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Corruption Aversion, Social Capital and Institutional Trust in a
Dysfunctional Institutional Framework: Evidence from a Palestinian
Survey

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Abstract

Studying the inter-play between social capital and corruption aversion in a context subject to institutional dysfunctions like the Palestinian Territories may help understand mechanisms of governance and institutional legitimacy. By using a unique survey conducted in 2007 in the Palestinian Territories, we find that corruption aversion increases with civic spirits and is lower among individuals involved in voluntary activities. Furthermore, corruption aversion and social capital increase with institutional trust and the importance of the rule of law. These results are integrated within the current debate on the role that identity-based motivations of moral solidarity play in supporting institutional legitimacy.

Key words: Social Capital, Corruption, Trust, Institutions, Palestinian Studies

JEL Classifications: K42, L31, O17, O53, Z, Z13

Introduction

Understanding citizens' corruption aversion is a key element for more effective anti-corruption reforms, particularly in contexts under state capacity building affected by dysfunctional public institutions like the Palestinian one. In such contexts, citizens may express their disappointment against the political and institutional *status quo*, through unconventional means that impose costs to the society, including violent actions, protests and noncompliance to the rules of law (Machado et al. 2011). The institutionalist perspective argues that anti-corruption reforms are more likely to be effective if lied within a system in which formal and informal institutions mutually support each other (Hodgson and Jiang 2007). Hence, fighting corruption requires coordination between formal mechanisms of governance (legal monitoring and sanctioning) and informal ones including trust and social norms of civic spirit contributing to the shared expectations that most people can be trusted and are honest (Ostrom 1998). On the basis of this critical perspective, we claim that the cognitive and the structural dimensions of social capital help better understand individuals' corruption aversion in a context subject to a dysfunctional public institutional framework like the Palestinian Territories. We also claim that this inter-play between corruption aversion and social capital increases in the presence of citizens' trust towards institutions, institutional trust, and confidence in the rule of law. This is because both institutional trust and confidence in the rule of law reflect the citizens' evaluations of public institutions, policy makers and political leaders as promise-keeper, accountable, transparent, fair and honest (Zmerli et al., 2007). Values indicating the type of society the individuals wish to have (Mansbridge 1999).

Among the several definitions of social capital, the one dominating in the contemporary socio-economic debate refers to a system of social norms enhancing cooperation, reciprocity and trust among individuals of a community for the achievement of mutual benefits and collective goals (Christoforou 2013). In this respect, social capital is built upon values of responsibility, loyalty and solidarity based on a sense of social obligations and shared identity with the rest of the community (Farr 2004).

Corruption is often defined as “the misuse of entrusted authority for private benefit” (Kunicova and Rose-Ackerman 2005). For instance, in the case of Palestine, according to Transparency International¹, the first Palestinian audit conducted in 1997 reports that about 40% of the PA budget was misappropriated (Transparency International 2012). This trend of misappropriation of public resources for private benefit has also been revealed in the 2008 corruption report of the Coalition for Accountability and Integrity in Palestinian Territories (AMAN 2009).

Interestingly, due to the illegal nature of the corrupt exchange, as for social capital, also corruption lies upon trust, loyalty, cooperation and reciprocity among the individuals involved (Della Porta and Vannucci 1999). Given these puzzling commonalities between social capital and corruption, empirical evidence has not reached a unilateral relationship so far. For instance, while some studies report a significant negative correlation between social capital and corruption (La Porta et al 1997, Uslaner 2013), others argue that in communities dominated by in-group ties, outsiders might have to incur an additional charge or bribes to access the community’s resources (Bjørnskov 2011).

As part of the Arab world, the Palestinian Territories is acknowledged as collectivistic-type society in which extended families and friends represent crucial reference groups during the life of an individual (Ben-Ari 2004; Fronk et al. 1999). In such context, in exchange of social support, individuals tend to behave according to the social norms internalised by the reference group doing what the in-group expects (Triandis 2001)². In this respect, informal institutions play a crucial role in the governance of the community influencing individuals’ attitudes towards rent-seeking behaviours and corruption. This form of collectivism may be very persistent and subject to slow changes in societies with long traditions, closed and isolated from other socio-economic and geopolitical contexts, where individuals are affected by limited social and geographical mobility (Triandis et al 1988). Of course, every society, included the Palestinian one, is not strictly homogeneous, rather it is composed by different socio-economic, cultural and political sub-groups, circles and communities that shape the multidimensional composition of their collectivistic nature (Triandis 1988).

Hence, the study of Palestinians' attitude towards corruption cannot be confined to a merely cost-benefit analysis of administrative and financial wrongdoings of some rent-seeker public officials. Rather, it should consider the system of social norms governing the relationship among the community members along with the individuals' perception of the public and formal institutions. Furthermore, the interpretation of these relational mechanisms requires considerable reflection upon the complexity and multidimensional collectivist nature of the Palestinian society. Unlike corrupt exchanges undertaken as a result of a calculative cost-benefit analysis, in society with a pronounced collective dimension, some activities, even though legally illicit, might be undertaken by the community members to preserve and intensify their mutually-beneficial relationship and to boost the welfare of the group. This, in turn, might be justified by the members of the group in the spirit of the communitarian belonging, particularly in societies collectivistic in nature (Fikret and Odabaş 2014). These exchanges tend to rely upon relational favours, rather than on a pure monetary aspect. These might include the provision of constructions permits in areas where these are unlikely to be obtained, the granting of documents such as passport and other certificates more easily and without following the regular procedures and so. Systematically this relies on norms of reciprocity and trust where "who you know" becomes an invaluable asset.

Addressing our research focus on such a context inevitably enriches the debate on the role of social capital and social values in combating corruption and in improving the design of mechanisms of governance in two complementary key perspectives. Firstly, is the perspective that social capital is built on values of responsibility and loyalty enhancing a sense of justice and shared rules for redistribution and fairness in the socio-economic process (Christoforou 2011). Secondly, legal conformity requires public authorities to be accepted as legitimate by citizens. In a state capacity building context, like the Palestinian one, this is more likely to occur if citizens perceive that the values about right and wrong embraced by the legal authorities are consistent with the group's normative values.

The empirical analysis uses data from a Palestinian public opinion survey conducted in 2007 in the West Bank and Gaza Strip by Nasr and Hilal (2007) and administered by the Palestinian Central Bureau of Statistics. Corruption aversion is captured by Palestinians' opinions about the use of bribes at work and the importance of fighting corruption.

The variables of social capital follow the dimensional distinction of Uphoff (1999) and derive from individual opinions about a set of civic spirit promoting prosocial behaviour

(*cognitive social capital*) and individuals involved in voluntary activities (*structural social capital*).

By employing a reduced form bivariate probit model, empirical evidence suggests that corruption increases with cognitive social capital and reduces among individuals involved in voluntary associations.

Further analysis also reports that corruption aversion and social capital increase with institutional trust (trust towards public institutions) and confidence in the rule of law. In collectivistic societies, individuals' loyalty towards their reference group might undermine their support for the collective good if this does not conform to the reference group interests. Hence, values of civic spirit underpinned by trust in external enforcement mechanisms might help restore the individual's commitment to the collective rather than to the interests of specific groups (Irwin 2009).

The corruption environment is one of the key factors undermining the solution of the Palestinian question along with the division between Gaza and West bank and the fanaticism (Saghieh 2012). Hence, shading light on the inter-play between social capital and corruption aversion can contribute to better understand the Palestinian question. In this regard, in addition to the achievement of peace, the building of a functional public institutional framework in the Territories is essential. As in the Western democracies, this passes through the establishment of a complement system of formal and informal institutions promoting prosocial behaviour, inclusivity and respect towards the diversity outside the individual's reference group (Nikitas and Kyriazis 2016).

