Cooperation in ethnically diverse Neighborhoods: A lost-letter experiment. *Political Psychology*, 35(3), 379–400.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Trust in large organizations. *American Economic Review*, 87, 333–338.
- Levitt, S. D., & List, J. A. (2007). What do Laboratory experiments measuring social preferences reveal about the real world. *Journal of Economic Perspectives*, 21(2), 153–174.
- Li, T., Huang, C., He, X., & Zhou, K. (2008). What affects People's social trust? Evidence from Guangdong Province. *Economic Research Journal*, 1, 137–152.
- Li, T., Liu, L., & Zhu, L. (2017). 4–6 year-old Children's Trust in economic game and its influencing factors. *Acta Psychologica*, 1, 17–27.

- Ligon, E., & Schechter, L. (2012). Motives for sharing in social networks. *Journal of Development Economics*, 99(1), 13–26.
- Lindstrom, M., & Rosvall, M. (2016). Life course perspectives on economic stress and generalized trust in other people. *The Social Science Journal*, 53(1), 7–13.
- Luo, J., Chen, Y., He, H., et al. (2019). Hukou identity and fairness in the ultimatum game. *Theory and Decision*, 4, 1–32.
- McLeish, K. N., & Oxoby, R. J. (2011). Social interactions and the salience of social identity. *Journal of Economic Psychology*, 32(1), 172–178.
- Niu, G., & Zhao, G. (2018a). Identity and trust in government: A comparison of locals and migrants in urban China. *Cities*, 83, 54–60.
- Niu, G., & Zhao, G. (2018b). Religion and trust in strangers among China's rural-urban migrants. *China Economic Review*, 50, 265–272.
- Ortmann, A., Fitzgerald, J., & Boeing, C. (2000). Trust, reciprocity, and social history: A re-examination. *Experimental Economics*, 3, 81–100.
- Özer, Ö., Zheng, Y., & Ren, Y. (2014). Trust, trustworthiness, and information sharing in supply chains bridging China and the United States. *Management Science*, 60(10), 2435–2460.
- Putnam, R. D. (2000). *Bowling alone: America's declining social Capital, in culture and politics*. New York: Palgrave Macmillan.
- Qin, X., Shen, J., & Meng, X. (2011). Group-based trust, trustworthiness and voluntary cooperation: Evidence from experimental and survey data in China. *The Journal of Socio-Economics*, 40(4), 356–363.
- Smith, A. (2011). Identifying in-group and out-group effects in the trust game. *BE Journal of Economic Analysis and Policy*, 11(1).
- Solnick, S. (2007). Cash and alternative methods of accounting in an experimental game. *Journal of Economic Behavior and Organization*, 62, 316–321.
- Song, F. (2008). Trust and reciprocity behavior and Behavioral forecasts: Individuals versus group-representatives. *Games and Economic Behavior*, 62, 675–696.
- Song, F., Bram Cadsby, C., & Bi, Y. (2012). Trust, reciprocity, and Guanxi in China: An experimental investigation. *Management and Organization Review*, 8(2), 397–421.
- Sutter, M., & Kocher, M. (2007). Trust and trustworthiness across different age groups. *Games and Economic Behavior*, 59(2), 364–382.
- Tanis, M., & Postmes, T. (2005). A social identity approach to trust: Interpersonal perception, group membership and trusting behaviour. *European Journal of Social Psychology*, 35, 413–424.
- Tsutsui, K., & Zizzo, D. J. (2014). Group status, minorities and trust. *Experimental Economics*, 17(2), 215–244.
- Uslaner, E. (2002). *The moral foundations of trust*. Cambridge (UK): Cambridge University Press.
- Wang, H., Chen, Z., & Lu, M. (2009). Hukou, social segregation and trust: Evidence from Shanghai. *Journal of World Economy*, 10, 81–96.
- Zak, P., & Knack, S. (2001). Trust and economic growth. *Economic Journal*, 111, 295–321.
- Zhang, W., & Rongzhu, K. (2002). Trust in China: A cross-regional analysis. *Economic Research Journal*, 10, 59–70.
- Zheng, P., Yu, G., & Zheng, Y. (2010). The development of Children's Trust in economic games. *Psychological Development and Education*, 4, 378–385.
- Zizzo, D. J. (2010). Experimenter demand effects in economic experiments. *Experimental Economics*, 13(1), 75–98.