Modelling the Effects of Socio-Economic Characteristics on Survey Trust: Empirical Evidence from Cameroon

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Abstract

A large number of studies have used both an economic experiment and surveys to measure trust. There is some evidence on how behaviour in the experiment is related to socio-economic characteristics (for example, age, gender, income levels, educational attainment, marital status and group memberships). However, the relationship between survey trust and such characteristics has not been explored in the current literature. This paper explores this relationship. Generally, the extent of trust declines as the radius of trust widens, suggesting that social distance is important. The results show some evidence that survey trust is correlated with some socio-economic characteristics. However, the correlates of context-specific and non-context specific trust are different. The number of years lived in the village is the key determinant of non-context specific trust. ROSCA membership is important for non-context specific trust in fellow ROSCA members only. Age and marital status are significantly negatively correlated with non-context specific trust in other village members. Income is what really matters for context-specific trust; however, years lived in the village and whether someone has ever lived in an urban area are also correlated with trust in fellow villagers.

Keywords: survey trust, socio-economic characteristics, radius of trust
JEL Classification: O12, Z13

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1. INTRODUCTION

There is a growing consensus among social scientists, particularly economists, that high levels of trust are associated with high levels of economic performance. Arrow (1972) and Fukuyama (1995), for example, argue that trust is a prerequisite for economic performance. The economic function of trust is to reduce the transactions costs associated with formal coordination mechanisms such as contracts, hierarchies and bureaucratic rules (Fukuyama, 1995). High transactions costs have been associated with low levels of trust (North, 1990) and economic stagnation (La Porta *et al*., 1997; Knack and Keefer, 1997; Zak and Knack, 2001). Trust has also been used to explain differences in environmental quality (Grafton and Knowles, 2004) and differences in levels of financial development (Guiso *et al*., 2004) across countries. At the micro level, recent studies by Van Bastelaer and Leathers (2006) and Cassar *et al*. (2007) show that trust (a proxy for social capital) is significantly positively correlated with loan repayment performance.

A large number of studies have used both an economic experiment (commonly known in the literature as the Trust Game) and surveys to measure trust. There is a literature on how behaviour in the experiment is related to subjects' socio-economic characteristics such as age, gender, income levels, educational attainment, marital status and group memberships. However, the relationship between survey trust and respondents' socio-economic characteristics has not been explored in the current empirical literature. Three arguments may possibly justify why hardly any attempt has been made to analyze the determinants of survey trust. Firstly, it is assumed in the literature that what people do under controlled experimental conditions is more reliable than their observed attitudes in a survey (Glaeser *et al*, 2000). In other words, there is an assumption that an experimental measure of trust is probably better than a survey-based measure. Hence, if survey data are different it is assumed they are wrong. In this case, there may be no need to bother about further analysis of the survey data. Alternatively, there often seems to be less variation in trust within a survey than in the experimental data; so one may not necessarily expect to find a significant coefficient in the survey results. Finally, if both the experiment and survey measure the same thing then it makes sense to assume that the determinants of survey trust would not be different from those of experimental trust.

However, in many studies[1] the level of survey trust diminishes as the radius of trust widens[2]. There is a large extent to which the degree of self-stated trust falls as the radius of trust expands from trust in fellow group members, through trust in fellow villagers and trust in people from neighbouring villages, to trust in strangers. As the radius of trust broadens, there is a rapid fall in the number of respondents who indicate strong agreement that other people can be trusted, while the number indicating strong disagreement increases. This indicates some variation in the way individuals respond to each of the survey questions. It is therefore of interest to examine what socio-economic features of an individual cause variation in the level of survey trust as the radius of trust expands. This paper explores this relationship, using measures of trust constructed from a survey conducted in a rural Cameroonian village. The current study contributes to the literature by being the first to analyze the declining level of trust as the radius of trust widens.

The results show some evidence that survey trust is correlated with some socio-economic characteristics. However, the correlates of *context-specific* and *non-context specific* trust are different. The number of years lived in the village is the key determinant of non-context specific trust, while income is the main significant determinant of context-specific trust. I also collected experimental data and these are analyzed in another paper (Etang, Fielding and Knowles, 2007). Previous work has found that experimental trust among our subjects is driven by a much wider range of explanation. Therefore, survey trust captures a different set of individual characteristics than does experimental trust.

