

SUPPLEMENTARY MATERIAL TO THE ARTICLE:

STRATEGIC DECISIONS: BEHAVIORAL DIFFERENCES BETWEEN CEOS AND OTHERS (IN EXPERIMENTAL ECONOMICS)

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Appendix 1A. Comments on the general design

Information about the other player

Subjects were informed that in some tasks they would play against another anonymous person, who was denoted as X. The CEOs got the information that X “is a CEO of a Chinese firm and is a Chinese citizen” and the CGs were informed that X “is a Chinese citizen”. Admittedly, referring to a smaller group may create stronger group identity effects (see Chen and Li 2009) among CEOs. While this is a theoretical possibility, we can rule out group identity effects by using a group of self-identified CEO:s within the group of CGs, who received exactly the same information as the other CG:s. This “Control group CEOs”, henceforth denoted CGCEOs, differs from the other CGs in the same way as the CEO group who received different information (see the robustness check in Appendix 4).

Sampling

CEOs are difficult to recruit for time-consuming academic studies. Many studies of CEOs have for this reason focused on self-employed individuals or on ‘convenience’ samples (see Table 1). These selection methods are understandable in practical terms, but issues of selection biases naturally raise concerns over the external validity of findings (Levitt and List 2007).¹ We were able to mitigate some of these problems by appending our experiment to a standard firm and CEO survey focusing on sizeable industrial firms in the Yangzi delta region.

A central concern with surveys involving high level executives is the representativeness of the sample. CEOs are busy professionals, who are less likely to support survey efforts than ordinary people. For this reason, survey response rates for CEOs or organizations tend to be far lower than those realized in surveys of lower-ranked employees (Mellahi and Harris 2016) or individual respondents (Baruch and Holtom 2008). Oftentimes, low response rates among CEOs involve a selection bias as smaller and less successful managers are more likely to invest time and effort in academic than successful managers of large-scale firms. Comparisons between executives and others are therefore difficult to realize.

As was to be expected, both populations are characterized by the commonly noted difference in survey response rates (Mellahi and Harris 2016). CEOs participating in this study were recruited into the sample in 2006, 2009, and 2012, respectively, with an average response rate for Shanghai reaching 37.7% and for Wenzhou 31.7%.² The average response rate among the CG subjects sampled

¹ The self-employed individuals may be an interesting group for studying characteristics related to activities such as start-up strategies of very small businesses. However, this is not an ideal group to study strategic decision making for many reasons. Their experience of business culture and entrepreneurial activities is limited. One can also question whether they have been exposed to any forces of selection, since many self-employed are pushed to self-employment for lack of alternatives.

² CEOs recruited before 2012 had participated in one or two earlier firm surveys, which did not focus on strategic behavior in games. For Shanghai 65 of the CEOs were recruited in 2006, 21 in 2009 and 14 in 2012.

in 2012 in both cities was 66.3% (73% in Shanghai and 58% in Wenzhou).³ Yet, in spite of the lower response rate for CEOs, our sampling strategy was successful in recruiting a sample that is close to the national average of private manufacturing firms in terms of firm size, with an average of 129 employees compared to the national average of 121 employees, and the mean book value of assets reaching CNY 22.37 million compared to the national mean of 20.66 million. The average profit in our sample is CNY 4.18 million, which is somewhat smaller than the national average of 5.5 million but above the regional average in the Yangzi Delta region (comparison data from China Statistical Yearbook 2011). Most of the CEOs were also founders (83%) and/or owners (91%) of the firm, which means that the results from this study hold almost equally well for more restrictive definitions of “entrepreneurs” versus the CGs. The high representation of owner-CEOs also implies that these individuals were not ‘recruited’ or selected to match a certain expected managerial behavior or firm strategy.

Of course, we cannot rule out that non-participating CEOs could theoretically be behaviorally different from participating CEOs. However, if it were true that non-cooperative types are generally less likely to participate in surveys, the same would apply to CGs. We would end up with a level effect in both populations, but not with a bias in only one of the two populations. Hence, while we readily admit that we may not be able to fully trust our point estimates, we would still be in a good position to compare average behavior across two populations.

A related concern is that 161 of the 200 CEOs have participated in an earlier survey in 2009, which also included incentivized games. None of the household members has such prior experience (at least not within the same survey context). The difference in previous experience could carry various implications. For one, one could argue that repeat participants are simply more cooperative types, as demonstrated by their continuing support to the survey. If true, the repeat-respondents might score higher not because they are CEOs but because of the selection bias of being continuing supporters of the survey. Alternatively, one could argue, that prior game experience could bias their behavior towards more cooperation. Hence, both arguments would suggest that newly recruited CEOs should be less cooperative. To rule out such concerns, we ran standard mean comparison tests on game behavior between new and second-time participants, without finding any statistically significant differences in game behavior.

Training of interviewers, trial experiments and pretests

All interviewers selected for the implementation of the experiment were familiar with the local dialect and participated in a two-day training program (April 12-13, 2012) led by the authors of this paper in

For Wenzhou 58 of the CEOs were recruited in 2006, 26 in 2009, and 16 in 2012. It can be noted that the average levels of response rates in this study are in line with other surveys studying management behavior (Baruch 1999).

³ This difference in recruitment methods might bias our results and is addressed in the robustness check in section 5.3.

order to standardize the implementation of the tasks and interview. They also received detailed written instructions and questionnaires for each task. At the end of the training, the authors accompanied teams of interviewers and supervisors to the field to conduct a series of trial experiments to check and test the design and implementation. To fine-tune the design we also ran a pretest on 39 CEOs before the main experiment. The behavior of this pretest group was used when we rewarded subjects in the belief elicitation.

Appendix 1B: Conducting experiments in Shanghai and Wenzhou, that is, in China: a comment

Shanghai is well-known to readers as the largest city proper in China and as a global financial center. The diversity of private and state owned firms is substantial and so is the presence of foreign firms. Wenzhou is a municipality of more than 9 million people located in Zhejiang province, which borders Shanghai to the south. The city achieved national and international fame as one of the early developers of a private firm economy in China. Just as those in Shanghai, private firms in Wenzhou are active participants in the country's rapidly expanding export market and are fully integrated in national and international trading networks (see Nee and Oppen 2012 for more details).

All countries differ culturally, politically and historically, which motivates caution when drawing general conclusions as to behavioral differences between CEOs and other people. However—cultural and political differences aside—with the transition towards a capitalist economy nearly completed, managers of private firms in China face similar challenges as firms anywhere else in the world (Lardy 2012). All firm managers have to organize resources through market exchange, coordinate decisions, cooperate under various forms of uncertainty and compete in a highly competitive market economy. Hence, although there is some evidence that management quality may differ among countries (Bloom, et al., 2012), there is no reason to assume that Chinese CEOs are substantively different from CEOs elsewhere in terms of their reliance on and familiarity with strategic decision making in competitive market settings.

Many of the CEOs and the CGs have spent some time at a junior college or university. It is therefore relevant to note that in one of the most ambitious studies on differences in strategic decision making among students from 16 different countries, the Chinese students did not stick out in any respect. On the contrary, the Chinese students were relatively close to the average behavior in contributions, punishments and in antisocial punishments in public good games (Herrmann, Thöni and Gächter 2008). Bartling, Weber, and Yao (2015), in contrast, find differences between Swiss and Chinese students suggesting that the Chinese students exhibit less prosocial market behavior. However, in the same study, the groups' prosocial behavior in non-markets does not differ. Hence, if anything, these results would suggest that subjects heavily exposed to Chinese markets (like CEOs) ought to be less prosocial than those less exposed to market activities.

Some historical particulars of China's economic reforms may even be regarded as an advantage in a study of business leaders. First, the history of capitalism in China is relatively brief, which means that our group of CEOs belong to a generation that has intentionally earned its position by founding their own firms.⁴ In this respect, they fit fairly well with the original idea of entrepreneurship and

⁴ Before 1988, private entrepreneurship was not even legalized, and full constitutional recognition was not granted before 2004.

exposure to market forces as observed in the rise of modern capitalism in the West (Schumpeter 1942).⁵

⁵ China's government has not implemented any top-down policies aimed at actively promoting private start-up firms. To the contrary, private firms are disadvantaged relative to the state-owned enterprises, which benefit from government policies and loans from state-owned banks. Rather the development of China's private entrepreneurs can be described as a bottom-up process (Nee and Oppen 2012).

Appendix 1C: The design of the treatments

In Table A1 we describe the six different treatments, which consist of tasks in a given order.

TABLE A1. DESIGN OF THE TREATMENTS

Treatment	1	2	3	4	5	6
Task						
1	CA	BSSA	PDA	CF	BSSF	PDF
2	CAG	BSSAG	PDAG	CFG	BSSFG	PDFG
3	BSSA	PDA	CA	BSSF	PDF	CF
4	BSSAG	PDAG	CAG	BSSFG	PDFG	CFG
5	PDA	CA	BSSA	PDF	CF	BSSF
6	PDAG	CAG	BSSAG	PDFG	CFG	BSSFG
#subjects	34	33	33	34	33	33

Notes: A treatment is a combination of tasks in a specific order. C-Chicken, BSS-Battle of the sexes, PD-prisoner's dilemma, A-abstract frame, F-field frame, G- belief elicitation.

Appendix 2A: Beliefs and behavior

As noted in the main text, the impact of beliefs on behavior in games is not straightforward but depends on underlying motivations and preferences. For instance, in PD, beliefs would never matter for a rational subject with purely selfish preferences since defection is then a dominant strategy. However, for an individual with e.g., inequity aversion (Fehr and Schmidt 1999) and only imperfect information about preference types, beliefs matter.

TABLE A2. BEHAVIOR AND BELIEFS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CEO	-0.092 (0.059)	-0.114** (0.051)	-0.180*** (0.054)
Male	0.048 (0.069)	-0.078 (0.058)	-0.052 (0.065)
Age	-0.002 (0.004)	0.005 (0.003)	-0.000 (0.003)
School	-0.013 (0.011)	0.007 (0.010)	0.020* (0.011)
Income	-0.006 (0.008)	-0.013** (0.006)	-0.003 (0.007)
Shanghai	0.002 (0.066)	-0.109* (0.059)	-0.029 (0.064)
Frame_Abstr	0.070 (0.051)	-0.010 (0.047)	-0.032 (0.051)
Belief_PD	0.367** (0.144)		
Belief_BSS		0.570*** (0.136)	
Belief_C			-0.144 (0.151)
Wald chi2	19.133	39.084	21.075
Prob > chi2	0.014	0.000	0.007
Pseudo R2	0.037	0.085	0.041
N	400	400	400

Notes. Results from logistic regressions. Belief_PD, Belief_BSS, Belief_C represent the subjects' belief of the proportion playing Defect (PD) and Hawk (BSS and Chicken), respectively. Coefficients represent average partial effects. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A2 summarizes the results of the logit regression controlling for beliefs. The coefficients for CEO are negative and significant for BSS and Chicken. In PD, CEO is not significant anymore, but the ‘belief’ variable is positive and significant, suggesting that subjects who believe that a high fraction of players will defect are more likely to defect themselves. Since CEOs have significantly ‘lower’ beliefs regarding defection, it is reasonable to assume that the significant behavioral differences in PD may be largely explained by differences in beliefs. Furthermore, in BSS, believing that others are more likely to play Hawk increases the likelihood that subjects themselves play Hawk.⁶ This suggests that beliefs are important for behavior in PD and BSS and seem consistent with conditional cooperation or norm abiding behavior.⁷

⁶ This interpretation is based on the assumptions discussed in section 3.2. Thus, Belief_BSS, gives the belief about the percentage Hawk players in BSS and is assumed to be the same as the percentage Option A choices among players having the Row role and the percentage of Option B choices among Column players.