Beyond the Palestinian question, regional case studies as such might represent an additional source of information able to capture relational realities in different localities, and to investigate and generalise on the dynamics of diversity and transformation across time and space (Reinikka and Svensson 2005; Tavits 2010).

The paper is structured as follows. Section 2 presents the Palestinian background, Section 3 discusses the research hypotheses, Section 4 describes the data and the methodology, Section 5 presents the empirical results and addresses some robust analysis; Section 6 discusses the empirical results and Section 7 concludes.

Palestinian Background and Corruption

The Palestinian Territories is a small geographical territory characterised by a close-knit collectivist-type society based on a system of interconnected families with a strong sense of in-group cohesion (Jaber 2015). Given the multi-dimensional perspective of the collectivistic nature of a specific society, aspects such as language, religion, cultural and ethnic origins, and so on, might characterise the individual's belonging to multiple collective identities (Triandis et al. 1988). These, in turn, influence the individual's identification of multiple reference groups (and by reflection of the respective outgroups) she feels she belongs to, including civil identity (state), local identity (place of residence), family or extended family identity, national identity, religious identity and so on (Diab and Mi'ari 2007; Triandis et al. 1988).

For instance, some experimental studies identified in the attachment of the Palestinian to their religion one aspect of their collective identity (Sagy et al. 2001). However, in the late 19th and 20th century in both Palestine and Israel the nationalist discourse relied on religious connotations (Irfan 2018). The Palestinian party of Hamas explicitly associates Palestinian nationalism with political Islam as the correct alternative to what Hamas considers the secular corrupt PLO (Irfan 2018). Likewise, regarding Israel, Sorek and Ceobanu (2009) show how religious arguments are used to bust national identity and pride, to sustain and provide legitimacy to the Israeli state and its actions within the Israeli-Palestinian conflict. Other studies suggest that extended families and close friends are the most frequently reported reference group among Palestinians (Diab and Mi'ari 2007; Flicker et al. 2019). In this respect, experimental evidence suggests that Palestinians consider family members and friends the main source of social, emotional and instrumental support (Ben-Ari 2004). Hence, Palestinians would rely more frequently on partners and close friends for emotional support (such as sadness, stress, anxiety) and on family members for instrumental support such as financial problems, work related problems and house purchase. This is in line with a broader more generalised perspective that considers Arab societies dominated by a strong family system emphasising family integrity, security, support and conformity (Triandis 1988). With a specific focus to the Palestinian society, Palestinian culture is argued to give considerable importance to the role of honour as part of the Palestinian social unconscious where conformity to the reference group is expected (Robinson 2008). This is also because when a family member

loses honour due to unaccepted behaviour on the basis of local norms and beliefs, this will not only expose that member but also the entire family (Baxter 2007).

It is also argued that Palestinian collectivism has been intensified by the continuing Israeli-Arab conflict of which the first and second intifada, the two Palestinian uprisings against the Israeli occupation, are two key major events in this respect (Sagy et al. 2001, p.6).

During the “First Intifada” (1987-1991), social and informal networks were constantly used to disseminate information: from the timing of demonstrations or durations of commercial strikes to guidance for students on how to study when the universities were closed (Mishal and Ahorni, 1994, pp.25-29). During the second intifada (started in 2000) the Israeli government erected a wall to restrict West Bank Palestinians from entering Israel. This severely restricts the Palestinians’ access to health services, markets and other essential facilities unless in possession of a specific work permit³. Additionally, the increasing number of road closures and checkpoints restrain movements of people and goods considerably and drastically affect the Palestinian economy and human development. Ethnographic studies report that Palestinians deal with this situation in numerous ways from NGOs and associations organising social movements and human rights activism, to women and militant groups mobilised in street protests, to individuals’ engagement in crime and anti-social behaviours (Allen 2008).

In such a context, voluntary activities and associational life assumes a crucial importance since the beginning of the last century (Sullivan, 1996,). Palestinian NGOs provide crucial social services including 60% of all health-care services, 80% of all rehabilitation services and the majority of all pre-school education (Zaharna et al. 2009, p.227). They also tend to be embedded in the local community through relationship-building activities including hosting public functions, being involved in small business and credit services and participating in public events (Zaharna et al. 2009, p.227).

Corruption in The Palestinian Context

According to the 2014 corruption report of Transparency International 22% of Palestinians perceive an increase in corruption in the last two years; 42% of the

respondents consider the political parties extremely corrupt, 26% considers the Parliament extremely corrupt and 22% consider the judicial system corrupt.

According to the 2008 corruption report of the Coalition for Accountability and Integrity in Palestinian Territories (AMAN), 63% of respondents believe that *wasta*⁴, nepotism and favouritism are the most common forms of corruption in the public sector impeding the access to public services. Dysfunctions in the rule of law and accountability, insufficient punitive legislation and an ineffective system of monitoring institutions are considered the main causes of corruption by the respondents. The lack of institutional transparency is, of course, one of the institutional voids through which corrupt exchanges in Palestine can be carried out by public officials. To better understand Palestinian corruption, however, this behaviour of wrongdoing should be considered within the peculiarities of the Palestinian socio-economic and geopolitical context.

Given the family ties nature of the social and economic relations within the Palestinian society, the patron-clientelism system is one of the key factors feeding corruption in Palestinian Territories (Hilal and Kahn 2004). This system lies on kinship and family ties linking political with socio-economic elites (Rubenberg, 2003). These linkages are used by the ruling elites to receive and maintain political support and loyalties within their constituencies in exchange for the redistribution of public resources within the network and by tolerating the financial malfeasance of the supporters (Brinen 1995). Among the different purposes, this relational mechanism helps the ruling elites to reinforce and extend their network of political influence in order to implement more freely their political agenda (Ghanem 2010). Inevitably, this patron-clientelism system is aligned with the lack of institutional transparency inherited by the Palestinian Authority (PA) institutional base (Ghanem 2010). This was established in 1994 without a legislative authority and constituted on the basis of the Oslo Agreement (AMAN 2009).

The mechanisms of governance adopted by the PA at that time derive from the revolutionary resistance movement of the Palestinian Liberation Organisation (PLO) where the transparency of institutions and rule of law were not priorities. For instance, the increasing presence of Israeli settlements in the West Bank during the post-Oslo period, undermined the leadership of Arafat, president of the PNA. It is argued that Arafat's response was the development of a hierarchic system of personal ties and vertical

linkages particularly with some pro-PNA voluntary organisations (Jamal 2007). This created a polarised distribution of the voluntary associations with those supported by the regime having better access to local and political resources (Jamal, 2007). In this respect, developing contexts affected by severe institutional dysfunctions may likely experience what Granovetter (2007) titles a “social construction of corruption”. As in the Palestinian case, particularistic networks tend to precede the formation of formally codified institutions. Hence, the social obligations imposed by these networks to their members tend to dominate the legal rules set by the public institutions that should regulate individuals and groups’ behaviour (Granovetter 2007).

After Arafat, in 2004, the Palestinian institutions focused on the development of anti-corruption measures. However, the regulatory capacity and the accountability of the Palestinian institutions have been undermined by several factors including: the impossibility of using oversight instruments of interpellations; the lack of accountability and formation of commissions of inquiry; and an ineffective auditing system able to verify potential irregularities in the annual financial report of the Ministry of Finance (AMAN 2009).