2. LITERATURE REVIEW

Survey trust has usually been measured by responses to a statement such as "most people can be trusted". Other survey questions ask whether respondents have ever lent money and other items such as CDs to others. One advantage of the survey is that it reports

[1] For example, Haddad and Maluccio (2003) found a fall in the levels of trust as the radius of trust expands from trust in extended family, through trust in neighbours and local leaders, to trust in strangers.
[2] The term "radius of trust" is used to refer to a circle of people among whom trust operates (Fukuyama, 2000). For example, trust in relatives, friends, neighbours, fellow group members, other community members, people from the same ethnic group, people from the same country, and trust in strangers.

responses for a wide variety of trust questions, facilitating analysis of an individual's trust in different groups of people. A survey also enables us to distinguish between context-specific trust and non-context specific trust. While no study has analyzed the relationship between survey trust and socio-economic characteristics, many studies have established the effect of such characteristics on experimental trust. Assuming both experimental and survey trust are measuring the same thing, before proceeding, it is useful to dwell briefly on previous studies analyzing the socio-economic determinants of experimental trust as the variables analyzed in this paper are taken from these studies. The first group of studies in this line are conducted on university students in developing countries. These include Buchan and Croson (2004), Haile *et al.* (2004), Lazzarini *et al*. (2004), Holm and Danielson (2005), Buchan *et al*. (2006) and Ashraf *et al*. (2006). However, the results from these studies are contentious. For example, Lazzarini *et al*. and Buchan *et al*. document that men trust significantly more than women. On the contrary, Haile *et al.* found that men trust less. Holm and Danielson and Ashraf *et al*. did not establish any significant gender differences in trust.

However, it is unclear to what extent students can be regarded as a representative sample in the Trust Game. There is likely to be relatively little variation in students' socio-economic characteristics such as age, income and educational attainment. Generally, the results indicate that few socio-economic variables affect trusting behaviour in experiments on students. Perhaps this is further evidence that students are not representative of the overall population. To rule out this argument, a few studies have been conducted on non-students in developing countries. Examples of such studies include Greig and Bohnet (2005), Bouma *et al.* (2005), Karlan (2005), Mosley and Verschoor (2005), Johansson-Stenman *et al. (*2006), Schechter (2007) and Danielson and Holm (2007). Nevertheless, the results from these few studies are similarly inconsistent. For example, in analyzing experimental trust, Greig and Bohnet (2005) and Schechter (2007) found that women are significantly less trusting than men. In contrast, Danielson and Holm found no gender differences in trusting behaviour. The effect of education is negative in Bouma *et al.* and Schechter, positive in Karlan, but insignificant in Johansson-Stenman *et al.*

Membership of groups is also another personal characteristic that might affect trust. Karlan (2005) established that belonging to the same micro credit scheme is statistically insignificant in explaining trusting behaviour in the experiment, while whether subjects attend the same church is positively correlated with experimental trust. Johansson-Stenman *et al*. did not find any link between group membership and experimental trust; however, Mosley and Verschoor (2005) found a positive correlation among members of groups within the same village. This paper adds to the literature by analyzing the effects of individual characteristics on survey trust from a sample of villagers in rural Cameroon who vary significantly in terms of social and economic characteristics.

3. METHODOLOGY

3.1 Background on the Village

The survey was administered in a village in the South West Province of Cameroon. The village has a population of about 1000 inhabitants. All villagers are from the same ethnic group and speak the same dialect. Most villagers are illiterate and agriculture is the main economic activity, with cocoa and coffee being the main cash crops. Neighbouring villages are about 5km away and the closest town to the village is about 40km away. The village has neither a bank nor a post office, so most villagers depend on informal financial instruments such as rotating savings and credit associations (ROSCAs) for their financial services. A ROSCA is an informal association formed by men or women (or both), who at regular periods contribute a fixed amount of money to a common fund that each of them receives in order. All agreements do not require formal contracts, but are enforced by the group members. More than half of the adult population belong to the 17 ROSCAs operating in the village.