⁷ We want to warn the reader not to draw bold conclusions regarding the causal relationship between beliefs and behavior. Cognitive biases like the false consensus effect and self-serving beliefs make the separation of beliefs and behavior intricate. Furthermore, Costa-Gomes and Weizsäcker (2008) demonstrate that players’ actions are often inconsistent with their beliefs. Hence, players do not always best-respond to their own beliefs even if many different preferences and decision models are assumed.

Appendix 2B: Best responses to beliefs

In Table A3 we present logit regressions where the dependent variables are the probability of an individual selfish best response in BSS (BRBSS) and Chicken (BRC).

TABLE A3. INDIVIDUAL AND SOCIAL BEST RESPONSES.

	(1) BRBSS	(2) BRC
CEO	0.051 (0.057)	-0.058 (0.057)
Male	0.006 (0.067)	-0.022 (0.069)
Age	0.000 (0.003)	-0.008** (0.004)
School	0.002 (0.011)	0.013 (0.011)
Income	-0.004 (0.007)	-0.005 (0.007)
Shanghai	0.025 (0.063)	-0.089 (0.064)
Frame_A	-0.078 (0.050)	0.039 (0.050)
Wald chi2	3.645	15.507
Prob > chi2	0.820	0.030
Pseudo R2	0.007	0.028
N	400	400

Notes. Results from logistic regressions. BRBSS - individual best response in BSS. BRC - individual best response in Chicken. SBRBSS – social best response in BSS. SBRC – social best response in Chicken. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 2C: Testing for accuracy of beliefs

Table A4 shows the average deviation of the CEOs' and the CGs' beliefs from the respective groups' actual behavior. Since this can be interpreted as the average error, low numbers represent more accurate beliefs than high numbers. We see that the CEOs and the CGs are about equally accurate in PDF and CF, but that the CEOs are significantly more accurate in the remaining games. The difference in accuracy is most convincing when the games are abstractly framed, where there is a significant difference in all games. Overall, this suggests that CEOs are more accurate about other CEO's behavior than the CGs are about other people's behavior.

TABLE A4. AVERAGE DEVIATION FROM CORRECT BELIEFS.

Game and Frame	CEOs: Average difference between belief and actual value	CG: Average difference between belief and actual value
PDA**	12.4 (101)	16.0 (101)
PDF	15.6 (99)	15.7 (99)
BSSA**	14.8 (101)	19.3 (101)
BSSF***	13.0 (99)	18.9 (99)
CA***	13.4 (101)	23.8 (101)
CF	13.9 (99)	13.4 (99)

Notes. Number of observations in parentheses. Significance levels of t-tests of difference in means. *- p-value < 0.1; **- p-value < 0.05; ***- p-value < 0.01.

To control for background factors, we ran fractional logit regressions where the error for each subject in the respective games is the dependent variable. Results presented in Table A5 confirm that CEOs are indeed significantly more accurate in all games when we control for these background factors. Hence, the results from the previous section are robust. It can also be noted that years of education—as indicated by the variable school—is negative in all games and marginally significant at the 10% level in BSS and significant in Chicken. Thus,

more educated subjects have more accurate beliefs about their co-players than less educated subjects, which seems reasonable. Income has a positive sign in all games and is significant or marginally significant in all regressions. One possible explanation for this is that people with higher incomes are somewhat less careful when they make their guesses since the experimental pay matters less to them. Since CEOs have higher incomes than CGs, this also suggests that if the incomes were more even in these groups, the difference in accuracy levels would be even larger.

TABLE A5. DEVIATION FROM CORRECT BELIEFS: AVERAGE PARTIAL EFFECTS.

	(1) Error_PD	(2) Error_BSS	(3) Error_C
CEO	-0.133** (0.056)	-0.283*** (0.059)	-0.254*** (0.053)
Male	-0.053 (0.062)	-0.038 (0.072)	0.034 (0.067)
Age	-0.001 (0.003)	0.004 (0.004)	0.001 (0.003)
School	-0.009 (0.010)	-0.020* (0.011)	-0.031*** (0.010)
Income	0.172** (0.074)	0.164** (0.071)	0.132** (0.065)
Shanghai	0.060 (0.058)	0.065 (0.066)	0.132** (0.062)
Frame Abstr	-0.073 (0.048)	0.043 (0.052)	0.197*** (0.049)
Wald chi2	12.681	25.696	49.565
Prob > chi2	0.080	0.001	0.000
Pseudo R2	0.004	0.009	0.014
N	400	400	400

Notes. Results from fractional response regressions. Error_PD, Error_BSS, and Error_C represent the absolute value of the difference between the subject's belief and the group's average behavior in PD, BSS, and Chicken. Coefficients represent average partial effects. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

We also test how accurate the CGCEOs beliefs are compared to the rest of the CGs. (For a definition of CGCEOs, see Appendix 3). By doing this we can check if the CGCEOs also are superior in forming beliefs about the CGs' behavior. Here we cannot reproduce our previous findings.

TABLE A6. DEVIATION FROM CORRECT BELIEFS: AVERAGE PARTIAL EFFECTS.

	(1) Error_PD	(2) Error_BSS	(3) Error_C
CGCEO	-0.099 (0.081)	0.098 (0.096)	0.019 (0.090)
Male	-0.087 (0.077)	0.083 (0.103)	0.096 (0.095)
Age	0.002 (0.005)	0.002 (0.006)	0.003 (0.006)
School	0.002 (0.017)	-0.032* (0.018)	-0.044*** (0.016)
Income	0.008 (0.186)	0.084 (0.152)	0.085 (0.121)
Shanghai	-0.005 (0.082)	0.106 (0.099)	0.132 (0.090)
Frame Abstr	0.012 (0.062)	0.024 (0.076)	0.405*** (0.071)
Wald chi2	3.536	5.473	48.201
Prob > chi2	0.831	0.602	0.000
Pseudo R2	0.001	0.003	0.024
N	200	200	200

Notes. Results from fractional response regressions. Error_PD, Error_BSS, and Error_C represent the absolute value of the difference between the subject's belief and the group's average behavior in PD, BSS, and Chicken. CGCEO denotes the group of 43 subjects defining themselves as enterprise directors among the CGs. The non-CGCEOs consist of the rest of the CGs.

By inspecting Table A6 it should be clear that the CGCEO coefficient is far from significant and it does not have the same consistent negative sign as with the original sample. Here, the

accuracy is measured with respect to the average behavior of only one group, namely the CGs. In this sample, the CGCEOs believe that others defect less and play less hawkish than the non-CEOs, which is also exactly how CEOs play themselves. This suggests that CEOs are not better at guessing other people's behavior in general, but they are better in predicting their own group's behavior compared to how well the CGs are to predicts their group's behavior.

Appendix 3: The definition of the CEOs and CGs: robustness tests of behavior and beliefs

All our CEOs' positions are verified since they have all been visited at their respective firm. As mentioned earlier, we selected CGs who were similar to the CEOs in age, gender, and education, and also lived in the same residential areas as the CEOs, assuring a comparable level of wealth and socio-economic status. Consequently, the CGs are more educated and have better jobs and higher incomes than the average Chinese person. To learn more about the CGs, we asked about their profession and found that 26% label themselves as administrative officers, 17% as technical personnel and 12% as ordinary workers. More importantly, the second largest group (21.5% or 43 subjects) label themselves 'enterprise directors' in organizations labeled as either 'private enterprise' or 'individual business'. Thus, this group can be considered self-reported CEOs. We decided not to include these subjects in the CEO group since our assistants did not visit them at their firms to verify that they actually were CEOs. Further, the category of 'individual business' is in China reserved for so-called household firms (*getihu*) with less than seven salaried workers, making it likely that these individuals are running relatively small enterprises of a different organizational character.

Our ambition to have a 'clean' sample of CEOs and 'conservative' tests motivated the decision not to exclude the potential 43 CG CEOs from the CG sample.⁸ At the same time, the CG sample is not a clean non-CEO sample with these subjects included. To test if our results are robust if we exclude these 43 CEOs from the CGs and include them in the sample of CEOs, we ran regressions similar to those reported in Table 6 above. In fact, the magnitude of the CEO coefficients increased for all games, and in BSS the significance level increases from the 5 % level to 1 % (see Table A7). We ran similar tests on differences in beliefs and found that the results are robust (see Tables A8 and-A9).

In Table A7 we report the robustness test for differences in behavior when the "CGCEOs" are taken out from the CGs and included in the group of CEOs. The impact of the CEO variable is now even stronger than what was reported in Table 6.

⁸ Our tests are conservative in the meaning that if these CGCEO subjects behave similarly to the selected CEOs, any difference detected would be stronger or at least not weakened if we exclude these 43 from the CG group and add them the original CEOs.

TABLE A7. BEHAVIOR: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CEO ⁺	-0.151** (0.059)	-0.220*** (0.049)	-0.247*** (0.053)
Male	0.048 (0.068)	-0.073 (0.056)	-0.046 (0.065)
Age	-0.001 (0.004)	0.006* (0.003)	0.001 (0.003)
School	-0.009 (0.011)	0.013 (0.010)	0.026** (0.011)
Income	-0.004 (0.008)	-0.010* (0.006)	0.001 (0.007)
Shanghai	-0.026 (0.065)	-0.140** (0.061)	-0.058 (0.064)
Frame Abstr	0.063 (0.051)	-0.018 (0.046)	-0.026 (0.050)
Wald chi2	15.098	34.984	28.208
Prob > chi2	0.035	0.000	0.000
Pseudo R2	0.028	0.072	0.056
N	400	400	400

Notes. Results from logistic regressions. CEO⁺ denotes the original CEOs plus the group defining themselves as enterprise directors. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In Table A8 we report the robustness test for differences in beliefs with the new categorization of groups. We find that the observed difference in PD is still significant at the same level whereas the difference in beliefs in BSS now becomes significant at the 5% level suggesting that CEOs are less inclined to believe that the opponent plays Hawk. Hence, we find that differences in beliefs are reinforced when we redefine our comparison groups in this way.

TABLE A8. BELIEFS: AVERAGE PARTIAL EFFECTS.