Social Capital, Corruption and the Research hypotheses

In society with a pronounced sense of community governance where the collective dimension dominates the individuality, where groups feel to be treated by an unfair legal and institutional system and where individuals’ freedom is constrained and threaten by a situation of conflict, within group support may represent a form of informal insurance against uncertainty. Hence, aspects of social capital and illicit socio-economic exchanges might likely overlap and being bridged through norms of reciprocity, mutual support and trust for the benefit of the group. The internalization of these social norms might drive individuals to consider some corrupt exchanges expressions of wrongdoing, though “justifiable” due to unforeseen environmental circumstances (Fikret and Odabaş 2014). Hence, studying the inter-play between social capital and corruption aversion requires the consideration of different relational mechanisms to be tested.

Following Uphoff (1999), we consider to main social capital dimensions: structural and cognitive. The structural dimension refers to the individual’s participation to networks

and associational activities including voluntary organisations. The cognitive dimension refers to a set of norms, values and beliefs towards civic spirit contributing to the individual's adoption of prosocial behaviour (Fiorillo and Sabatini 2015). Both dimensions imply elements of social interactions. While the structural aspects facilitate social interactions, the cognitive dimension refers to a set of norms, values and beliefs towards civic spirit contributing to the individual's adoption of prosocial behaviour (Fiorillo and Sabatini 2015). This inclines people to act in a socially beneficial way on the basis of goodwill, fellowship and solidarity for ultimate goal of the collective benefit (Farr 2004; Kaasa and Parts 2008).

The cognitive and the structural dimensions have been used in previous studies to explain differences in crime rates and attitude towards corruption and tax evasion. For instance, empirical studies report that cognitive social capital tend to reduce corruption (Bjornskov 2011) and to increase individual's motivation to pay taxes in Spain (Alm and Gomez 2008). Hence, the cognitive dimension of social capital expressed in terms of civic spirit might be a positive predictor of corruption aversion. This is because civic spirit promotes prosocial values which contribute to the restoration of individuals' priorities towards the well-being of the entire community rather than any specific interest group (Bogaert et al. 2008). This leads to the first hypothesis.

H1: the higher the degree of cognitive social capital (measured in terms of civic spirit) the higher the degree of corruption aversion

Social capital might also be related to negative outcomes. Strong in-group ties might provide benefits only to the group members causing the classical dichotomy insider-outsider (Fukuyama 2001). Sampson, Raudenbush and Earls (1997) argue that overly in-group community structures might reduce collective efficacy, a combination between social cohesion among citizens and their willingness to maintain the public order. This, in turn, can have an undesirable effect on crime and social disorder (Beyerlein and Hipp 2005). This might be reflected in a collectivist society like the Palestinian one dominated by in-group ties and inclusive structure. The structural dimension based on the individual involvement in associational activities might neglect the importance of fighting corruption and of being corruption-averse for two reasons. Given the crucial complementary role of NGOs in the provision of a range of social services to the local community, individuals involved in associational activities might be more aware of the dysfunctional characteristics of the public institutions. Hence, they might not consider fighting corruption to be a priority in their strategic agenda as long as they can pursue

their social goals. Secondly, it is argued that since the emergence of the PNA (1993), NGOs “had to define their relationships with the government in power” in order to have better access to resources and to acquire security and credibility (Jamal 2007, p.21). This led to a polarisation of the civic associations between pro-PNA from one side and the rest of the associations. Inevitably this favours the creation of vertical linkages between the local authorities and the pro-PNA organisations based on a system of nepotism and clientelistic networks (Jamal 2007). This might induce individuals actively involved in these voluntary activities to consider rent-seeking behaviours less rigorously. This leads to the second hypothesis.

H2: the higher the degree of structural social capital (measured as associational activity) the lower the degree of corruption aversion.

In light of the second hypothesis, mutual cooperation and cohesion are likely to be social resources accessible only to in-group members (bonding social capital) and not to outsiders. This process of inclusion and exclusion may reduce horizontal relations between groups (bridging social capital) and increase further tensions within the entire community (Ballet et al 2007). A blending between inclusive bonding and bridging social capital would be ideal (Narayan and Woolcock 2000). In this regard, one of the challenging aspects characterising the Palestinian context is coping with a process of state capacity building in a context of strong uncertainty. For a collectivist society this implies the preservation of in-group cohesion and, at the same time, the building of out-group relationships for the wellbeing of the entire society. The dominance of in-group over out-group ties makes the members feel uncertain about strangers’ intentions and, hence, reduces social trust (Yamagishi and Yamagishi 1994). The lack of trust towards outsiders in supporting the collective good drives individuals to rely on external enforcement mechanisms, including formal and public institutions, to ensure cooperation (Berigan and Irwin 2011). In this respect, trust towards public institutions may favour an attitude of civic spirit prioritising common goals over the specific interests of the personal individual circle. Empirical evidence suggests that cross-group cooperation increases when individuals have confidence in the effectiveness and fairness of public institutions to protect them from rent seeking behaviours of outsiders (Irwin 2009).

A complementary line of argument relies on the idea that institutional trust, according to some scholars, is the reflection of the extent to which the promise of political fairness and equality is made real by rules, procedures and structures governing the functioning and the behaviour of public institutions and actors (Hakverdian and Mayne 2012). This

include, for instance, rules of equal opportunity regardless of gender, ethnic origins, age and so on made concrete by a new law; or the implementation of policies and provision of services properly addressing public preferences and priorities (Hakverdian and Mayne 2012). In this respect, institutional trust and the confidence in the rule of law reflect the citizens' assessment of public institutions, policy makers and political leaders as promise-keeping, accountable, caring, transparent, fair and honest (Zmerli et al., 2007). This assessment is a continuous exercise carried on by the citizens even in absence of constant scrutiny (Miller and Listhaug 1990) and conducted according to cognitive knowledge-based evaluation of the operation of the public institutions. This evaluation is based not only on subjective criteria of self-interests (Hardin 1999) but also on values and morals reflecting the type of society the individuals wish to have (Mansbridge 1999). This leads to the third hypothesis.

H3: the higher the trust of citizens in public institutions and confidence in the rule of law, the higher the corruption aversion and the degree of cognitive social capital.

Data and Methodology

Bivariate Probit Model: The Baseline Model

The methodological strategy considers two crucial issues.

Firstly, attitudes towards corruption and social capital are likely to be jointly correlated by unobservable factors since corruption requires elements that are also key components of social capital such as reciprocity, cooperation and mutual trust among the individuals involved in the corrupt exchange (Warren 2004). Additionally, in collectivist societies, expressions of structural social capital such as associational relations occur mainly within groups rather than between groups. This discourages cooperation and trust towards outsiders and facilitates practices of nepotism and corruption (Harris 2007).

Secondly, both social capital and attitudes towards corruption may depend on similar covariates including social trust, trust towards public institutions and the importance of the rule of law (Kaasa and Parts 2008; Tavits 2010; Uslaner 2013).

For these reasons, we estimate the interplay between corruption aversion and social capital with a specified bivariate probit model in latent variables. This consists of a system of two probit equations where each dependent variable, in our case social capital and corruption aversion, is a function of observable socio-economic and demographic

covariates and of the respective error terms. The residuals of the two equations are assumed to be normally distributed and derived from a joint normal distribution. Hence, they are allowed to be correlated to one another. The non-zero correlation suggests the presence of unobservable factors of the respondent that influence both their civic spirit and their attitude towards corruption.