3.2 The Survey

The survey was designed in English and then translated into the local dialect. The author and his three research assistants are all fluent in the local dialect and were not known to

the villagers prior to the study. A copy of the survey can be found in Appendix 1. The sample was made up of 200 subjects, including 140 ROSCA members (selected from seven ROSCAs) and 60 non-ROSCA members. In all cases, selection was random. The survey asks questions about trust, cooperation, trustworthiness and crime victimization. This paper focuses on the questions designed to analyze the level of trust as the radius of trust broadens. The questions are separated into *context-specific* and *non-context specific* trust. The former specify how much trust people are being asked to place in others while the latter do not. The non-context specific questions ask to what extent people would agree or disagree with the statements that their fellow ROSCA or group members[3], other villagers, neighbouring villages, and people in general (including strangers) could be trusted. These are the first three questions and question ten in the questionnaire. The two context-specific questions ask whether people would be willing to lend their bicycle[4] to fellow group members and to other villagers (questions four and five). Using a five-point scale (*A* to *E*), respondents ranked their levels of trust in different sets of people. *A* indicates strong disagreement and *E* indicates strong agreement with the statement.

A separate section of the questionnaire collected information on an individual's social and economic characteristics. These include: age, gender, income, educational attainment, marital status and ROSCA memberships and duration of membership, whether subjects' have ever lived in an urban area and the number of years they had lived in the village. As most respondents were illiterate, the author and one of the research assistants read out the questions one after another; respondents indicated their answers from a range of choices. This might have influenced subjects' responses to the questions. This problem is common in most studies carried out in rural areas of developing countries, where most respondents are not able to read and write (see for example, Barr, 2003; Karlan, 2005; Schechter, 2007). However, the interview approach enables the

[3] Some of the participants did not belong to ROSCAs. However, the question asked about membership of ROSCAs or any other group. Non-members of ROSCAs were asked if they could trust people who were in the same social group (for example, sports club and church groups) as the respondent. Every participant belonged to some sort of group. Hence, people who were not in ROSCAs also answered this question.

[4] Almost every home in the village owns a bicycle, which is the most common means of transport in the village and neighbouring villages. People attach much value to their bicycles.

collection of more information about the respondents, than could otherwise be collected. It also helps to ensure the understanding of each question by the respondents.

4. RESULTS

4.1 Descriptive Statistics

Table 1 shows the large extent to which the degree of self-reported trust falls as the radius of trust expands from trust in fellow group members, through trust in fellow villagers and trust in people from neighbouring villages, to trust in people in general. As the radius of trust broadens, there is a rapid fall in the number of respondents who indicate strong agreement that other people can be trusted, while the number indicating strong disagreement increases. Figure 1 illustrates this relationship. It is not surprising to find that people are willing to place more trust in others with whom they interact frequently than those they do not know or interact with. However, economic development requires a high degree of trust in people in general rather than a narrow radius of trust. With a high level of generalized trust, mutually beneficial trades can be extended beyond a particular community.

[Table 1 and Figure 1 here]

4.2 Econometric Analysis

As shown in Table 1, responses to some of the questions are highly skewed. A logit model was fitted to the skewed data (questions asking about trust in fellow ROSCA members, whether the respondent would lend a bicycle to fellow group members and whether they would lend the same item to fellow village members). The dependent variable equal 1 if the respondent indicated strong agreement and zero otherwise. For the other questions (asking about trust in fellow villagers, trust in people from neighbouring villages and generalized trust) a Poisson regression was used. The explanatory variables are individuals' gender, age, marital status, household size, number of children, years