	(1) Belief_PD	(2) Belief_BSS	(3) Belief_C
CEOplus	-0.311*** (0.053)	-0.115** (0.055)	-0.041 (0.047)
Male	-0.024 (0.063)	-0.026 (0.067)	0.019 (0.056)
Age	0.003 (0.003)	0.001 (0.003)	0.001 (0.003)
School	0.004 (0.010)	0.002 (0.011)	0.014 (0.009)
Income	0.088 (0.081)	-0.081 (0.082)	-0.115* (0.064)
Shanghai	-0.122** (0.055)	-0.036 (0.057)	0.011 (0.050)
Frame Abstr	-0.031 (0.045)	-0.029 (0.045)	-0.160*** (0.041)
Wald chi2	40.600	11.615	27.639
Prob > chi2	0.000	0.114	0.000
Pseudo R2	0.009	0.003	0.005
N	400	400	400

Notes. Results from fractional response regressions. Belief_PD, Belief_BSS, Belief_C represent the subjects' belief of the proportion playing Defect (PD) and Hawk (BSS and Chicken), respectively. CEO⁺ consists of the group of the original CEOs plus the group defining themselves as enterprise directors. Coefficients represent average partial effects. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In Table A9 we report regressions including beliefs as explanatory variables with the modified definition of CEOs and CGs. The main results are robust (i.e., that the coefficient for beliefs is significant in PD and BSS). One small change is that CEO is now marginally significant in PD even if we control for beliefs.

TABLE A9. BEHAVIOR AND BELIEFS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CEOplus	-0.111* (0.064)	-0.207*** (0.049)	-0.250*** (0.053)
Male	0.051 (0.069)	-0.075 (0.057)	-0.045 (0.066)
Age	-0.002 (0.004)	0.006* (0.003)	0.001 (0.004)
School	-0.010 (0.011)	0.012 (0.010)	0.027** (0.011)
Income_F	-0.005 (0.008)	-0.008 (0.005)	0.001 (0.007)
Shanghai	-0.010 (0.066)	-0.135** (0.059)	-0.057 (0.065)
Frame A	0.069 (0.051)	-0.013 (0.047)	-0.035 (0.051)
Belief_PD	0.343** (0.147)		
Belief_BSS		0.553*** (0.137)	
Belief_C			-0.150 (0.155)
Wald chi2	20.452	46.259	30.372
Prob > chi2	0.009	0.000	0.000
Pseudo R2	0.038	0.106	0.057
N	400	400	400

Notes. Results from logistic regressions. Belief_PD, Belief_BSS, Belief_C represent the subjects' belief of the proportion playing Defect (PD) and Hawk (BSS and Chicken), respectively. CEO⁺ consists of the group of the original CEOs plus the group defining themselves as enterprise directors. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 4: Location effect and in-group feelings: robustness tests

For practical reasons and to secure their participation, the CEOs ‘played’ the strategic games and made their choices in their workplaces, whereas CGs did so in their homes. This may raise the concern that the observed differences are caused by a ‘location effect’. Furthermore, the recruitment of subjects to a meeting with the interviewers at a given location (home or workplace) may affect the composition of ‘types’ that are willing to participate.⁹ However, previous research does not suggest that making incentivized choices at different locations creates any substantial biases (e.g., Holm and Nystedt 2007; von Gaudecker, van Soest and Wengström 2012). Furthermore, the interviewers were trained to carefully follow the same instructions for the CGs as for the CEOs.

Second, there were subtle differences in the way the opponent was described, with the CEOs being informed that X “is a CEO of a Chinese firm and is a Chinese citizen”, while the CGs were informed that X “is a Chinese citizen” (see the instructions). Since both formulations may give rise to in-group emotions, we do not expect this to drive the differences in results. Still, it may be that referring to a more exclusive group creates stronger in-group emotions, which in principle can drive differences in results.¹⁰ From social identity theory (Tajfel and Turner 1979) and earlier experimental research, it is well-known that group effects can easily be generated (Chen and Li 2009) leading to more prosocial behavior towards in-group players than towards out-group players, but there is also evidence that identification with a certain business culture may trigger more anti-social behavior (see e.g., Cohn, Fehr and Maréchal 2014). The typical design where in-group effects appear pervasive is where subjects contingent upon some active choice (e.g., the choice of a picture) in an experiment are allocated to a salient group and where it is clear that there exists, relative to the subject, one or several out-groups. In our study, the category of the other player is not induced by an active choice but given and rather general (e.g., an existing occupation and a citizenship), which means that it is not particularly salient. Furthermore, there is no suggestion that there exist any ‘out-groups’. Consequently, we do not expect strong group effects in this case.¹¹

While location and group identification effects are unlikely to drive our results, critics may still call for more direct empirical evidence alleviating these concerns. While both effects are typically difficult to control, we are fortunate to have the 43 CGCEOs who did their tasks exactly like the rest of

⁹ Additional issues relating to the recruitment and selection of specific “types” of CEOs and CGs are analyzed in Appendix 5.

¹⁰ If this was the fact, we still think that the observed differences in results would be interesting since it would suggest that the mere information that another anonymous player is a CEO shapes behavior and beliefs in the direction of efficiency.

¹¹ For instance, Charness, Rigotti and Rustichini (2007) did not find any group identification effect when the group was not salient and Fershtman and Gneezy (2000) found no in-group bias based on ethnic origin among Ashkenazic and Eastern Jews in trust games in Israel. In fact, the findings in the latter study went partly against the standard hypothesis of social identity theory, since Jews of Eastern origin were less trusting towards their own group than towards Ashkenazic Jews.

the CGs, in their homes and received exactly the same information about their opponent. In addition, they were recruited into the study with the exactly the same method as the rest of the CGs. Hence, we can focus our analysis on the CGs and let those 43 individuals take the CEO role. In this exercise, we obviously press the data very hard since the number of observations is drastically reduced.

Furthermore, these CGCEOs also include leaders of individual enterprises who are likely to run on average smaller firms and may thus be of a different ‘quality’ than our original verified CEO sample. Despite this, we are able to reproduce almost all of our results in this much smaller sample (see below).

A related concern is that the results may be driven by the fact that CEOs’ beliefs about other CEOs may differ from their beliefs about other people—a less specialized population. However, the beliefs that CEOs hold about other CEOs and the belief the CGCEOs hold about ordinary Chinese citizens are very similar and in no case are they significantly different. Hence, in PD, the average CEO believed that 46.6% of other CEOs played Defect, while the average CGCEO believed that 47.0% of Chinese citizens played Defect. The corresponding numbers for BSS are 57.0% and 57.1%. In Chicken the difference in mean beliefs is a bit larger (51.8% versus 54.5%), but still far from being statistically different. This suggests that the CEOs do not hold special beliefs about other CEOs.

We now present regressions on behavior and beliefs where we compare the behavior of the 43 CGCEOs against the rest of the control group. The regression results on behavior are presented in Table A10 and are surprisingly strong. All coefficients are negative, which is similar to our finding in Table 6. The CGCEO coefficient for PD is not significant but it is strongly significant for both BSS and Chicken. This test within the CG sample supports our earlier findings that CEOs play less “aggressively” than the non-CEOs.

TABLE A10. BEHAVIOR: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CGCEO	-0.066 (0.111)	-0.419*** (0.108)	-0.359*** (0.113)
Male	0.064 (0.096)	-0.097* (0.059)	-0.082 (0.071)
Age	-0.003 (0.006)	0.008* (0.005)	0.014*** (0.005)
School	-0.018 (0.019)	0.013 (0.016)	0.046*** (0.018)
Income	-0.153 (0.247)	0.220 (0.151)	0.075 (0.238)
Shanghai	0.107 (0.095)	-0.154* (0.084)	-0.249*** (0.084)
Frame Abstr	0.072 (0.072)	-0.051 (0.059)	0.046 (0.065)
Wald chi2	6.130	20.383	17.990
Prob > chi2	0.525	0.005	0.012
Pseudo R2	0.025	0.114	0.088
N	200	200	200

Notes. Results from logistic regressions. CGCEO denotes the group of 43 subjects defining themselves as enterprise directors among the CGs. The non-CGCEOs consist of the rest of the CGs. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In line with the original sample, we find statistically significant differences in beliefs in the same direction when we compare the CGCEOs with the other CGs (Table A11). CGCEOs believe that their opponent is less likely to defect (strongly significant) and less likely to play hawk (strongly significant in BSS but not significant in Chicken). Thus, with this new categorization and with only half the number of observations we are able to reproduce our main results on differences in beliefs.

TABLE A11. BELIEFS: AVERAGE PARTIAL EFFECTS

	(1) Belief_PD	(2) Belief_BSS	(3) Belief_C
CGCEO	-0.308*** (0.076)	-0.157** (0.076)	-0.059 (0.062)
Male	0.031 (0.090)	-0.052 (0.087)	-0.046 (0.070)
Age	0.012** (0.005)	-0.001 (0.005)	-0.001 (0.004)
School	0.013 (0.019)	0.014 (0.021)	0.027* (0.014)
Income	0.041 (0.125)	-0.034 (0.125)	-0.044 (0.094)
Shanghai	-0.142* (0.083)	-0.048 (0.084)	-0.117* (0.067)
Frame Abstr	-0.025 (0.065)	-0.078 (0.067)	-0.223*** (0.054)
Wald chi2	28.504	8.640	31.386
Prob > chi2	0.000	0.280	0.000
Pseudo R2	0.009	0.003	0.007
N	200	200	200

Notes. Results from fractional response regressions. Belief_PD, Belief_BSS, Belief_C represent the subjects' belief of the proportion playing Defect (PD) and Hawk (BSS and Chicken), respectively. CGCEO denotes the group of 43 subjects defining themselves as enterprise directors among the CGs. The non-CGCEOs consist of the rest of the CGs. Coefficients represent average partial effects. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

When we test for how beliefs affect behavior the main results remain robust, namely that the coefficient for beliefs is positive and significant in PD and BSS (Table A12). It can also be noted that in this subject group the coefficient for beliefs in Chicken is significant and negative. Hence, believing that a high percentage will play hawk in Chicken will decrease the probability the subject plays hawkish, which is in line with standard rational play assuming self-interested preferences.

TABLE A12. BEHAVIOR AND BELIEFS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CGCEO	0.008 (0.120)	-0.384*** (0.105)	-0.381*** (0.115)
Male	0.058 (0.098)	-0.085 (0.056)	-0.090 (0.070)
Age	-0.006 (0.006)	0.010** (0.004)	0.014*** (0.005)
School	-0.022 (0.019)	0.008 (0.017)	0.052*** (0.018)
Income	-0.170 (0.279)	0.204 (0.135)	0.066 (0.243)
Shanghai	0.146 (0.097)	-0.146* (0.075)	-0.276*** (0.086)
Frame Abstr	0.080 (0.073)	-0.028 (0.054)	0.014 (0.068)
Belief_PD	0.628*** (0.211)		
Belief_BSS		0.558*** (0.143)	
Belief_C			-0.452** (0.211)
Wald chi2	14.374	29.619	22.468
Prob > chi2	0.073	0.000	0.004
Pseudo R2	0.059	0.172	0.106
N	200	200	200

Notes. Results from logistic regressions. Belief_PD, Belief_BSS, Belief_C represent the subjects' belief of the proportion playing Defect (PD) and Hawk (BSS and Chicken), respectively. CGCEO denotes the group of 43 subjects defining themselves as enterprise directors among the CGs. The non-CGCEOs consist of the rest of the CGs. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 5: The selection of CEOs and CGs: Some additional comments

We have provided evidence that the matching between the CEOs and CGs was relatively successful and that there are no serious indications of selection issues (see section 4.2 and Appendix 4).

However, there might still be concerns. One issue is that the different groups may differ in their willingness to participate and that this may be associated with how they behave in the games. A second issue is even if the years of education are the same for our respondents (see Table 4) their education may be dissimilar in other respects. We will address these two concerns below.