In our specific case y_{1i}^* is the unobservable propensity of individual i to declare they are corruption averse and y_{2i}^* is the unobservable propensity of individual i holding social capital. Following Cavatorta and Pieroni (2013) the two probit equations are estimated jointly by the maximum likelihood method where corruption aversion and social capital are the respective dependent variables, functions of a set of socio-economic covariates plus an error term as in the equations (1) and (2).

$$y_{1i}^* = \beta'_1 x_{1i} + u_{1i} \quad (1)$$

$$y_{1i} = 1 \quad \text{if } y_{1i}^* > 0$$

$$y_{1i} = 0 \quad \text{otherwise}$$

$$y_{2i}^* = \beta'_2 x_{2i} + u_{2i} \quad (2)$$

$$y_{2i} = 1 \quad \text{if } y_{2i}^* > 0$$

$$y_{2i} = 0 \quad \text{otherwise}$$

$$\{u_{1i}, u_{2i}\} \sim \Phi_2(0,0,1,1, \rho) \quad (3)$$

where $y_{1i} = 1$ indicates the individual declaring to be corruption-averse which depends on socio-economic factors x_{1i} . $y_{2i} = 1$ indicates the individual “holding” social capital which depends on socio-economic factors x_{2i} . The errors $\{u_{1i}, u_{2i}\}$ are assumed to have a standard bivariate normal distribution Φ_2 with $\text{cov}(u_{1i}, u_{2i}) = \rho$. A significant covariance estimate suggests that corruption aversion and social capital are interrelated by latent factors such as unobservable characteristics of the respondents that may influence both their self-assessed corruption aversion and their social capital.

Given these assumptions, the probability of individuals declaring themselves to be corruption-averse while simultaneously holding social capital is the following

$$\begin{aligned}
\Pr(\text{corruption-averse, social capital} \mid x) &= \Pr(y_1 = 1, y_2 = 1 \mid x) \\
&= \Pr(y_1^* > 0, y_2^* > 0 \mid x) \\
&= \Pr(u_1 > -\beta'_1 x_1, u_2 > -\beta'_2 x_2) \\
&= \Phi_2(\beta'_1 x_1, \beta'_2 x_2, \rho) \quad (4)
\end{aligned}$$

where Φ_2 is the standard bivariate normal distribution.

This estimation technique has been largely used in several social studies to shed light on joint decisions and attitudes assumed by individuals in different social aspects of their life. For instance, by using data from the Canadian Labour Market Activity Survey, Christofides et al. (1997) employ a bivariate probit model to shed light on individuals' joint decision to go on welfare and to supply hours of work. With regard to the specific Palestinian context, Cavatorta and Pieroni (2013) employ a bivariate probit model to study the relationship between the Palestinians' perception of incurring a background risk, i.e. food insecurity in this specific case, and their attitudes towards other insurable risks such as health risks.

Data Description and Variables

The data derives from a Palestinian public opinion survey conducted in 2007 in the West Bank and Gaza Strip by Nasr and Hilal (2007) and administered by the Palestinian Central Bureau of Statistics. The survey contains several sections where a number of opinions regarding public spirit, trust, shared values and norms have been collected from a random sample of individuals (2,508 observations) located in the West Bank and Gaza Strip. Almost 50.3% of the individuals are males and 2,344 individuals out of 2,350 are included in the age interval 16 – 92⁵ (table 1).

[Table 1]

For political and security reasons, in Gaza the survey was conducted according to the Strip's population as a whole rather than to demographic characteristics at sub-group levels as in the West Bank (Nasr and Hilal 2007). This makes the sample unequally distributed, since more than 91% of the sample belongs to the West Bank, affecting the reliability of a potential regional dummy variable. Even though we do not have access to the survey response rate, the survey was conducted according to the statistical validity and sampling procedures of the PCBS (Nasr and Hilal 2007). The statistical validity of the sampling process is reinforced by comparing the stratification of the representative sample with the socio-demographic statistics regularly reported by the PCBS (PCBS 2010). For example, the PCBS reports that the distribution of those in higher education by gender is as follows: 55% of females and 45% of males. Similarly, in our survey, the proportion of female respondents with higher education is 57% against 43% of males. In terms of the labour market, the unemployment rate estimated among the respondents living in WB is 19.8% which is very similar to the unemployment rate of 18.6% reported by the PCBS.

The binary variables of corruption aversion are y_{Bribe} and y_{Fight} . The variable y_{Bribe} derives from the question "In your opinion can you justify this behaviour by other people?" where among the list of the behaviours one is "bribery at work". y_{Bribe} assumes value 1 if the response is "can't justify at all bribery at work" and value 0 otherwise. The variable y_{Fight} derives from the question "What is the importance of these objectives?" where among the list of the objectives one is fighting corruption. y_{Fight} assumes value 1 if the respondent declares that "fighting corruption is very important" and value 0 otherwise.

The binary variables of social capital are y_{Vol} and y_{Civic} . The variable y_{Vol} assumes value 1 if the respondent declares that he/she did volunteer in the last 12 months and 0 otherwise. The variable y_{Civic} derives from the response to questions about other people's behaviours including "absence from work without reasonable reasons, abstention to elections, not commitment to traffic rules, buying stolen products and finding a wallet and not give it back to the police". Each behavioural item follows a scale (1-3) with 1 meaning "I can justify it" and 3 "I can't justify it at all". Following Green and Hensher⁶

(2010), given the positive and significant correlations of coefficients among the items and a Cronbach's alpha around the acceptable threshold of 0.6, the binary variable assumes value 1 if above the sample mean 13.524 and 0 otherwise. This measure is also consistent with the experimental and empirical evidence of individuals' conformity to pro-social norms (Bicchieri 2006). Individuals' conformity to a given social norm is supported by the individual's expectation that that social norm is followed by others and by the belief that others expect one to conform to them (Bicchieri and Xiao 2009). Ajzen et al (1970) is a traditional work in this sense. In a prisoner dilemma game, they provide evidence suggesting that an individual's cooperative behaviour is predicted by his attitude towards specific norms and his belief about the expectations of the other players.

The variable y_{Bribe} might be affected by self-reporting bias. Individuals might tend to overvalue their anti-corrupt spirit and, hence, provide answers not corresponding to their true opinion. Clausen, Kraay and Murrell (2010) argue that phrasing the questions about corruption less personally mitigate the biased answer since the respondents feel more protected by the general structure of the sentence (Clausen, Kraay and Murrell 2010). Moreover, this unbiased condition is favoured by less topic-specialised surveys. For instance, where surveys are mainly focused on corruption, respondents might become more reticent because they might feel that every question could provide additional inferences about the respondent's own behaviour. On the other hand, a more general survey in which attitudinal questions about corruption are only few of the numerous attitudinal questions might reduce this risk (Clausen, Kraay and Murrell 2010). We argue that the data source used in this paper corresponds to the latter scenario for, at least, two reasons. Firstly, the survey used here covers multi-dimensional aspects of citizens' attitude towards their social, political and civil life. Their attitude towards corruption is only one of them. Secondly, the questions on corruption are general rather than personal. They are mainly based on the respondents' opinion about other people's behaviour or about the concept of corruption within a general perspective⁷.

In the reduced form, the probability of declaring to be corruption-averse while simultaneously holding social capital are functions of covariates x_{ki} which is a vector of socio-economic factors. Following Glaeser, Laibson and Sacerdote (2002) and De Blasio and Nuzzo (2010), we consider a series of covariates that can be related to social capital

and corruption aversion including *age*, *age squared*, gender (*male*), the educational level (*education*), being employed (*employed*), the importance of the rule of law (*Rule law*), the trust in public institutions (*institutional trust*⁸), trust towards people in general (*social trust*), the family network (*family*), the network composed of friends and neighbours (*friends*), marital status (*marital status*) and a control variable indicating whether the respondent resides in an urban locality (*urban*).