lived in the village, income and educational attainment, whether they have ever lived in an urban area, whether they belong to ROSCAs, if so, for how long have they belonged to these associations. Data on household size, the number of children someone has, years lived in the village and the number of years a person has belonged to a ROSCA are all measured as continuous variables. Information on age (in years) and income were collected in bands, and are measured using the midpoint of the particular band. The other variables are measured as dummy variables, coded as 1 if an individual is male, is divorced, has ever lived in an urban area, belongs to a ROSCA or holds a first school leaving certificate[5], and zero otherwise. The data are analyzed for both the non-context specific and the context-specific trust questions. I ran some regressions including quadratic and interaction terms as explanatory variables and found these terms to be insignificant, so left them out. A joint hypothesis test to determine if the overall regression equation is statistically significant rejects the null that all the regression coefficients are zero. Excluding years lived in the village does not change the results significantly and age remains insignificant. This rules out any argument about multicolinearity between years lived in the village and age.

4.2.1 Non-context specific Trust

The results reported in Table 2 indicate that the number of years people have lived in the village is the main determinant of how they answered the non-context specific trust questions. The coefficient on this variable is positive and significant in all specifications, indicating that its effect is robust. The positive sign is consistent with expectations. Increasing the number of years a person has lived in the village by one is associated with an increase in the likelihood that he or she will strongly agree that fellow group members could be trusted. Ten extra years lived in the village is expected to increase the degree of trust in fellow villagers by about 4% and trust in people in general by about 6%, holding all other factors constant. These coefficients are significant at the 10% level. The effect is

[5] A few subjects held higher qualifications than the first school leaving certificate. However, a dummy for first school leaving certificate is used because including people with higher qualifications may lead to the problem of multicollinearity. Since the highest academic institution in the village is the primary school, holding a higher qualification suggests that the individual must have lived in an urban area, which is a separate explanatory variable.

stronger for trust in people from neighbouring villages, where ten additional years spent in the village is expected to increase trust levels by about 8% (significant at the 1% level). The positive impact on trust in fellow villagers is consistent with expectations that people may become more familiar with other village members as they live longer in the village, which in turn, will most likely increase their levels of trust in people from the same village. That increases in the number of years lived in the village are associated with increases in the levels of trust may have implications for policy. High levels of trust are associated with low transaction costs. Thus, Government could create some incentives that would cause villagers to stay in the village. This could promote economic performance, at least at the village-level.

The other significant determinant of non-context specific survey trust is whether someone belongs to a group (ROSCA). Being a ROSCA member is associated with an increase in the probability that a person will strongly agree with the statement that fellow group members could be trusted. The strong relationship is also indicated by marginal effect of this variable, which is significant at the 5% level. That ROSCA membership increases the likelihood of people to trust their fellow group members is in line with the belief that frequent interactions among members of the same group are more likely to increase the probability of trust between them. This result suggests that social distance is important for trust.

However, ROSCA membership becomes statistically insignificant in explaining trust at wider radii. Finding no strong correlation between these variables for wider radii of trust is not surprising as we might not necessarily expect ROSCA members to trust non-members. We would rather expect someone to trust his or her fellow ROSCA members in order for the group to function well, which is confirmed by the results. Needless to say that lack of trust in people out of the ROSCA circles is contrary to what economic development requires. ROSCA members would likely trade with fellow villagers as well as with non-villagers. Thus, if people who are in ROSCAs do not trust those who are not, then transactions costs are likely to be high when trading with non-ROSCA members (Fukuyama, 1995). This can be economically inefficient for the community.

An econometric issue arises about the interpretation of the significant coefficient on ROSCA membership. Finding a positive and significant coefficient on the ROSCA membership dummy may suggest two alternative hypotheses: either more trusting people are more likely to join ROSCAs in the first place (selection effect) or ROSCA membership makes people more trusting (treatment or "spill over" effect)[6]. This issue has been addressed by including the duration of ROSCA membership as an explanatory variable. This allows the test for whether the effect of ROSCA membership is a treatment or selection effect. A significant coefficient on the duration in a ROSCA will suggest that the second hypothesis is correct (treatment effect), else the effect of ROSCAs might just be selection (that is, first hypothesis is correct). This variable is statistically insignificant in explaining how people responded to all the questions. Thus, the significant coefficient on ROSCA membership suggests that it is more likely that more trusting people are more likely to join ROSCAs rather than ROSCA membership making people more trusting.