Selection of cooperative CEOs:

A warning sign is that the response rate of the CGs was higher than the response rate in the CEO group (see Appendix 1A). If the more cooperative CEOs were more willing to participate in this study this could bias the results since even if the same selection mechanism affected the CGs, the higher response rate in the latter group would make the selection effect weaker. The difference in response rates between CEOs and CGs can depend on many things, like the location of the interview and/or the subject's cooperativeness. We cannot fully rule out the latter potential source of bias, but there are some indications that this might be less of a concern, which will be presented below.

First of all, one might suspect that there is a selection issue in that more busy CEOs do not participate and that this group would differ in their behavior from the CEOs participating in the study (e.g., in being less cooperative). It is natural to assume that CEOs of larger firms are busier than CEOs of smaller firms. It is therefore of interest to check if these groups differ in their behavior. We do this by comparing the size distributions of the firms (in terms of the value of sales and number of employees) of those CEOs who choose defect in PD, hawk in BSS and Chicken, respectively. However, in not one of the games is any size measure of the firms of the CEOs playing defect and/or hawk significantly different statistically from those CEOs' firms who did not play these strategies. Hence, these results indicate that this potential selection issue appears to be of minor concern.

Second, even if the response rate of the CEOs interviewed at their firms differ substantially from the response rate of the CGs, the same is not necessarily true in the group of the CEOs who were interviewed in their homes (i.e., the CGCEOs) and for which our main results hold. Among the CGs we do not have information on subgroups' response rates. However, there is no obvious reason to believe that the selection of cooperative subjects was stronger among the CGCEOs than the non CGCEOs. In addition, we can compare the share of CGCEOs who run their own firms with the average running their own firms in the provinces of Shanghai and Zhejiang (i.e., the provinces where the cities of Shanghai and Wenzhou are located) according to household data (covering on 65.555 households nationally). From this household data 18.5% are self-employed or

owners of their firm, which is 21.5% in our data (see Department of Household Surveys, 2012). Similarly, the China General Social Survey provides occupational information and confirms a share of 21.2% self-employed and private firm owners for the year 2011 (see CGSS 2011, retrieved September 12, 2016, at <http://www.cssod.org>). These figures do not suggest that there are any substantial selection effects among the CGCEOs in this respect.

Finally, while one might think that cooperativeness, as measured in the PD, is related to participation in the study, it is less straightforward to argue that the same holds for non-hawkishness in coordination and anti-coordination games, like BSS and Chicken. These games account for two-thirds of our results.

Differences in education:

One issue is that even if the length of education is the same, the content and quality of their education might differ. One thing to note is that while the quality of different schools differs in China, the country has a relatively centralized system of education which partly ought to reduce heterogeneity. Another issue is that even if the length of education is the same for CEOs and GGs the different groups could differ in their attainment of degrees. In Table A13 we provide the distribution of the subject's highest educational degree. It should be clear that there is a very close match for the different categories of the highest education levels.

TABLE A13. HIGHEST EDUCATION LEVEL.

	CEOs	Control Group
Primary school education	4	3
Junior high school	20	19
Vocational school/high school	49	50
Junior college	56	62
Undergraduate education (China)	58	53
Master degree (China)	12	12
Master degree (abroad)	1	1
Number of Observations	200	200

Notes. Number of CEOs and CGs categorized according to their highest attained degree.

Appendix 6: Extreme values

Except for family income, the variables used in the regressions are either dummy variables or not characterized by distributions including extreme values that may affect results. In the case of income one may worry that the highest incomes might impact our result since the highest family income among the CEOs is 3.5 million CNY, which is almost 9 times higher the median CEO income and 20 times higher than the median CG income. The highest CG family income is also relatively high (2 million CNY, which is more than ten times the CG median). To check if our results in Table 6 are robust to limiting the extreme values in family income distribution, we winsorize the family income variable at 98% and 90% in the regressions below. The conclusion is that our main results hold.

TABLE A14. BEHAVIOR: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CEO	-0.122** (0.056)	-0.127** (0.051)	-0.179*** (0.054)
Male	0.044 (0.067)	-0.076 (0.057)	-0.053 (0.065)
Age	-0.001 (0.004)	0.005 (0.003)	-0.000 (0.003)
School	-0.013 (0.011)	0.008 (0.010)	0.019* (0.011)
IncomeW98	-0.006 (0.008)	-0.015** (0.006)	-0.002 (0.007)
Shanghai	-0.010 (0.065)	-0.111* (0.060)	-0.029 (0.064)
Frame Abstr	0.064 (0.051)	-0.016 (0.047)	-0.024 (0.049)
Wald chi2	13.201	24.454	19.660
Prob > chi2	0.067	0.001	0.006
Pseudo R2	0.025	0.047	0.039
N	400	400	400

Notes. Results from logistic regressions. The income variable is subject to 98% winsorizing. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE A15. BEHAVIOR: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CEO	-0.103* (0.059)	-0.124** (0.053)	-0.181*** (0.056)
Male	0.050 (0.068)	-0.070 (0.057)	-0.053 (0.065)
Age	-0.001 (0.004)	0.005 (0.003)	-0.000 (0.003)
School	-0.011 (0.011)	0.006 (0.010)	0.019* (0.011)
IncomeW90	-0.015 (0.012)	-0.019* (0.010)	-0.002 (0.011)
Shanghai	-0.010 (0.065)	-0.104* (0.060)	-0.028 (0.064)
Frame Abstr	0.066 (0.051)	-0.015 (0.047)	-0.024 (0.049)
Wald chi2	14.330	21.988	19.536
Prob > chi2	0.046	0.003	0.007
Pseudo R2	0.026	0.043	0.039
N	400	400	400

Notes. Results from logistic regressions. The income variable is subject to 90% winsorizing. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

We also conduct a robustness check on the results on beliefs, on behavior when beliefs are included and on the average deviation from the correct beliefs when income is subject to 90% winsorizing. The main results remain robust (see Tables A16-A17).

TABLE A16. BELIEFS: AVERAGE PARTIAL EFFECTS.

	(1) Belief_PD	(2) Belief_BSS	(3) Belief_C
CEO	-0.199*** (0.052)	-0.092* (0.052)	-0.073 (0.048)
Male	-0.028 (0.066)	-0.027 (0.069)	0.019 (0.057)
Age	0.002 (0.003)	0.001 (0.003)	0.001 (0.003)
School	0.000 (0.010)	-0.003 (0.011)	0.010 (0.009)
IncomeW90	-0.008 (0.012)	-0.008 (0.011)	-0.004 (0.011)
Shanghai	-0.095* (0.056)	-0.017 (0.057)	0.024 (0.049)
Frame Abstr	-0.026 (0.045)	-0.029 (0.046)	-0.161*** (0.041)
Wald chi2	25.166	8.204	25.321
Prob > chi2	0.001	0.315	0.001
Pseudo R2	0.006	0.002	0.004
N	400	400	400

Notes. Results from fractional response regressions. Belief_PD, Belief_BSS, Belief_C represent the subjects' belief of the proportion playing Defect (PD) and Hawk (BSS and Chicken), respectively. The income variable is subject to 98% winsorizing. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE A17. BEHAVIOR AND BELIEFS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CEO	-0.077 (0.061)	-0.110** (0.054)	-0.185*** (0.057)
Male	0.054 (0.069)	-0.072 (0.058)	-0.051 (0.065)
Age	-0.002 (0.004)	0.005 (0.003)	-0.000 (0.003)
School	-0.011 (0.011)	0.006 (0.010)	0.019* (0.011)
IncomeW90	-0.014 (0.013)	-0.018* (0.010)	-0.002 (0.011)
Shanghai	0.003 (0.066)	-0.102* (0.059)	-0.027 (0.064)
Frame Abstr	0.071 (0.051)	-0.008 (0.047)	-0.032 (0.051)
Belief_PD	0.358** (0.144)		
Belief_BSS		0.580*** (0.135)	
Belief_C			-0.137 (0.151)
Wald chi2	19.993	36.347	20.754
Prob > chi2	0.010	0.000	0.008
Pseudo R2	0.038	0.082	0.040
N	400	400	400

Notes. Results from logistic regressions. Belief_PD, Belief_BSS, Belief_C represent the subjects' belief of the proportion playing Defect (PD) and Hawk (BSS and Chicken), respectively. The income variable is subject to 90% winsorizing. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 7: Interviewers

In an ideal design, interviewers would be randomized among cities and among CEOs and CGs. However, the restriction that the interviewers should be able to speak the local dialect made it impossible to have the same interviewers in different cities. In addition, for logistic reasons, we had a group of subjects who were interviewed by interviewers who only interviewed either CEOs or CGs. When this is the case it is not possible to control for interviewer effects without causing multicollinearity. However, since the interviewers who interviewed only CGs also interviewed the 43 CGCEOs for whom we observed basically the same differences compared to the rest of the CGs (see the previous section), it is unlikely that interviewer effects are driving the results. We also provide a robustness check below where no indication of serious interviewer effects is detected.

We run regressions separately for CEOs and the CGs for each game and treat each interviewer as a dummy. This implies three regressions for the CEOs and the CGs.

TABLE A18. INTERVIEWER EFFECTS ON THE CEOS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
Male	0.156 (0.469)	-0.233 (0.434)	0.062 (0.452)
Age	-0.000 (0.022)	0.006 (0.020)	-0.032 (0.020)
School	-0.036 (0.057)	0.045 (0.052)	0.086 (0.059)
Income	-0.010 (0.030)	-0.078** (0.031)	-0.000 (0.031)
Frame Abstr	0.363 (0.319)	0.027 (0.320)	-0.532 (0.333)
Interviewer 2	0.505 (0.615)	-0.252 (0.615)	1.870*** (0.700)
Interviewer 13	-1.012* (0.597)	0.318 (0.564)	0.772 (0.600)
Interviewer 17	0.708 (0.802)	1.023 (0.923)	1.697* (0.884)
Wald chi2	17.725	12.075	32.137
Prob > chi2	0.406	0.739	0.014
Pseudo R2	0.074	0.045	0.120
N	199	196	199

Notes. Results from logistic regressions. Coefficients represent log of odds ratios. Interviewer 1 serves as baseline. For space reasons only interviewers who are significant in at least one game are included. Eight interviewers are excluded for this reason. Interviewer 8 is omitted in all regressions and 18 omitted in BSS due to lack of variation in dependent variable for these interviewers. Interviewer 8 and 18 did interviews with only 1 and 3 CEO subjects, respectively. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE A19. INTERVIEWER EFFECTS ON THE CGS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
Male	0.541 (0.565)	-0.813 (0.787)	-0.291 (0.692)
Age	-0.028 (0.029)	0.060 (0.040)	0.089*** (0.033)
School	-0.096 (0.077)	-0.018 (0.107)	0.166* (0.092)
Income	-0.054 (0.085)	-0.003 (0.069)	-0.068 (0.074)
Frame Abstr	0.292 (0.299)	-0.194 (0.361)	0.335 (0.343)
Interviewer 9	0.272 (0.689)	1.971** (0.903)	1.123 (0.820)
Interviewer 12	0.025 (0.632)	2.419** (1.166)	1.174 (0.766)
Wald chi2	12.116	18.545	21.635
Prob > chi 2	0.277	0.046	0.017
Pseudo R2	0.045	0.111	0.084
N	200	200	200

Notes. Results from logistic regressions. Coefficients represent log of odds ratios. In all 6 did interviews with CGs. Interviewer 1 serves as baseline. For space reasons only interviewers who are significant in at least one game are included. 3 interviewers are excluded for this reason. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The results of these regressions are presented in Table A18 and Table A19 where only significant interviewers are displayed. There are 15 interviewers and some of them interview both CEOs and the CGs. In all, we obtain $3 \times 19 = 57$ dummies for the six regressions. With a significance level of 5 percent, one should expect that about three dummies are significant for random reasons. This is also what we find. Hence, there is nothing from these regressions that suggest that interviewer effects are something problematic. Furthermore, it is somewhat comforting that not the same interviewer is recurring as significant in the regressions for the different games.