It is worth noting that Unlike De Blasio and Nuzzo (2010) and Glaeser, Laibson and Sacerdote (2010), the variables of homeownership and income are missing as well as the variable of geographical proximity among individuals. Glaeser, Laibson and Sacerdote (2002) stress that reduced physical distance intensifies social connections and, hence, favour cooperation and social capital. We replace this missing variable with the frequency of individuals meeting with family, friends and neighbours⁹. Previous research suggests that a better regulatory capacity can favour prosocial behaviour especially among citizens who consider the rule of law very important (Bowles and Gintis 2002, Andriani and Sabatini 2015).

Empirical Results

Baseline Model: Empirical Results

Table 2 shows the correlations between errors of corruption and social capital of these reduced forms confirming both hypotheses 1 and 2.

Column I and II show a positive and significant correlation between cognitive social capital and corruption aversion. Where social capital is expressed in terms of civic spirit (Column I and II) the coefficient of ρ is positive and statistically significant at a statistically significant level of 1%. Hence, in line with Hypothesis 1, the two variables/errors are correlated (given $\rho \neq 0$) suggesting that the probability of one

variable will positively depend on the value/probability of the other and that the bivariate probit fits the data better than separate models.

Where social capital is expressed in terms of voluntary activities (Column III and IV), the coefficient of ρ is negative and statistically significant at a significant 5% statistical level. In line with Hypothesis 2, this suggests that the probability of one variable will negatively depend on the value/probability of the other and the bivariate probit fits the data better than separate models.

[Table 2]

Hypothesis 3 is tested by computing the marginal effects on the joint probabilities of the respondents of declaring to be corruption-averse while holding social capital $\Pr(y_1 = 1, y_2 = 1)$ as in equation (4)¹⁰.

[Table 3]

The estimations reported in Table 3 seem to confirm Hypothesis 3. All the estimations suggest that the joint probabilities of being corruption-averse and simultaneously holding social capital increases with trust in institutions and with the importance of the rule of law in both of the social capital and corruption-averse specifications. The coefficient of the *rule of law* is much higher in the specified case of joint probability of being against the use of bribes and holding civic spirit (*column II*).

The joint probabilities of being involved in voluntary activities and being corruption-averse, increase with the network of friends and neighbours and decrease with social trust. Our empirical evidence is robust to a series of sensitivity analyses including the disentanglement of the composite indicator of institutional trust (*Robustness Analysis 1*), the marginal effect of social trust on the joint probability of being involved in voluntary associations and not being corruption aversion (*Robustness Analysis 2*) and the use of alternative baseline models for civic spirit. (*Robustness Analysis 3*).

Robustness Analysis 1: Trust in Public Institutions

It can be argued that the potential substitutive and complementary relationships occurring among the single components of institutional trust are not captured by the composite indicator. Furthermore, institutions closer to the citizens such as *local government* and (the) *police* might have a higher marginal effect on the joint probabilities. Hence, we conduct our baseline model by estimating the marginal effects of each of the components of the variable *institutional trust* separately to avoid possible risks of multicollinearity¹¹. Table 4 shows the estimates related to the single institutional trust items. These indicate that in most of the cases, all (of) the coefficients of the single components of *institutional trust* have a positive and significant marginal effect on the joint probabilities except in two cases: trust in clan and trust in the judicial system when we consider individuals involved in voluntary activities.

[Table 4]

Robustness Analysis 2: Social Trust between Voluntary Activity and Corruption Aversion

Previous studies show the positive relationship between social trust and corruption (Bjornskov 2011). Table 3, however, reports a negative relationship between social trust and the joint probability of being corruption-averse and involved in voluntary activities. Given the particular contextual framework, this might be explained by social trust being negatively related to y_{vol} rather than to the corruption-aversion. This is confirmed when we estimate the marginal effects of the joint probabilities of being involved in voluntary activities and not being corruption-averse (Table 5). It seems that social trust is highly negatively correlated with the variable *vol* rather than with the corruption-averse attitude. A possible explanation of this outcome lies in the complexity of the socio-economic and political conditions in which the Palestinians are trapped. The road blockages within the Territories placed by Israel, the Israeli control on foreign aid and the construction of the “security wall” around parts of the Palestinian Territories create severe movement restrictions of people, goods and services in and out as well as within the Territories. In

this condition of movements restrictions, voluntary associations and NGOs assume different key role in the Palestinian socio-economic system. They act as a bridge between the Palestinian Territories and the rest of the international community; they provide social services in the context of health care and education and they also engage in activities aiming to pursue a better social and civil right condition of the Palestinians including street protests, manifestations, organised movements, human rights activities and so on (Allen 2008). However, at the same time, this condition of conflicts and isolation exacerbates the complexity of the relationship between the NGOs and the local socio-economic and political environment (Jamal 2007). In such a context of socio-economic and political uncertainty, the same associational activities might represent a reference group per se¹². While this increases trust and reciprocity within the same organisation, this might undermine the trust and cooperation with strangers and outsiders. At the same time, where there is less social trust, in coexistence with dysfunctional state institutions, people may increase involvement in voluntary organisations, even if they are aware that this might imply the engagement in clientelism and corruption. This is because the access to basic goods and services is on stake. This is coherent with what Allen (2008) names a “getting by” approach of the Palestinians, a concomitance of many small actions and attitudes that are part of the process of managing everyday survival in a context of continuous uncertainty and frustration (Allen 2008, p.460).

[Table 5]

Robustness Analysis 3: Alternative Baseline Models for Civic Spirit

Given the nature of Palestinian society we consider alternative baseline models for our civic spirit as well as alternative indicators of y_{Civic} .

Firstly, given the 3-level scale of the composite items, we consider the indicator $y_{Civic 2}$ with a median cut-off rather than the mean as in the original baseline model.

Secondly, the lack of State sovereignty and the discontent about the implementation of the state capacity building process might undermine Palestinians’ trust towards

politicians as well as driving some of them not voting in elections. We address these aspects by considering an alternative version of civic spirit, $y_{Civic\ 3}$ without the item *abstention in elections* and by running the model for the sub-sample of respondents who do not trust politicians at all.

[Table 6]

Table 6 shows that in all the alternative specifications, the positive and statistically significant correlation between civic spirit and corruption aversion remains unaltered.

In all specifications the non-zero correlation between the residuals is statistically significant at (a) 1% statistical level. In the case of $y_{Civic\ 2}$ given the small difference in the cut-off of 0.48, the estimations remain unaltered. In the case of $y_{Civic\ 3}$ the correlations coefficient is higher especially in the case of the attitude toward the use of bribes. This difference might capture the Palestinians' dissatisfaction with the ongoing process of state capacity building and hence lower their trust towards politicians.

These results are confirmed even in the case where we consider a sub-sample of respondents who do not trust politicians at all. Not surprisingly, in this case the correlations coefficients are slightly lower, 0.583 and 0.271, compared to the 0.631 and 0.295 respectively of the original baseline model but they remain high and positive.