Another econometric issue that may arise is that the ROSCA membership dummy could possibly be endogenous as there is some unobservable factor that might be causing both ROSCA membership and trust. In this case, the estimated coefficient on ROSCA may suffer from simultaneity bias. The standard solution to endogeneity problems is the use of instrumental variable estimation, which provides an empirical test to the extent of two-way causality. However, we cannot find a valid instrument to perform this test. An alternatively way of dealing with the endogeneity problem is to analyze data for the ROSCA sample only to test if the results vary significantly from those for the full sample. However, there is not enough variation in survey responses for ROSCA members, making it not feasible to deal with the endogeneity issue. So it is possible that the point estimates on the ROSCA membership dummy suffer from some endogeneity bias.

The results also show that in addition to the number of years lived in the village, age and marital status have significant effects on an individual's trust in fellow villagers. For age,

[6] Frequent interactions may lead people to trust more or being exposed to trusting and trustworthy people makes someone more trusting (spill over effect).

a ten-year increase is expected to reduce the degree of trust in other village members by about 4%. The coefficient is significant at the 5% level. Perhaps the older people become, the more likely they are to have bad experiences that would probably reduce their levels of trust. Age does not significantly affect the other non-context specific trust questions. Respondents who are divorced are significantly less trusting than those who are either single or married, all else held constant. The negative effect is consistent with expectations as divorced people are more likely to have had bad experiences. The fact that only the years lived in the village significantly explains trust in non-villagers indicates that there is very little variation in the survey data for wider radii of trust beyond the village. It is found that gender, household size, the number of children someone has, whether someone has ever lived in an urban area, income and education are all insignificant in predicting how people answered the non-context specific trust questions.

[Table 2 here]

4.2.2 Context-specific Trust

Table 3 contains the results for context-specific trust. Income appears to be the only significant determinant of responses to both context-specific trust questions: whether someone would lend their bicycle to fellow ROSCA members and whether they would lend the same item to another village member. There is no significant difference in the coefficients as the radius of trust widens from ROSCAs to the entire village. In both models, the correlation coefficients are positive and significant at the 1% level. The marginal effects are also significant at the 1% level, showing how strong the income effect is. A richer person is about six times more likely to trust than a poorer person with the same characteristics. This result is not surprising. Perhaps in the event that the loaned bicycle gets broken, a rich person is more likely to afford the cost of getting it fixed or replaced. In this regard, poor people will be less likely to trust since they cannot afford to get their bicycle repaired or replaced if damaged by the borrower.

However, in addition to income, years lived in the village and whether people have ever lived in an urban area also predict whether they would lend their bicycle to fellow villagers. The coefficients on both variables are significant and negative, suggesting that the probability that people would strongly agree to lend to other village members falls if they have spent more time in the village and if they have ever lived in an urban area. It is possible that those who have spent some time out of the village will be less familiar with other village members, which could cause them to trust less. Finding that the number of years an individual has spent in the village is negatively correlated with context-specific trust in fellow villagers is opposite to the results for non-context specific trust in other village members. This suggests that non-context specific trust and context-specific trust are different. We would expect a positive coefficient on years lived in the village, as the non-context specific trust results show. Based on the assumption that both experimental and survey trust are measuring the same thing, it makes sense to have the most faith in the results for context-specific trust. This is because the results for context-specific trust are consistent with those for experimental trust where this variable was found to be significantly negatively correlated with trust (see Etang, Fielding and Knowles, 2007). Experimental trust can be compared to context-specific trust rather than non-context specific trust in fellow villagers as the experiment also involved trusting others with something (money).

The results indicate that ROSCA membership and the duration of membership are statistically insignificant, suggesting that belonging to a ROSCA does not matter for context-specific trust. Also, age, marital status, household size, number of children and education do not account for any significant part of the variation in trust levels, in both specifications. The same results were found for non-context specific trust, except for the fact that age and the divorce dummy have significant negative effects on non-context specific trust in fellow villagers.