Although the previous results did not indicate any non-normal prevalence of interviewer effect, we can run regressions where we exclude the significant Interviewers in respective game. Obviously, this means that we “press” our data for two reasons. First, we should expect our tests to be weaker since we exclude observations. Secondly, since we intentionally exclude

observations that have the strongest correlation to the dependent variable, either positively or negatively, we should expect this to dampen or strengthen any true causal or randomly generated effect. In Table A20 we present regressions corresponding to Table 6 where significant (p -value $< 5\%$) interviewers are excluded. We exclude city (Shanghai) for multicollinearity reasons.

TABLE A20. BEHAVIOR WITHOUT SIGNIFICANT INTERVIEWERS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CEO	-0.123** (0.056)	-0.060 (0.059)	-0.258*** (0.057)
Male	0.045 (0.067)	-0.057 (0.070)	-0.017 (0.070)
Age	-0.002 (0.004)	0.003 (0.004)	0.001 (0.004)
School	-0.014 (0.009)	-0.003 (0.009)	0.015 (0.009)
Income	-0.006 (0.008)	-0.013** (0.006)	-0.003 (0.007)
Frame Abstr	0.064 (0.051)	-0.011 (0.053)	-0.019 (0.054)
Wald chi2	13.164	9.344	26.676
Prob >chi2	0.041	0.155	0.000
Pseudo R2	0.025	0.021	0.062
N	400	328	344

Notes. Results from logistic regressions when significant interviewers (9 and 12 in BSS, 2 in Chicken) are excluded from respective game. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

For PD nothing changes, the significance of CEO remains since there is no significant interviewer effect detected. For BSS the regression concerns only the 328 subjects who were not interviewed by either 9 or 12. In this case, the CEO variable is still negative, but not significant. When doing the same for Chicken (where subjects interviewed by Interviewer 2 are excluded) we find that the coefficient of the CEO variable becomes substantially larger (0.258 compared to 0.177) and it gets even more significant. Our conclusion from this investigation is that there is no strong evidence suggesting that interviewer effect is a serious problem. If we press our data and omit subsamples of observations (i.e., for interviewers)

where the dependent variable deviates the most from its controlled mean, we still obtain significant results in the predicted direction for two of the three games. Both the strengthening and dampening of effects are consistent with what can be expected from statistical theory.

Appendix 8: Owners and founders

Scholars interested in the role and decisions of entrepreneurs are likely to be interested to know whether our results also hold for a narrower specification of the focus group, namely CEOs who are the actual founder or owner of a firm. Such a definition may come closer to the classical concept of entrepreneurs. It is in founding a firm that the entrepreneur plays out the entrepreneurial function in devising new combinations of resources, organization of production, marketing, and novel products (Schumpeter 1942). The focus on owner CEOs also rules out that individuals with a specific ‘strategic outlook’ were simply recruited into the role of a CEO. There is evidence based on large international data sets that family owned firms are better managed if run by an external CEOs compared with similar firms run by members of the owner family (Bloom et al., 2012). To some extent, a focus on owner-CEOs thereby tackles the question whether observed differences reflect a selection effect or are more likely to reflect ‘learned’ behavior in market exchange. To investigate if our main results on the differences in behavior and beliefs between entrepreneurs and control group also hold for stricter specifications, we run the same regression on the subsample of the 182 CEOs who are owners of firms they manage, and compare them to the sample of 157 CGs who do not define themselves as enterprise directors. The reason for excluding enterprise directors is that there is a relatively high probability that subjects in this group also are owners or founders since so-called individual businesses are rarely operated by professional managers. We conduct the same regressions for the 167 CEOs who are founders or co-founders of their companies. The results are presented below in Tables A21-A24. ‘Owner’ and ‘Founder’ are significant in all regressions on behavior and with the same (negative) sign. Like for the CEO sample “Founder” and “Owner” are not significant for beliefs in all games, but in four out of six regressions the variables are significant or marginally significant and the sign is the same. Thus, by and large, the results hold for these definitions as well and are even strengthened in some cases. This also implies that the differences between the CEOs and CGs are not driven by a group of purely ‘professional’ CEOs who are likely to be selected for the specific position for their strategic skills. We have also investigated whether the percentage of the shares owned in the company and the percentage of personal wealth invested in the firm run by the CEO impact behavior. However, none of these variables have a significant impact on behavior in the games.

The results on behavior and beliefs when we restrict the sample to CEOs who are owners (Table A21 and A23) or founders (Table A22 and A24).

TABLE A21. OWNERS' IMPACT ON BEHAVIOR: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
Owner	-0.150** (0.065)	-0.169*** (0.055)	-0.228*** (0.059)
Male	0.045 (0.075)	-0.076 (0.060)	-0.056 (0.071)
Age	-0.002 (0.004)	0.004 (0.003)	-0.003 (0.004)
School	-0.010 (0.012)	0.015 (0.010)	0.021* (0.012)
Income	-0.020 (0.080)	-0.146** (0.059)	-0.003 (0.072)
Shanghai	-0.040 (0.071)	-0.139** (0.065)	-0.067 (0.070)
Frame Abstr	0.052 (0.056)	-0.017 (0.049)	-0.045 (0.054)
Wald chi2	12.472	31.529	26.996
Prob > chi2	0.086	0.000	0.000
Pseudo R2	0.027	0.076	0.063
N	339	339	339

Notes. Results from logistic regressions when CEOs who are not owners of their firms are excluded from the CEO sample and when CGCEOs (enterprise directors) are excluded from the CGs. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE A22. FOUNDERS' IMPACT ON BEHAVIOR: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
Founder	-0.159** (0.067)	-0.158*** (0.056)	-0.237*** (0.062)
Male	0.040 (0.075)	-0.067 (0.059)	-0.056 (0.071)
Age	-0.002 (0.004)	0.004 (0.003)	-0.002 (0.004)
School	-0.012 (0.012)	0.012 (0.010)	0.022* (0.012)
Income	-0.004 (0.081)	-0.132** (0.057)	0.014 (0.077)
Shanghai	-0.047 (0.072)	-0.130** (0.065)	-0.062 (0.071)
Frame Abstr	0.036 (0.057)	-0.027 (0.049)	-0.042 (0.055)
Wald chi2	12.757	27.717	26.596
Prob > chi2	0.078	0.000	0.000
Pseudo R2	0.029	0.070	0.064
N	324	324	324

Notes. Results from logistic regressions when CEOs who are not founders of their firms are excluded from the CEO sample and when CGCEOs (enterprise directors) are excluded from the CGs. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE A23. OWNERS' IMPACT ON BELIEFS: AVERAGE PARTIAL EFFECTS.

	(1) Belief_PD	(2) Belief_BSS	(3) Belief_C
Owner	-0.327*** (0.059)	-0.128** (0.063)	-0.042 (0.054)
Male	-0.046 (0.070)	-0.021 (0.076)	0.007 (0.063)
Age	0.004 (0.003)	0.003 (0.003)	0.002 (0.003)
School	0.007 (0.010)	0.003 (0.012)	0.013 (0.010)
Income	0.103 (0.091)	-0.088 (0.094)	-0.137* (0.072)
Shanghai	-0.155** (0.061)	-0.053 (0.064)	0.024 (0.055)
Frame Abstr	-0.020 (0.049)	-0.034 (0.051)	-0.175*** (0.045)
Wald chi2	39.303	12.069	26.307
Prob > chi2	0.000	0.098	0.000
Pseudo R2	0.011	0.004	0.006
N	339	339	339

Notes. Results from fractional response regressions on beliefs when CEOs who are not owners of their firms are excluded from the CEO sample and when CGCEOs (enterprise directors) are excluded from the CGs. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE A24. FOUNDERS' IMPACT ON BELIEFS: AVERAGE PARTIAL EFFECTS.

	(1) Belief_PD	(2) Belief_BSS	(3) Belief_C
Founder	-0.328*** (0.060)	-0.113* (0.064)	-0.029 (0.055)
Male	-0.050 (0.070)	-0.026 (0.075)	0.002 (0.062)
Age	0.004 (0.003)	0.003 (0.003)	0.001 (0.003)
School	0.006 (0.011)	0.006 (0.012)	0.016* (0.010)
Income	0.087 (0.093)	-0.083 (0.097)	-0.151** (0.070)
Shanghai	-0.162*** (0.061)	-0.061 (0.064)	0.036 (0.056)
Frame Abstr	-0.041 (0.050)	-0.014 (0.051)	-0.148*** (0.045)
Wald chi2	41.576	9.777	25.333
Prob > chi2	0.000	0.202	0.001
Pseudo R2	0.011	0.003	0.006
N	324	324	324

Notes. Results from fractional response regressions on beliefs when CEOs who are not founders of their firms are excluded from the CEO sample and when CGCEOs (enterprise directors) are excluded from the CGs. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 9: Competition and experience

Although we make no claims of identifying causal mechanisms, some readers may be interested to know if factors in the environment of the CEOs' firms are correlated with their behavior. For instance, it is generally argued that collusion (i.e., horizontal cooperation) is easier and more profitable if the degree of competition is low than if it is high. In our firm survey, we asked the CEOs to estimate the effect on sales by a 10 percent price increase. From this, we get estimations on firm specific price elasticities that can serve as proxies for the degree of competition. However, we do not find any evidence for a connection between the CEOs' behavior in the games and the degree of competition their firms face (see Table A25 below).

Our data set does not allow us to determine whether the behavioral differences between CEOs and the CGs are the outcome of a 'selection effect', an "experience effect" or a combination of both. However, since we asked the CEOs about the year they got their CEO position, we can use this as a proxy for experience and explore whether this is correlated with behavior. When we run the same regressions as used before but with this variable included we find that the number of years as CEO has a negative coefficient in all games, suggesting that experience makes the CEO less prone to defection and hawkish behavior. However, the coefficient for the experience variable ('YearsCEO' in Table A26) is only significant for one of the games. We also asked CGs and CEOs if they were involved in "management" in their previous job. Not surprisingly most of the CEOs had some management experience, which means that the variation in this variable is small for the CEOs. However, the variation among CGs is larger and we find that management experience is marginally significant for CGs in BSS even when we control for the effect of being "enterprise director" indicating that such experience makes subjects less prone to play hawk (Table A27). These findings indicate that although the effect of management experience appears not to be dominant, it should not be neglected as a potential driver of the observed behavioral differences in future studies.