Discussion

The empirical evidence confirms our hypotheses. The interpretation of our empirical results need to be contextualised within the complexity of the Palestinian society and the related tensions involved in the Israeli-Palestine conflict. In other words, the explanations at the basis of Palestinians' attitude towards corruption go far beyond the pure individualistic punishment effect. In the last decades, for the Palestinian Arabs located in West Bank and Gaza Strip, consistent socio-economic setbacks, the two intifadas, conditions of economic and geographical isolations, restrictions and exposures to several forms of military and political violence have been central aspects of their daily life and culture (Allen 2008; Baxter 2007). This constant exposure to conflict and life uncertainty has been associated in some studies with higher level of aggression within the Palestinian

Territories (Qouta et al. 2008) and with an altered risk attitude of Palestinians towards legal rules (Cavatorta and Groom 2014). Increasing evidence shows that exposure to conflict and other life-threatening events jeopardising individuals' personal freedom develops anger and attitudes in favour of risk-taking, noncompliance to legal rules and greater inclination towards tax evasion (Voorst et al. 2012). For instance, Cavatorta and Groom (2014) conducted a quasi-experiment analysis, testing the effect of the construction of the wall between the State of Israel and the West Bank on the risk attitudes of the Palestinians located in more isolated communities. They find a greater level of risk-tolerance among the Palestinians living in isolated communities due to the construction of the wall compared to those who had no experience of the wall. Given these peculiar circumstances, Palestinians attitude and behaviour need to adjust to conditions of constant disruption and uncertainty by getting through these contingencies in different ways, not necessarily requiring military resistance to occupation, or organised resistance or social norms of nationalism (Allen 2008). For instance, our results suggest a negative relationship between corruption aversion and structural social expressed in terms of voluntary activities. The fact that Palestinians involved in voluntary activities are less sensitive to corruption aversion might have a speculative explanation based on the contextual circumstances. Individuals involved in voluntary activities are more likely aware of dysfunctions of the public institutions and, consequently, of informal linkages that voluntary associations hold with some bureaucrats for a better pursuit of their social services and social goals (Jamal 2007). From an attitudinal point of view, even though this condition keeps the individuals' social commitment towards their voluntary activities unaltered, it might undermine their corruption aversion. Beyond the Palestinian context, also in Latin America Xin and Rudel (2004) find that the wide perception of political corruption and the presence of vertical linkage between public officials and closely knit groups undermine corruption aversion among citizens. While this reduces the priority of fighting corruption, it also increases the tolerance towards it as it is perceived as a vehicle to pursue group interests, if not social goals. Support of this view is also provided by Graeff and Svendsen (2013). In analysing the relationship between corruption and social capital in Eastern Europe, they argue that when organisational collapse occurs, this is compensated by the linkages established between informal groups or associations and bureaucrats. These linkages allow these groups to pursue their goals. Hence, the use of bribery and corruption is more likely to be tolerated. Recalling the Palestinian context, these linkages might have two implications. Firstly, individuals might assess rent-seeking

behaviour less rigorously. Secondly, Palestinians might perceive the presence of corrupt exchanges between voluntary organisations and bureaucrats even where these are not-existent. This latter concern might explain the fact that 27% of the respondents felt that NGOs in the Palestinian Territories are corrupt if not extremely corrupt¹³ (Transparency International Report).

Our results also confirm the other hypotheses. The link between cognitive social capital and corruption aversion is positive and it increases with the Palestinians' trust towards public institutions. This clearly suggests that corruption aversion cannot be disconnected from the role of institutional legitimacy, of which institutional trust is a key vehicle (Tavits 2010). On the contrary, a lack of institutional trust can result in tendency to engage in corrupt activities and, even worse, to justify them (Xin and Ruden 2004). This problem is exacerbated in contexts affected by a lack of institutional legitimacy as is the case in the Palestinian Territories. For instance, in the case of Mexico, Guerrero and del Castillo (2003, p.2) argue that the lack of legitimacy of the rule of law can clearly undermine corruption aversion among citizens. This disseminates the culture of "everyone is doing it" leading to disincentives in obeying the law (Morris and Klesner 2010).

Conclusions

The standard principal-agent theoretical approach looks at corrupt exchanges as the result of a cost-benefit analysis conducted by the individual involved in these activities. Social exchanges based on norms of trust and mutual reciprocity aim to reduce transaction costs and in some cases are social capital outcome-based. Some of these social exchanges, however, might be the result of corrupt activities considered free from "transaction costs" and pursued within the spirit of the community identity and belonging. Particularly in contexts exposed to conflicts, life uncertainty and isolation like the Palestinian one. Even though, these exchanges are not the result of the classical principal-agent calculative cost-benefit analysis, as expression of illicit behaviour, are still categorised as corrupt and they, obviously, come with a loss in terms of resource allocation and widespread rent-seeking behaviour (Fikret and Odabaş 2014). In this respect, our analysis suggests that

Palestinians are generally in favour of combating corruption, even though, under certain circumstances, some forms of rent-seeking behaviour might be considered less rigorously. The cross-sectional design of the analysis requires, however, caution in advancing a causal interpretation of our estimates due to possible endogeneity problems in, at least, two ways. Firstly, unobservable individual characteristics such as personal interests and unexpected shocks may be correlated not only to the individual's trust in others but also to civic spirit as well as attitudes to corruption. This can be especially valid in a context of conflict and geopolitical isolation as is the case in the Palestinian Territories. Secondly, we should not ignore the possibility of reverse causality between institutional trust and civic spirit: individuals with civic spirit might be more inclined to trust institutions, even though previous empirical evidence does not support this perspective (Andriani and Sabatini 2015).

In spite of the above limitations, our results link with two complementary perspectives, helpful for speculating possible policy recommendations. Firstly, is the perspective that social capital is built on values of responsibility and loyalty enhancing a sense of justice and shared rules for redistribution and fairness in the socio-economic process (Christoforou 2013). Secondly is the perspective highlighting the importance of legitimacy for legal conformity. In other words, compliance with legal rules, such as anti-corruption regulations, is more likely to occur when the public authority is accepted as legitimate by citizens (Lindberg and Arjuela 2014). This legitimacy is more likely to be achieved if the values under which rulers and policy makers operate are recognised by the community (Horne et al. 2016).

The policy recommendations derived from our analysis in order to boost institutional legitimacy and, hence, reduce corruption aversion, require the consideration of the complex and peculiar Palestinian geopolitical condition. Instrumentally, a restructuring of the Palestinian public institutions according to more democratic standards of accountability and transparency might boost institutional trust, essential for institutional legitimacy, since it contributes to the dissemination of those social norms of civic duty beyond and across different social and economic groups. This means the implementation of several legal-institutional measures including an effective legislative monitoring system and an independent well-functioning judicial institution. Implementations that would be more feasible if Palestine achieves a condition of sovereignty. This, of course, would imply the involvement of social and institutional forces outside the Territories

supporting the setting of more favourable geopolitical conditions in this respect. However, the solely instrumental approach, even though necessary, might not be enough. Without undermining the obstacle and the challenges that the Israeli-Palestine question represents for the broader self-determination of Palestine *tout court*, domestically, Palestinian policy makers should not underestimate the citizens' perception about the operation and the integrity of their public institutions and political leaders. For instance, in a policy brief, Dana (2015) reports that according to an opinion poll conducted in 2014, about 25% of the sample considers corruption a major issue, coming immediately second after the problem of occupation and settlements. Hence, legal conformity may be better supported within a context subject to common shared values and identity perceived to be embraced by the legal authorities and by the different socio-economic groups of the society this authority is governing (Sunshine and Tyler 2003). The challenge for the Palestinian Authority is clearly to engage in actions aligning with the values of fairness and justice which Palestinians prioritise both for historical and geopolitical reasons. This cannot be the result of unilateral decisions going from "State" to citizens. On the one hand, in a state capacity building process, this should require a constant synergy between institutions and social groups where both parties target the development of a public organisation based on rules of impartiality, transparency and credibility (Evans 1996). On the other hand, building shared identities require the coordination and involvement of diverse groups for the building of a "collective" on the basis of social norms. This coordination mechanism implies moving away from the behaviour of group members centred on particularised interests¹⁴. Hence, continuous reflection within the group and constant interaction between individuals, groups and institutions might influence Palestinians' behaviour at every layer of society and determine what kind of society they wish to have.