[Table 3 here]

5. CONCLUSION

This paper aimed at analyzing individual socio-economic characteristics that drive the variation in the levels of survey trust as the radius of trust expands. Generally, the extent of trust declines as the radius of trust widens, suggesting that social distance is important. The results show some evidence that survey trust is correlated with some socio-economic characteristics. However, the correlates of non-context specific and context-specific trust are different. Thus, researchers should be cautious of this when designing a survey. For non-context specific trust, the number of years someone has lived in the village is the only personal characteristic that significantly determines trust across the radius of trust, and its effect is positive. This has the policy implication that government could create some incentives that would cause villagers to stay in the village. This could promote economic performance, at least at the village-level. In only one case (trust in fellow group members) is ROSCA membership significantly correlated with survey trust, suggesting that social distance is important. The duration of ROSCA membership is insignificant. Therefore, it is more likely that more trusting people are more likely to join ROSCAs rather than ROSCA membership making people more trusting. Age and marital status significantly determine trust in other village members only, but do not account for any significant part of the variation in the levels of trust as the radius of trust extends beyond the village.

It is found that income is the main significant determinant of context-specific trust. Richer people are more likely to trust others with their personal belongings such as bicycles. Besides income, years lived in the village and whether people have ever lived in an urban area also explain their trust in other village members. Education, gender, household size, and the number of children subjects have do not explain trust, regardless of whether trust is context-specific or non-context specific. This is the first attempt to analyze the relationship between survey trust and socio-economic characteristics. Therefore, more evidence is needed before any definitive conclusions can be established.

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Table 1: Distribution of survey responses

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Non-context specific trust						
fellow group members	0	1	3	36	160	200
fellow village members	2	17	0	73	108	200
neighbouring villages	10	32	3	90	65	200
people in general	32	39	8	92	29	200
Context-specific trust						
lend to fellow group members	0	2	0	50	148	200
lend to fellow villagers	0	0	1	90	109	200

Figure 1: Number of strong agreements and disagreements vs. radius of trust

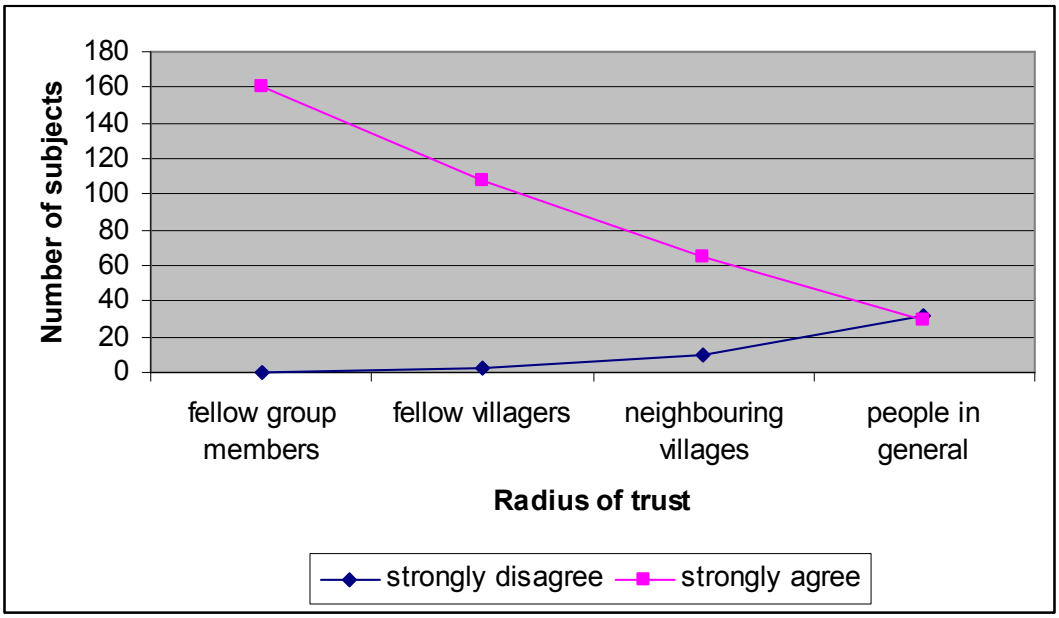

Table 2: Determinants of non-context specific trust (N = 200)