TABLE A25. THE EFFECT OF COMPETITION ON CEOS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
Male	0.059 (0.098)	-0.049 (0.096)	-0.005 (0.105)
Age	0.001 (0.005)	0.002 (0.005)	-0.008* (0.005)
School	-0.000 (0.015)	0.014 (0.014)	0.015 (0.015)
Income	-0.007 (0.080)	-0.195*** (0.074)	-0.020 (0.074)
Shanghai	-0.153* (0.091)	-0.135 (0.093)	0.114 (0.093)
Frame Abstr	0.064 (0.072)	0.007 (0.070)	-0.071 (0.073)
Competition	0.003 (0.003)	-0.001 (0.003)	0.002 (0.003)
Wald chi2	7.026	9.046	10.649
Prob > chi2	0.426	0.249	0.155
Pseudo R2	0.027	0.033	0.041
N	200	200	200

Notes. Results from logistic regressions. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

TABLE A26. THE EFFECT OF EXPERIENCE ON CEOS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
Male	0.053 (0.097)	-0.045 (0.097)	0.008 (0.102)
Age	0.001 (0.006)	0.003 (0.006)	-0.003 (0.005)
School	0.001 (0.015)	0.014 (0.014)	0.020 (0.015)
Income	-0.010 (0.080)	-0.195** (0.076)	-0.026 (0.073)
Shanghai	-0.166* (0.096)	-0.141 (0.096)	0.029 (0.099)
Frame Abstr	0.055 (0.071)	0.010 (0.071)	-0.077 (0.074)
YearsCEO	-0.001 (0.008)	-0.003 (0.008)	-0.022** (0.009)
Wald chi2	6.217	8.752	15.519
Prob > chi2	0.515	0.271	0.030
Pseudo R2	0.023	0.033	0.064
N	200	200	200

Notes. Results from logistic regressions. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.”

TABLE A27. THE EFFECT OF MANAGEMENT EXPERIENCE ON CGS: MARGINAL EFFECTS.

	(1) Defect	(2) Hawk_BSS	(3) Hawk_Chicken
CG_CEO	-0.089 (0.114)	-0.396*** (0.111)	-0.348*** (0.115)
Male	0.041 (0.096)	-0.084 (0.060)	-0.076 (0.073)
Age	-0.004 (0.006)	0.009* (0.005)	0.014*** (0.005)
School	-0.028 (0.019)	0.020 (0.017)	0.049*** (0.018)
Income	-0.161 (0.287)	0.233 (0.160)	0.078 (0.254)
Frame Abstr	0.069 (0.072)	-0.050 (0.058)	0.047 (0.065)
Shanghai	0.114 (0.094)	-0.155* (0.085)	-0.250*** (0.084)
Manexp	0.139 (0.084)	-0.116* (0.066)	-0.049 (0.076)
Wald chi2	7.675	22.508	18.349
Prob >chi2	0.466	0.004	0.019
Pseudo R2	0.036	0.130	0.090
N	200	200	200

Notes. Results from logistic regressions. Robust standard errors in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.”

Appendix 10: Experimental instructions and tasks to subjects*

QID |_|_|_|_|_|

Firm name: _____

Interviewer name: _____

General information (GI)

The purpose of this part of the study is to gain additional insights into economic behavior. You will make choices and guesses in different situations that will be explained later. To make it more interesting, realistic and fun, we will, at random let participants in this study earn some real money. One of your choices or one of your guesses made will be selected at random to determine a “money-earning decision” and you will be paid today according to your decision in this situation. The amount of money you earn will depend on the choices and guesses made by you. This means that you may earn money on any of the decisions made, but you will not know how much you will earn before you have made all choices and guesses. All numbers referring to payoffs refers to CNY. The maximum amount you can earn is 600 CNY and the minimum is 0 CNY.

In some situations, you will “play” with another person denoted as X and who has already made his/her choice, but we will not tell you about them. So you have to make your own decision based on what you think X has decided. (We have information about X:s decisions in an envelope. This envelope will be opened only if one of the decisions below is randomly selected as your “money-earning decision”.) X has been informed that you will be asked to choose from the same options as he/she has chosen from. X does not know your identity and you will not learn the identity of X either. However, you should know that X like you [is a CEO of a Chinese firm and] is a Chinese citizen.

The possibility to earn real money is important in economic experiments and that there are strict rules against deceiving persons who participate. Hence, all information given here about money and other aspects are true and will be carried out according to the information given. Please, note also that there are no “right” or “wrong” choices in the decisions you are going to make. Therefore, make decisions according to what you think is best. Your answers will only be used for research purposes and will be kept strictly confidential.

Read the instructions for each task carefully. Ask the Interviewer if there is anything you do not understand. In each task, you will make one choice between two options and one guess.

**Note the information to the CEOs and the control group differed slightly in a few places. To indicate this, the information only given to CEOs is underlined and in brackets, information only given to the control group is in italics and in parentheses. The codes for the games have been adapted to follow the presentation in the text.*

Situation CA

X has gotten the same information as you about the strategic situation and made a decision between A and B (based on his/her beliefs about what you will do). You will also be asked to choose between A and B. The payoffs in the strategic situation are as follows:

If you choose **A** and:

- X has chosen A your payoff is **0** CNY (and X' payoff is 0 CNY).
- X has chosen B your payoff is **600** CNY (and X' payoff is 150 CNY).

If you choose **B** and:

- X has chosen A your payoff is **150** CNY (and X' payoff is 600 CNY).
- X has chosen B your payoff is **300** CNY (and X' payoff is 300 CNY).

Note that X's choice affects your payoff and your choice affects his/her payoff.

Circle your preferred choice: **A** **B**

Guess CAG

We asked a number of [CEOs] (*persons*) (who lives and work in China) to make choices in the situation above. They had the same chance to earn money as you have. You are now asked to guess how many percents of these persons you think chose option A. We ask you to think hard about this and we will pay you according to how close your guess is the true percentage (given that this situation becomes the money-earning decision).

We pay you:

500 CNY if your guess is within 1 percentage point of the correct answer.

300 CNY if your guess is within 5 percentage points of the correct answer.

200 CNY if your guess is within 10 percentage points of the correct answer.

100 CNY if your guess is within 20 percentage points of the correct answer.

0 otherwise.

How many percents of the persons that previously made choices described the situation above do you think chose option A? _____ (a number between 0 and 100).

Situation CF

Suppose that you manage a firm and can choose between investing in an outlet for the firms' products in a new market or not. You are already partially serving the market's customers from distance, but an outlet would increase your sales. At the same time, there is another firm (denoted by X) from another region, which produces the same type of product as your firm does and also partially serves this new market. Firm X is in exactly the same situation as your firm and might also invest in a competing outlet. However, the market is not big enough for both of you to have an outlet so it will not be profitable to invest if X also does it. If you abstain from investing you can still serve some customers, but this number will be smaller if X invests. The monetary payoffs representing this strategic situation are given below.

X has gotten the same information as you about the strategic situation and made a decision between Investment and No Investment (based on his/her beliefs about what you will do). You will also be asked to choose between Investment and No Investment. The payoffs in the strategic situation are as follows:

If you choose **Investment** and:

- X has chosen *Investment* your payoff is **0** CNY (and X' payoff is 0 CNY).
- X has chosen *No Investment* your payoff is **600** CNY (and X' payoff is 150 CNY).

If you choose **No Investment** and:

- X has chosen *Investment* your payoff is **150** CNY (and X' payoff is 600 CNY).
- X has chosen *No Investment* your payoff is **300** CNY (and X' payoff is 300 CNY).

Note that X's choice affects your payoff and your choice affects his/her payoff.

Circle your preferred choice:

Investment

No Investment

Guess CFG

We asked a number of [CEOs] (*persons*) (who lives and work in China) to make choices in the situation above. They had the same chance to earn money as you have. You are now asked to guess how many percents of these persons you think chose Investment. We ask you to think hard about this and we will pay you according to how close your guess is the true percentage (given that this situation becomes the money-earning decision).

We pay you:

500 CNY if your guess is within 1 percentage point of the correct answer.

300 CNY if your guess is within 5 percentage points of the correct answer.

200 CNY if your guess is within 10 percentage points of the correct answer.

100 CNY if your guess is within 20 percentage points of the correct answer.

0 otherwise.

How many percents of the persons that previously made choices described in the situation above do you think chose Investment? _____ (a number between 0 and 100).

Situation BA

X has gotten the same information as you about the strategic situation and made a decision between A and B (based on his/her beliefs about what you will do). You will also be asked to choose between A and B. The payoffs in the strategic situation are as follows:

If you choose **A** and:

- X has chosen *A* your payoff is **600** CNY (and X' payoff is 400 CNY).
- X has chosen *B* your payoff is **0** CNY (and X' payoff is 0 CNY).

If you choose **B** and:

- X has chosen *A* your payoff is **0** CNY (and X' payoff is 0 CNY).
- X has chosen *B* your payoff is **400** CNY (and X' payoff is 600 CNY).

Note that X's choice affects your payoff and your choice affects his/her payoff.

Circle your preferred choice:

A

B

Guess BSSAG

We asked a number of [CEOs] (*persons*) (who lives and work in China) to make choices in the situation above. They had the same chance to earn money as you have. You are now asked to guess how many percents of these persons you think chose option A. We ask you to think hard about this and we will pay you according to how close your guess is the true percentage (given that this situation becomes the money-earning decision).

We pay you:

500 CNY if your guess is within 1 percentage point of the correct answer.

300 CNY if your guess is within 5 percentage points of the correct answer.

200 CNY if your guess is within 10 percentage points of the correct answer.

100 CNY if your guess is within 20 percentage points of the correct answer.

0 otherwise.

How many percents of the persons that previously made choices described in the situation above do you think chose option A? _____ (a number between 0 and 100).

Situation BSSF

Suppose that you manage a firm and you are to participate in one out of two important trade fairs with an exhibition. One fair takes place in city A and the other in city B. You must choose only one of them since they take place at the same date. An important circumstance is that it is essential that another firm denoted X who sells a complementary product (to your firm's product) comes to the same fair, otherwise your exhibition will not be attractive to potential customers. The problem is that you have not been able to get in contact with firm X, you must, therefore, choose which fair to participate in before you know firm X' choice. The fairs are equally good but city A is closer to your firm's location why this would be your preferred fair (with more customers etc.). You know that the management of firm X is in the same situation as you are. Your firm's presence is crucial for firm X, why X only benefits from the fair if your firm is there as well. Furthermore, since the time is running out for applications to the exhibitions you know that X must make its decision without knowing yours. You also know that city B is closer to firm X why this will be X' management's preferred fair. The monetary payoffs representing this strategic situation are given below.

X has gotten the same information as you about the strategic situation and made a decision between City A and City B (based on his/her beliefs about what you will do). You will also be asked to choose between City A and City B. The payoffs in the strategic situation are as follows:

If you choose **City A** and:

- X has chosen *City A* your payoff is **600** CNY (and X' payoff is 400 CNY).
- X has chosen *City B* your payoff is **0** CNY (and X' payoff is 0 CNY).

If you choose **City B** and:

- X has chosen *City A* your payoff is **0** CNY (and X' payoff is 0 CNY).
- X has chosen *City B* your payoff is **400** CNY (and X' payoff is 600 CNY).