Notes

1. The Palestinian Territories have been included in the Transparency International (TI) study only recently. Transparency International is one of the most popular civil society organisation involved in the fight against corruption. One of the tasks
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of Transparency International is to track and keep record of the corruption trend in as many countries as possible. More details about TI can be found in the association's website www.transparency.org.uk.

2. In individualistic-type societies, individuals behave according to their personal goals and values (Triandis 2001).
3. This access occurs only through checkpoints and security checking. For an in-depth description of the relevant background with regard to the construction of the wall see Cavatorta and Groom (2014).
4. Process through which an individual, on behalf of another person, uses his/her connections, particularly within the public administration, to influence the government transactions in which that person is involved including quick renewal of a passport, waiving of traffic fines, getting promoted for a job etc. (for a more complete analysis of *wasta*, (see Hutchings and Weird 2006)
5. The six missing individuals not included in the 2,344 are less than 16 years old. More precisely they are less than 10 years old.
6. In the binary choice model to health satisfaction, Green and Hansher (2010) derive the binary variable of health satisfaction (*Healthy*) from a self-reported health assessment recorded with a range of values [0 10]. In that case given the sample mean of 6.8, the binary variable $Healthy = 1$ if the health assessment is at least 7 and 0 otherwise.
7. A common problem of surveys dealing with corruption is the trade-off between the accuracy of the questions (general or specific and how much general or how much specific) and the unbiased answer. This survey is not able to overcome this problem. However, we believe that biased estimates are mitigated and reduced by the structure of the survey and the phrasing of the questions.

Given the very high Cronbach's alpha of 0.82 among the trust items, the variable *institutional trust* is the sum score of trust in different institutions including government political parties, local government, parliament, the president, the judicial system, the police and the clan.

8. Frequency of meetings and physical distance are not equivalent. However, the Palestinian Territories suffer of the presence of physical obstacles that limit the movement of Palestinians within the Territories tremendously. This means that in general Palestinians are likely to limit their movements within short distances.

Hence, higher frequency of contacts definitively implies higher geographical proximity.

9. Notice that we have four joint probabilities: $\Pr(y_1 = 1, y_2 = 1)$; $\Pr(y_1 = 1, y_2 = 0)$; $\Pr(y_1 = 0, y_2 = 1)$; $\Pr(y_1 = 0, y_2 = 0)$. We focus the attention on the first type since we consider it more related to the statement of social capital and corruption puzzle described by equation (1).
10. Notice that the marginal effects of the socio-economic covariates (not included in the table but in the empirical model) do not vary significantly from the baseline model.
11. In a critical perspective on the use of voluntary associations as proxy for social capital, Sabatini (2006) underlines that voluntary associations might be characterised by groups that are relatively homogeneous in character. This high level of homogeneity within the group is likely to reduce new possible bridges between circles and, hence, undermine social trust rather than enhance it.
12. The results of this survey is in the website of Transparency International <http://www.transparency.org/gcb2013/country/?country=palestine>.
13. We particularly thank the referee for this line of argument.

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Tables

Table 1 Summary statistics

Variable	Observations	Mean	St. Dev.	Min.	Max.
<i>Bribe</i>	2331	0.962	0.192	0	1
<i>Fight</i>	2494	0.958	0.200	0	1
<i>Vol</i>	2488	0.414	0.493	0	1
<i>Social trust</i>	2302	0.156	0.363	0	1
<i>civic</i>	2352	0.594	0.491	0	1
<i>age</i>	2344	36.310	13.856	16	92
<i>age</i> ²	2344	1510.36	1186.669	0	8464
<i>female</i>	2350	0.503	0.500	0	1
<i>education</i>	2351	3.772	1.518	1	8
<i>employed</i>	2352	0.431	0.495	0	1
<i>Rule law</i>	2337	2.919	0.306	1	3
<i>Institutional trust</i>	2352	12.420	5.062	0	24
<i>Marital status</i>	2497	0.647	0.478	0	1
<i>family</i>	2338	35.900	17.716	0	52
<i>friends</i>	2247	28.067	15.205	0	52
<i>Urban</i>	2508	0.530	0.499	0	1

Table 2: Hypotheses 1 and 2: Bivariate probit and correlation between errors of corruption-aversion and social capital

	$\Pr(y_{Bribe} = 1)$	$\Pr(y_{Fight} = 1)$	$\Pr(y_{Bribe} = 1)$	$\Pr(y_{Fight} = 1)$
	$\Pr(y_{Civic} = 1)$	$\Pr(y_{Civic} = 1)$	$\Pr(y_{Vol} = 1)$	$\Pr(y_{Vol} = 1)$
	Hypothesis 1 Column I	Hypothesis 1 Column II	Hypothesis 2 Column III	Hypothesis 2 Column IV
<i>N</i>	2,342	2,353	2,335	2,346
<i>MLL</i>	-1833.92	-1790.96	-1850.88	-1758.48
ρ	0.631***	0.295***	-0.129**	-0.156**
<i>se</i> (ρ)	0.051	0.07	0.063	0.075
<i>LR</i> ($H_0 : \rho = 0$)	102.445***	16.268***	4.163**	4.268**

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$

Table 3 Hypothesis 3: Marginal effects on joint probabilities of the respondents declaring to be corruption averse while holding social capital

	Pr($y_{Bribe} = 1$)	Pr($y_{Bribe} = 1$)	Pr($y_{Fight} = 1$)	Pr($y_{Fight} = 1$)
	Pr($y_{Vol} = 1$)	Pr($y_{Civic} = 1$)	Pr($y_{Vol} = 1$)	Pr($y_{Civic} = 1$)
<i>Rule law</i>	0.070** (0.034)	0.187*** (0.033)	0.095*** (0.035)	0.204*** (0.034)
<i>Trust institutions</i>	0.008*** (0.002)	0.009*** (0.002)	0.007*** (0.002)	0.009*** (0.002)
<i>Social trust</i>	-0.044 (0.028)	0.015 (0.028)	-0.048* (0.028)	0.013 (0.028)
<i>Family</i>	0.000 (0.001)	-0.002** (0.001)	0.000 (0.001)	-0.002** (0.001)
<i>Friends</i>	0.004*** (0.001)	0.001 (0.001)	0.004*** (0.001)	0.001 (0.001)
<i>Age</i>	0.002 (0.004)	0.001 (0.004)	0.001 (0.004)	0.001 (0.004)
<i>Age squared</i>	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
<i>Male</i>	0.090*** (0.023)	-0.038* (0.023)	0.092*** (0.023)	-0.036 (0.023)
<i>Education</i>	0.030*** (0.008)	0.009 (0.008)	0.032*** (0.008)	0.012 (0.008)
<i>Employed</i>	0.093*** (0.025)	0.001 (0.025)	0.093*** (0.025)	-0.005 (0.025)
<i>Marital status</i>	-0.053** (0.026)	0.052** (0.026)	-0.055** (0.026)	0.058** (0.026)
<i>Urban</i>	-0.072*** (0.021)	0.033 (0.021)	-0.073*** (0.021)	0.033 (0.021)

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$ Robust standard errors in parenthesis below each coefficient

Table 4: Robust Analysis 1: Marginal effects of the single institutional trust items