	(1) Trust in fellow group or ROSCA members *Logit*		(2) Trust in fellow villagers *Poisson*	(3) Trust in people from neighbouring villages *Poisson*	(4) Trust in people in general *Poisson*
	Coefficient	Marginal effect	Coefficient	Coefficient	Coefficient
In a ROSCA	2.0850*** (2.64) **8.0445**	0.3058** (2.00)	-0.0001 (-0.00)	-0.0021 (-0.03)	-0.0514 (-0.44)
Duration in a ROSCA	0.1248 (1.28) **1.1329**	0.0134 (1.34)	0.0025 (0.45)	-0.0018 (-0.23)	0.0133 (1.25)
Male	-0.1284 (-0.29) **0.8795**	-0.0138 (-0.29)	0.0415 (1.34)	0.0299 (0.69)	-0.0476 (-0.78)
Age	-0.0100 (-0.45) **0.9901**	-0.0011 (-0.46)	-0.0046** (-2.12)	-0.0037 (-1.58)	-0.0052 (-1.52)
Divorced	0.0475 (0.05) **1.0486**	0.0050 (0.05)	-0.1759* (-1.93)	-0.1826 (-1.58)	-0.2152 (-1.33)
Household size	-0.0576 (-0.52) **0.9440**	-0.0062 (-0.52)	0.0024 (0.25)	-0.0022 (-0.21)	0.0100 (0.64)
Number of children	0.1296 (0.87) **1.1384**	0.0139 (0.89)	0.0062 (0.62)	-0.0030 (-0.24)	0.0106 (0.58)
Years lived in village	0.0458** (2.35) **1.0468**	0.0049** (2.44)	0.0038* (1.88)	0.0077*** (3.25)	0.0061* (1.84)
Lived in an urban area	-0.4136 (-0.63) **0.6613**	-0.0443 (-0.63)	-0.0066 (-0.16)	0.0280 (0.46)	0.0223 (0.26)
ln(income)	0.6944 (0.92) **2.0025**	0.0746 (0.90)	0.1054 (1.62)	0.1141 (1.36)	0.0421 (0.36)
Education	0.3654 (0.79) **1.4411**	0.0398 (0.77)	-0.0001 (-0.00)	-0.0260 (-0.58)	-0.0058 (-0.09)
Intercept	-5.1490 (-1.20)		0.8850 (2.36)	0.6379 (1.33)	0.8575 (1.25)
Log likelihood	-73.2549		-352.0173	-354.1941	-356.4412
R^2	0.268		0.133	0.137	0.058
Predicted Probability		0.8775			

Notes: *, **, *** denote statistical significance at the 10%, 5%, and 1% level, respectively. He teroskedasticity-robust t ratios are in parentheses. Odds ratios are in bold.

Table 3: Determinants of context-specific trust (N = 200)

	(1) would lend a bicycle to fellow group members		(2) would lend a bicycle to fellow villagers	
	Coefficient	Marginal effect	Coefficient	Marginal effect
In a ROSCA	-0.1310 (-0.21) **0.8772**	-0.0237 (-0.21)	-0.5897 (-0.99) **0.5545**	-0.1428 (-1.02)
Duration in a ROSCA	0.0807 (1.31) **1.0840**	0.0148 (1.33)	0.0710 (1.26) **1.0735**	0.0176 (1.26)
Male	-0.2409 (-0.68) **0.7859**	-0.0443 (-0.69)	-0.4677 (-1.47) **0.6264**	-0.1153 (-1.49)
Age	0.0171 (0.89) **1.0172**	0.0031 (0.89)	0.0172 (1.07) **1.0174**	0.0043 (1.07)
Divorced	-0.1834 (-0.25) **0.8325**	-0.0350 (-0.24)	-0.4004 (-0.63) **0.6701**	-0.0998 (-0.63)
Household size	0.0131 (0.14) **1.0132**	0.0024 (0.14)	0.0723 (0.91) **1.0750**	0.0179 (0.92)
Number of children	-0.0590 (-0.51) **0.9427**	-0.0108 (-0.52)	-0.0464 (-0.49) **0.9546**	-0.0115 (-0.49)
Years lived in village	0.0038 (0.27) **1.0038**	0.0007 (0.27)	-0.0314** (-2.11) **0.9691**	-0.0078** (-2.11)
Lived in an urban area	-0.4356 (-0.92) **0.6469**	-0.0795 (-0.94)	-0.7602* (-1.87) **0.4676**	-0.1858* (-1.92)
ln(income)	1.8173*** (2.71) **6.1555**	0.3335*** (2.73)	1.8995*** (3.21) **6.6827**	0.4703*** (3.22)
Education	0.0461 (0.12) **1.0472**	0.0085 (0.12)	0.2339 (0.74) **1.2635**	0.0579 (0.74)
Intercept	-10.0103 (-2.75)		-10.1888 (-3.06)	
Log likelihood	-106.9749		-128.4786	
R^2	0.090		0.089	
Predicted Prob		0.7578		0.5493