Note that X's choice affects your payoff and your choice affects his/her payoff.

Circle your preferred choice:

City A

City B

Guess BSSFG

We asked a number of [CEOs] (*persons*) (who lives and work in China) to make choices in the situation above. They had the same chance to earn money as you have. You are now asked to guess how many percents of these persons you think chose City A. We ask you to think hard about this and we will pay you according to how close your guess is the true percentage (given that this situation becomes the money-earning decision).

We pay you:

500 CNY if your guess is within 1 percentage point of the correct answer.

300 CNY if your guess is within 5 percentage points of the correct answer.

200 CNY if your guess is within 10 percentage points of the correct answer.

100 CNY if your guess is within 20 percentage points of the correct answer.

0 otherwise.

How many percents of the persons that previously made choices described in the situation above do you think chose City A? _____ (a number between 0 and 100).

Situation PDA

X has gotten the same information as you about the strategic situation and made a decision between A and B (based on his/her beliefs about what you will do). You will also be asked to choose between A and B. The payoffs in the strategic situation are as follows:

If you choose **A** and:

- X has chosen *A* your payoff is **250** CNY (and X' payoff is 250 CNY).
- X has chosen *B* your payoff is **50** CNY (and X' payoff is 400 CNY).

If you choose **B** and:

- X has chosen *A* your payoff is **400** CNY (and X' payoff is 50 CNY).
- X has chosen *B* your payoff is **100** CNY (and X' payoff is 100 CNY).

Note that X's choice affects your payoff and your choice affects his/her payoff.

Circle your preferred choice:

A

B

Guess PDAG

We asked a number of [CEOs] (*persons*) (who lives and work in China) to make choices in the situation above. They had the same chance to earn money as you have. You are now asked to guess how many percents of these persons you think chose option A. We ask you to think hard about this and we will pay you according to how close your guess is the true percentage (given that this situation becomes the money-earning decision).

We pay you:

500 CNY if your guess is within 1 percentage point of the correct answer.

300 CNY if your guess is within 5 percentage points of the correct answer.

200 CNY if your guess is within 10 percentage points of the correct answer.

100 CNY if your guess is within 20 percentage points of the correct answer.

0 otherwise.

How many percents of the persons that previously made choices described in the situation above do you think chose option A? _____ (a number between 0 and 100).

Situation PDF

Suppose that you manage a firm in a small town and that you can choose to send your workers to a costly training which will make them more qualified and your firm more profitable. An important circumstance is that the training is only profitable if most of the trained workers stay in your company after the training. An alternative and less costly strategy is to hire workers that have been trained by another neighbor firm, denoted by X. However, this requires that the neighbor firm decides to send some of its worker to training. It should also be mentioned that firm X has the same options as your firm has, which means that it may recruit trained workers from your firm instead of training its own workers. To sum up, the most profitable situation for you is if you do not send your own workers to training but recruit from firm X, which trains its workers. The next best situation for you is if both you and X send workers to training and do not recruit from each other. The third best situation for you is if neither you nor X sends any worker to training. The worst situation for you is if you send your workers to training and firm X recruits your trained workers. The monetary payoffs representing this strategic situation are given below.

X has gotten the same information as you about the strategic situation and made a decision between Training and Recruitment (based on his/her beliefs about what you will do). You will also be asked to choose between Training and Recruitment. The payoffs in the strategic situation are as follows:

If you choose **Training** and:

- X has chosen *Training* your payoff is **250** (and X' payoff is 250).
- X has chosen *Recruitment* your payoff is **50** (and X' payoff is 400).

If you choose **Recruitment** and:

- X has chosen *Training* your payoff is **400** (and X' payoff is 50).
- X has chosen *Recruitment* your payoff is **100** (and X' payoff is 100).

Note that X's choice affects your payoff and your choice affects his/her payoff.

Circle your preferred choice:

Training

Recruitment

Guess PDFG

We asked a number of [CEOs] (*persons*) (who lives and work in China) to make choices in the situation above. They had the same chance to earn money as you have. You are now asked to guess how many percents of these persons you think chose Training. We ask you to think hard about this and we will pay you according to how close your guess is the true percentage (given that this situation becomes the money-earning decision).

We pay you:

500 CNY if your guess is within 1 percentage point of the correct answer.

300 CNY if your guess is within 5 percentage points of the correct answer.

200 CNY if your guess is within 10 percentage points of the correct answer.

100 CNY if your guess is within 20 percentage points of the correct answer.

0 otherwise.

How many percents of the persons that previously made choices described in the situation above do you think chose Training? _____ (a number between 0 and 100).

Appendix 11: Instructions to interviewers

This part contains instructions to interviewers. For each task, there are instructions and a list of material needed (forms, decks of cards etc).

Task: General Information (GI):

Instruction for conversation:

Interviewer, please note, don't read sentences in 【】

Instruction:

1. Please read the General Information page. Please do not turn pages. I will explain it to you after you finish reading.
2. Each of the following pages describes three different strategic situations. In each situation, you are asked to make one choice and one guess. The different situations are independent of each other.
3. Next, I will explain how the payment works. After you have made all decisions, we will have a deck of cards 【Interviewer, please show the envelope of cards that will be used – envelope marked “Money earning decisions”】. Your choices and guesses are represented by cards in this deck. We will ask you to draw one card from the deck and that card will determine the money earning decision and hence which of your choices or guesses that we will pay.
4. Do you have any questions?
5. 【Interviewer, answer the questions until you are sure that the subject understands.】
6. now please turn to the next page.

<p><i>Material:</i> GI-form, Envelope marked “Money earning decisions”, Questionnaire with experimental tasks in proper order (one for each of the six treatments), pen (do not use pencils).</p>

Situation CA

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with X:s decision in this situation **【show the subject the envelope marked “X:s decisions in CA”】** .
3. X:s decision will be revealed if this decision is randomly selected as the money earning decision. You and X will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please fill in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in “A” or “B” at the bottom of the form. If you see that the subject has made any mistakes such as making a decision for X as well, explain again.】**
May I explain to you again?
【Explanation...Be careful to point out that X has already made his/her decision and that the subject has to make the decision without knowing this.】
【Let the subject change his/her decisions if (s)he wants. If (s)he does not want to change the decision move on.】

Material: CA-form, Envelope marked “X:s decisions in CA”
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GUESS CAG

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with information about the percentages that chose Option A in the previous situation. **【show the subject the envelope marked “Information about percentages”】** .
3. The true percentage will be revealed if this guess is randomly selected as the money earning decision. You will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please make your guess by filling in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in a number between 0 and 100 at the bottom of the form. If this is not the case, instruct the subject to fill in a number.】**

Material: CAG-form, Envelope marked “Information about percentages”.
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Situation CF

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with X:s decision in this situation **【show the subject the envelope marked “X:s decisions CG”】** .
3. X:s decision will be revealed if this decision is randomly selected as the money earning decision. You and X will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please fill in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in “A” or “B” at the bottom of the form. If you see that the subject has made any mistakes such as making a decision for X as well, explain again.】**
May I explain to you again?
【Explanation...Be careful to point out that X has already made his/her decision and that the subject has to make the decision without knowing this.】
【Let the subject change his/her decisions if (s)he wants. If (s)he does not want to change the decision move on.】

Material:CF-form, Envelope marked “X:s decisions in CF”.
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GUESS CFG

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with information about the percentages that chose Investment in the previous situation. **【show the subject the envelope marked “Information about percentages”】** .
3. The true percentage will be revealed if this guess is randomly selected as the money earning decision. You will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please make your guess by filling in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in a number between 0 and 100 at the bottom of the form. If this is not the case, instruct the subject to fill in a number.】**

Material: CFG -form, Envelope marked “Information about percentages”.

Situation BSSA

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with X:s decision in this situation **【show the subject the envelope marked “X:s decisions in BSSA”】** .
3. X:s decision will be revealed if this decision is randomly selected as the money earning decision. You and X will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please fill in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in “A” or “B” at the bottom of the form. If you see that the subject has made any mistakes such as making a decision for X as well, explain again.】**
May I explain to you again?
【Explanation...Be careful to point out that X has already made his/her decision and that the subject has to make the decision without knowing this.】
【Let the subject change his/her decisions if (s)he wants. If (s)he does not want to change the decision move on.】

Material: BSSA -form, Envelope marked “X:s decisions in BSSA”.
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GUESS BSSAG

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. The group that already has made their choices were in an exactly same situation as you, which means that he/she earned most when both chose Option A. Here is the envelope with information about the percentages that chose Option A in the previous situation. **【show the subject the envelope marked “Information about percentages”】** .
3. The true percentage will be revealed if this guess is randomly selected as the money earning decision. You will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please make your guess by filling in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in a number between 0 and 100 at the bottom of the form. If this is not the case, instruct the subject to fill in a number.】**

Material: BSSAG -form, Envelope marked “Information about percentages”.

Situation BSSF

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with X:s decision in this situation **【show the subject the envelope marked “X:s decisions in BSSF”】** .
3. X:s decision will be revealed if this decision is randomly selected as the money earning decision. You and X will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please fill in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in “City A” or “City B” at the bottom of the form. If you see that the subject has made any mistakes such as making a decision for X as well, explain again.】**
May I explain to you again?
【Explanation...Be careful to point out that X has already made his/her decision and that the subject has to make the decision without knowing this.】
【Let the subject change his/her decisions if (s)he wants. If (s)he does not want to change the decision move on.】

Material: BSSF -form, Envelope marked “X:s decisions in BSSF”.
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GUESS BSSFG

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. The group that already has made their choices were in an exactly same situation as you, which means that he/she earned most when both chose City A. Here is the envelope with information about the percentages that chose City A in the previous situation. **【show the subject the envelope marked “Information about percentages”】** .
3. The true percentage will be revealed if this guess is randomly selected as the money earning decision. You will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please make your guess by filling in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in a number between 0 and 100 at the bottom of the form. If this is not the case, instruct the subject to fill in a number.】**

Material: BSSFG -form, Envelope marked “Information about percentages”.

Situation PDA

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with X:s decision in this situation **【show the subject the envelope marked “X:s decisions in PDA”】** .
3. X:s decision will be revealed if this decision is randomly selected as the money earning decision. You and X will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please fill in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in “A” or “B” at the bottom of the form. If you see that the subject has made any mistakes such as making a decision for X as well, explain again.】**
May I explain to you again?
【Explanation....Be careful to point out that X has already made his/her decision and that the subject has to make the decision without knowing this.】
【Let the subject change his/her decisions if (s)he wants. If (s)he does not want to change the decision move on.】

Material: PDA-form, Envelope marked “X:s decisions in PDA”.