Trust single institutions	Pr($y_{Bribe} = 1$)	Pr($y_{Bribe} = 1$)	Pr($y_{Fight} = 1$)	Pr($y_{Fight} = 1$)
	Pr($y_{Vol} = 1$)	Pr($y_{Civic} = 1$)	Pr($y_{Vol} = 1$)	Pr($y_{Civic} = 1$)
<i>Clan</i>	0.003 (0.013)	0.047*** (0.013)	-0.003 (0.013)	0.043*** (0.013)
<i>Government</i>	0.03*** (0.011)	0.03*** (0.011)	0.026** (0.011)	0.027** (0.011)
<i>Parties</i>	0.049*** (0.03)	0.035*** (0.011)	0.044*** (0.012)	0.032*** (0.011)
<i>Local govern.</i>	0.026** (0.011)	0.046*** (0.011)	0.019* (0.011)	0.043*** (0.011)
<i>Parliament</i>	0.028** (0.011)	0.025** (0.011)	0.023** (0.011)	0.023** (0.011)
<i>President</i>	0.026** (0.011)	0.039*** (0.01)	0.022** (0.011)	0.037*** (0.01)
<i>Judicial</i>	0.01 (0.011)	0.026** (0.011)	0.001 (0.011)	0.024** (0.011)
<i>Police</i>	0.024** (0.011)	0.039*** (0.01)	0.021* (0.01)	0.038*** (0.01)

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$ Robust standard errors in parenthesis below each coefficient

Table 5: Robust Analysis 2: Marginal Effects of being involved in voluntary activities but not being corrupt-averse

	Pr($y_{Bribe} = 0$)	Pr($y_{Fight} = 0$)
	Pr($y_{Vol} = 1$)	Pr($y_{Vol} = 1$)
<i>Rule law</i>	-0.005 (0.005)	-0.032*** (0.006)
<i>Trust institutions</i>	-0.000 (0.000)	0.000 (0.000)
<i>Social trust</i>	-0.009** (0.004)	-0.007** (0.003)
<i>Family</i>	-0.000 (0.000)	0.000 (0.000)
<i>Friends</i>	0.0003** (0.000)	-0.000 (0.000)
<i>Age</i>	-0.001 (0.001)	0.000 (0.000)
<i>Age squared</i>	0.000 (0.000)	0.000 (0.000)
<i>Male</i>	0.006 (0.004)	0.002 (0.003)
<i>Education</i>	0.0001** (0.002)	-0.002* (0.001)
<i>Employed</i>	0.004 (0.005)	0.006 (0.004)
<i>Marital status</i>	-0.009* (0.006)	-0.004 (0.004)

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$ Robust standard errors in parenthesis below each coefficient

Table 6: Robust Analysis 3: Alternative indicators of civic spirit

	Pr($y_{Bribe} = 1$)	Pr($y_{Bribe} = 1$)	Pr($y_{Bribe} = 1$)	Pr($y_{Bribe} = 1$)
	Pr($y_{Civic} = 1$)	Pr($y_{Civic_2} = 1$)	Pr($y_{Civic_3} = 1$)	Pr($y_{Civic} = 1$)
	Original baseline model	Median cut-off	No item of abstention to elections	No trust politicians at all
N	2,342	2,342	2,342	800
MLL	-1833.92	-1833.92	-1706.41	-607.05
ρ	0.631***	0.631***	0.957***	0.583***
$se(\rho)$	0.051	0.051	0.43	0.105
$LR(H_0 : \rho = 0)$	102.445***	102.445***	180.91***	22.188***
	Pr($y_{Fight} = 1$)	Pr($y_{Fight} = 1$)	Pr($y_{Fight} = 1$)	Pr($y_{Fight} = 1$)
	Pr($y_{Civic} = 1$)	Pr($y_{Civic_2} = 1$)	Pr($y_{Civic_3} = 1$)	Pr($y_{Civic} = 1$)
N	2,353	2,353	2,353	803
MLL	-1790.96	-1790.96	-1703.13	-614.74
ρ	0.295***	0.295***	0.366***	0.271***
$se(\rho)$	0.07	0.07	0.07	0.126
$LR(H_0 : \rho = 0)$	16.268***	16.268***	25.379***	4.295***

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$

APPENDIX

Table A1: Variables and coding scheme

Dependent variable - Corruption		
Variables	Description	Range
y_{Bribe}	“Can you justify bribery at work?”	Bribe = 1 if “can’t justify at all bribery at work” Bribe = 0 otherwise
y_{Fight}	“Fighting Corruption”	<i>Fight</i> = 1 if “Fighting corruption is very important” <i>Fight</i> = 0 Otherwise
Dependent variables - Social Capital		
Variables	Description	Range
y_{Vol}	“In the last 12 months did you volunteer?”	<i>Vol</i> = 1 if the answer to the question is yes <i>Vol</i> = 0 Otherwise
y_{Civic}	“Can you justify these behaviours by other people?” “absence from work without reasonable reasons, absenteeism in elections, not commitment to traffic rules, buying stolen products, finding a wallet and not give it back to the police”	The answers to each behaviour follows a scale (1-3) 1. I can justify it 2. I can justify it sometimes 3. I can’t justify it at all We set a composite variable called <i>behaviour</i> which is the sum of the scores obtained by answering all the questions. The range of <i>behaviour</i> is [0 15]. The mean of <i>behaviour</i> from the survey is 13.5 <i>Civic</i> = 1 if <i>behaviour</i> is at least 13.5 <i>Civic</i> = 0 otherwise
Covariates		
Variables	Description	Range
<i>age</i>	Age of the individuals	16 - 92
<i>age</i> ²	Age squared	256 - 8464
<i>female</i>	Individuals that are female	Female = 1 if the individual is female Female = 0 otherwise
<i>education</i>	Level of education	1 illiterate 2 primary 3 secondary 4 high school 5 diploma 6 bachelor 7 diploma after bachelor 8 master or more

<i>employed</i>	Individual employed	Employed = 1 if the individual is employed Employed = 0 otherwise
<i>Rule law</i>	“Which is the importance of the rule of law?”	1. not important 2. important 3. very important Range = [1 3]
<i>Institutional trust</i>	“How is your trust for these institutions?” <i>Clan, Government, parties, local government, Parliament, Court of Justice, police</i>	The score for each answer is the following 1 = no trust 2 = little trust 3 = somehow trust 4 = lot of trust The measure is composite and sum up the values over the six institutions. Hence the range of institutional trust is [0 24]
<i>Social trust</i>	Can you say that you can trust people in general?”	<i>Social trust = 1</i> if the answer to the question is “yes” <i>Social trust = 0</i> Otherwise
<i>Marital status</i>	Individuals that are married	Marital status = 1 if the individual is married Marital status = 0 otherwise
<i>Urban</i>	Individuals living in urban areas	<i>Urban = 1</i> if the individual lives in an urban area <i>Urban = 0</i> otherwise
<i>family</i>	frequency of an individual of meeting the family and/or talking to the family via phone/email	The scores are the following: 52 = once a week 24 = once or twice a month 6 = few times a year 0 = never Range of family = [0 52]
<i>friends</i>	synthetic measure composed by the frequency of an individual of having contacts with friends (visiting, inviting friends, contacting them via phone or via email) and neighbours (visiting, inviting neighbours, contacting them via phone or via email)	The scores are the following For friends: 52 = once a week 24 = once or twice a month 6 = few times a year 0 = never For neighbours 52 = once a week 24 = once or twice a month 6 = few times a year 0 = never

$$\text{Bridging} = \frac{(\text{friends} + \text{neighbour})}{2}$$

The range of bridging = [0 52]