Notes: results of the binary logit regressions. *, **, *** denote statistical significance at the 10%, 5%, and 1% level, respectively. Heteroskedasticity-robust t ratios are in parentheses. Odds ratios are in bold.

APPENDIX 1: The Survey Form

This set of questions is designed to provide some information on trust, cooperation and decision making in this village. Any information you provide will be held as strictly confidential and used for study purposes only.

Please circle the most appropriate response A, B, C, D or E, for questions 1 to 10.
A = Disagree Strongly
B = Disagree
C = Neither Agree nor Disagree
D = Agree
E = Agree Strongly

How much would you agree or disagree with the following statements about this village?

1. People who live in this village can be trusted. A B C D E

2. Most people who live in your neighbouring villages can be trusted. A B C D E

3. Generally speaking, most people can be trusted. A B C D E

4. You would be willing to lend your bicycle or hoe to someone else in this village. A B C D E

5. You would be willing to lend your bicycle or hoe to someone in the same ROSCA as you (or to someone close to you – for non-members of ROSCAs) A B C D E

6. If your neighbours need your help during cocoa or coffee harvest seasons, you would be willing to help them. A B C D E

7. Assuming that you help other people harvest their crops, they would help you harvest your crops when you need help. A B C D E

8. Suppose your bucket got broken and you need to fetch water before the next market day. Your neighbour would be willing to lend you theirs. A B C D E

9. You would expect to get your wallet/purse returned (with nothing missing) if you lost it in the street in town Z.* A B C D E

10. People in the same ROSCA (group) as you can be trusted. A B C D E

11. Have you been a victim of crime in the past five years?
Yes □ No□ (If yes, how many times? Where? What happened?)

* The town was named in the survey, but is not named here so as to protect the anonymity of the village. The town is the nearest large town to the village, and is about 40km away.

Demographics

1. Gender: Male □ Female □

2. Age: 16-20 □ 21-30 □ 31-40 □ 41-50 □ 51-60 □ 61-70 □ 71 + □

3. Marital Status: Single □ Married □ Divorced□ Widow/Widower□

4. Occupation: Farming □ Business □ Other □

5. With whom do you live with?
   Alone Partner □ Children Partner and Children □
   Friends Extended family □ Household size…….

6. How many children do you have?

7. How long have you lived in this village? ……. years

8. Have you ever lived in an urban area? Yes □ No□

9. Do you belong to a ROSCA? Yes □ No□

10. If yes, for how long have you been a member? ……. years

11. Annual income of household from occupation (last year's income).
    a) < CFA 300,000
    b) CFA 300,000 - CFA 500,000
    c) CFA 500,000 - CFA 750,000
    d) CFA 750,000 - CFA 1,000,000
    e) CFA 1,000,000 - CFA 1,500,000
    f) > CFA 1,500,000

12. Academic qualifications:
    a) None
    b) First School Leaving Certificate (F.S.L.C.)
    c) GCE O-Level (or equivalent)
    d) GCE A-Level (or equivalent)
    e) Degree