GUESS PDAG

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with information about the percentages that chose Option A in the previous situation. **【show the subject the envelope marked “Information about percentages”】** .
3. The true percentage will be revealed if this guess is randomly selected as the money earning decision. You will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please make your guess by filling in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in a number between 0 and 100 at the bottom of the form. If this is not the case, instruct the subject to fill in a number.】**

Material: PDAG -form, Envelope marked “Information about percentages”.
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Situation PDF

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with X:s decision in this situation **【show the subject the envelope marked “X:s decisions in PDF”】** .
3. X:s decision will be revealed if this decision is randomly selected as the money earning decision. You and X will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please fill in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in “A” or “B” at the bottom of the form. If you see that the subject has made any mistakes such as making a decision for X as well, explain again.】**
May I explain to you again?
【Explanation....Be careful to point out that X has already made his/her decision and that the subject has to make the decision without knowing this.】
【Let the subject change his/her decisions if (s)he wants. If (s)he does not want to change the decision move on.】

Material: PDF -form, Envelope marked “X:s decisions in PDF”.
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GUESS PDFG

1. Please read the form.
2. **【Interviewer, please observe whether the subject has finished reading】** Let me explain it to you. Here is the envelope with information about the percentages that chose Training in the previous situation. **【show the subject the envelope marked “Information about percentages”】** .
3. The true percentage will be revealed if this guess is randomly selected as the money earning decision. You will then be paid according to the sums described in the form. **【Point at the payoff information in the subject’ s form.】**
4. Do you have any questions **【Interviewer, answer the questions until you are sure that the subject understands.】**
6. Please make your guess by filling in the form.
7. **【Interviewer, please look at the questionnaire, check that the subject has filled in a number between 0 and 100 at the bottom of the form. If this is not the case, instruct the subject to fill in a number.】**

Material: PDFG -form, Envelope marked “Information about percentages”.
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Instructions to procedure after all tasks are completed:

Random selection of money earning decision:

1. Take out the deck of card from the envelope denoted “Money earning decision”.
2. Inform the subject that (s)he will now draw a card representing one decision previously made. Money will be paid according to this selected decision. Remind the subject that many decisions will result in no money at all or rather small amounts of money.
3. Ask the subject to draw a card.
4. Write down the decision drawn on the Earnings-form.
5. Circle the money earning decision with a pen on the subject’s questionnaire. (Example: if the subject draws a card with “BSSAG” go to the BSSAG-form.) Point it out to the subject so that (s)he understands, which decision was chosen. If it is not a guess write the option chosen or on the Earnings-form.
6. The continuing procedure will depend on the decision drawn:

Material: Envelope marked “Money earning decisions”, A marked deck with 30 cards representing the choices and guesses. Earnings-form.

--> *If a CA or CF decision is drawn.*

I. Look at the subject's decision at the CA or CF-form.

II. Take out X:s decision sheet ("X:s decision in CA" or "X:s decision in CF"). Show it to the subject and look up, which decision X made in the money earning decision. Point at the decision made by X and show it to the subject.

- If the subject chose Option A (in CA) or Investment (in CF) and X chose Option A or Investment → inform the subject that (s)he regretfully did not earn anything.

- If the subject chose Option A (in CA) or Investment (in CF) and X chose Option B / No Investment → inform the subject that (s)he earned 600 CNY.

- If the subject chose Option B (in CA) or No Investment (in CF) and X chose Option A or Investment → inform the subject that (s)he earned 150 CNY.

- If the subject chose Option B (in CA) or No Investment (in CF) and X chose Option B / No Investment → inform the subject that (s)he earned 300 CNY.

III. Write down the sum the subject earns on the Earnings-form. If anything earned, pay him/her the amount earned and fill out the receipt form.

IV. Thank the subject for participating.

Material: The subject's CA or CF -form, Envelope marked "X:s decisions in CA" or "X:s decisions in CF", Earnings-form, receipt form.

--> *If a BSSA or BSSF decision is drawn.*

I. Look at the subject's decision at the BSSA or BSSF-form.

II. Take out X:s decision sheet ("X:s decision in BSSA" or "X:s decision in BSSF"). Show it to the subject and look up, which decision X made in the money earning decision. Point at the decision made by X and show it to the subject.

- If the subject chose Option A (in BSSA) or City A (in BSSF) and X chose Option A or City A → Inform the subject that (s)he earned 600 CNY.

- If the subject chose Option A (in BSSA) or City A (in BSSF) and X chose Option B / City B → inform the subject that (s)he regretfully did not earn anything.

- If the subject chose Option B (in BSSA) or City B (in BSSF) and X chose Option A or City A → inform the subject that (s)he regretfully did not earn anything.

- If the subject chose Option B (in BSSA) or City B (in BSSF) and X chose Option B / City B → inform the subject that (s)he earned 400 CNY.

III. Write down the sum the subject earns on the Earnings-form. If anything earned, pay him/her the amount earned and fill out the receipt form.

IV. Thank the subject for participating.

Material: The subject's BSSA or BSSF -form, Envelope marked "X:s decisions in BSSA" or "X:s decisions in BSSF", Earnings-form, receipt form.

--> *If a PDA or PDF decision is drawn.*

I. Look at the subject's decision at the PDA or PDF-form.

II. Take out X:s decision sheet ("X:s decision in PDA" or "X:s decision in PDF"). Show it to the subject and look up, which decision X made in the money earning decision. Point at the decision made by X and show it to the subject.

- If the subject chose Option A (in PDA) or Training (in PDF) and X chose Option A or Training → inform the subject that (s)he earned 250 CNY.

- If the subject chose Option A (in PDA) or Training (in PDF) and X chose Option B / Recruitment → inform the subject that (s)he earned 50 CNY.

- If the subject chose Option B (in PDA) or Recruitment (in PDF) and X chose Option A or Training → inform the subject that (s)he earned 400 CNY.

- If the subject chose Option B (in PDA) or Recruitment (in PDF) and X chose Option B / Recruitment → inform the subject that (s)he earned 100 CNY.

III. Write down the sum the subject earns on the Earnings-form. If anything earned, pay him/her the amount earned and fill out the receipt form.

IV. Thank the subject for participating.

Material: The subject's PDA or PDF -form, Envelope marked "X:s decisions in PDA" or "X:s decisions in PDF", Earnings-form, receipt form.

--> *If a Guess decision is drawn (that is a card with any of the following codes CAG, CFG, BSSAG, BSSFG, PDAG, PDFG).*

I. Look at the number of percentages the subject has written at the bottom of his/her form that correspond to the card. (If a CAG/CFG card was drawn look at the subjects guess at the CAG or CFG form. If a BSSAG/BSSFG card was drawn look at the subjects guess at the BSSAG or BSSFG form. If a PDAG/PDFG card was drawn look at the subjects guess at the PDAG or PDFG form.

II. Take out the sheet (“Information about percentages”). Show it to the subject and look up, which decision the guess concerned (i.e., *CAG, CFG, BSSAG, BSSFG, PDAG, PDFG*). Point at the number of percentages corresponding to his guess and show it to the subject. Calculate the difference between the correct percentage and the subject’s guess (a number between 0 and 100). Inform the subject of this difference. Write down the difference in the Earnings form.

If this difference is:

- not more than 1 → pay the subject 500 CNY
- more than 1 but not more than 5 → pay the subject 300 CNY
- more than 5 but not more than 10 → pay the subject 200 CNY
- more than 10 but not more than 20 → pay the subject 100 CNY
- more than 20 → inform the subject that his/her guess was too far away from the correct percentage and will regretfully not be paid anything.

III. Write down the sum the subject earns on the Earnings-form. If anything earned, pay him/her the amount earned and fill out the receipt form.

IV. Thank the subject for participating.

Material: The subject’s relevant guess-form (corresponding to codes *CAG, CFG, BSSAG, BSSFG, PDAG, PDFG*). Envelope marked “Information about percentages”, Earnings-form, receipt form.

REFERENCES (Appendix)

- Bartling, B., Weber, R. A., & Yao, L. (2015). Do markets erode social responsibility? *Quarterly Journal of Economics*, *119*, 219–266.
- Baruch, Y., & Holtom, B. C., (2008). Survey response rate levels and trends in organizational research. *Human Relations*, *61*, 1139-1160.
- Bloom, N., Genakos, C., Sadun, R., & Van Reenen, J. (2012). Management practices across firms and countries. *Academy of Management Perspectives*, *26*, 12-33.
- Charness, G., Rigotti, L., & Rustichini, A. (2007). Individual behavior and group membership. *American Economic Review*, *97*, 1340–52.
- Chen, Y., & Li, S. X., (2009). Group identity and social preferences. *American Economic Review*, *99*, 431-457.
- Cohn, A., Fehr, E., & Maréchal, M. A. (2014). Business culture and dishonesty in the banking industry. *Nature*, *516*, 86-89.
- Costa-Gomes, M., & Weizsäcker, G. (2008). Stated beliefs and play in normal-form games. *Review of Economics Studies*, *75*, 729-762.
- Department of Household Surveys, National Bureau of Statistics, China Yearbook of Household Survey (2012). Beijing China: China Statistics Press (Table 4-1-1, 311).
- Fehr, E., & Schmidt, K. M. (1999). A theory of fairness, competition, and cooperation. *The Quarterly Journal of Economics*, *114*, 817–868.
- Gallani, S., Krishnan, R., & Wooldridge, J. M. (2016). Applications of fractional response model to the study of bounded dependent variables in accounting research. *Harvard Business School working paper*, 016.
- Glaeser, E. L., Laibson, David I., Scheinkman, J. A., & Soutter C. L. (2000). Measuring trust. *The Quarterly Journal of Economics*, *115*, 811–846.
- Güth, W. Schmidt, C., & Sutter, M. (2007). Bargaining outside the lab – A newspaper experiment of a three-player ultimatum game. *Economics Journal*, *117*, 449-469.
- Harrison, G. W., & List, J. (2004). Field experiments. *Journal of Economic Literature*, *42*, 1009-1055.
- Henrich, J. Boyd, R., Bowles, S., Camerer, C., Gintis, H., McElreath, R., & Fehr, E. (2001). In search of homo economicus: Experiments in 15 small-scale societies. *American Economic Review*, *91*, 73-79.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature*, *466*.
- Hermalin, B. (1998). Toward a theory of leading by example. *American Economic Review*, *88*, 1188-1206.
- Herrmann, B., Thöni, C., & Gächter, S. (2008). Antisocial punishment across societies. *Science*, *339*, 1362-1367.

- Holm, H. J., & Nystedt, P. (2008). Trust in surveys and games: A methodological contribution on the influence of payments and location. *Journal of the Economic Psychology*, 29, 522-542.
- Lardy, N. (2014). *Markets over Mao: The Rise of Private Business in China*. Washington: Institute for International Economics.
- Levitt, S. D., & List, J. A. (2007). What do laboratory experiments measuring social preferences reveal about the real world? *Journal of Economic Perspectives*, 21, 153-174.
- Mellahi, K., & Harris, L. C. (2016). Response rates in business and management research: An overview of current practice and suggestions for future direction. *British Journal of Management*, 27, 426-437.
- Nee, V., & Opper, S. (2012). *Capitalism from Below: Markets and Institutional Change in China*. Cambridge, MA: Harvard University Press.
- Schumpeter, J. A. (1942/1947). *Capitalism, Socialism and Democracy*, 2nd ed. London, UK: Allen and Unwin.
- Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. in *The Social Psychology of Intergroup Relations*, Stephen Worchel and, William Austin (Eds.) Monterey, CA: Brooks/Cole.
- Von Gaudecker, H.-M., van Soest A., & Wengström, E. (2012). Experts in experiments: How selection matters for estimated distributions of risk preferences. *Journal of Risk and Uncertainty*, 45, 159-190.