Corruption and inequalities of social capital: Can human agency play a role?

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Abstract

We examine the role of social capital and human agency in shaping corruption proclivities. We use data from the World Values Survey and other data sources for 308, 901 individuals from 98 countries employing a multilevel modelling approach. We find that, though social structures have an influence on individual corruption proclivities, an increase in human agency increases the likelihood that an individual will not develop a corruption proclivity. Also, no social network structure (either bonding or bridging)is particularly more benign than the other. What matters for corrupt behaviours is the intensity of connections within a network which has the tendency to breed in-group loyalties and particularism leading to partiality, hence increasing corrupt behaviours. Finally, we also find that familial bonding social capital may be more desirable in countries with high anti-social norms whereas weak bridging social capital may be more desirable in countries with low corruption levels and high social norms.

Key words: Corruption, social networks, trust, human agency, norms

JEL classification: B52, D73, Z13

1 Introduction

In contexts of persistently pervasive corruption, hardly would one find "honest" principals and corrupt agents who deviate from the directives of their principals (Rose-Ackerman, 1999, 2007; Treisman, 2000). What is predominantly observed are weak institutions and norms of corruption tolerance which influence both principals and agents (Persson et al., 2013). Citizens are not just victims in corrupt transactions but very active suppliers of corruption. Therefore in such contexts, though strong (formal) institutions are very crucial in reducing corruption proclivities, the need to look at more social factors become very important (Pottenger, 2014b).

For collective action problems like corruption, principal-agent models can, and must be complemented by other social theories (Marquette and Peiffer, 2015), particularly, theories of social capital- "connections among individuals ...social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000). The analysis of how social factors affect corrupt behaviours however, raises the question of whether there is really such a dichotomy as corrupt societies versus corrupt individuals. In deciphering these different perspectives of corruption, this study underscores the tripartite relationship between moral disengagements towards corruption, the role of social capital (at the societal level) and human agency (at the individual level).

Social effects play a major role in determining human behaviour. People tend to conform to a particular mode of behaviour based on the predominant behavioural norm within their environment. This conformity of oneself to the collective behaviour is caused by a contagion effect where societal norms alter individual values (Fischbacher et al., 2001; Henrich et al., 2004).Dong et al. (2012) and Lee and Guven (2013) studied the conditionality of corruption on perceived behaviours of others. They find that, people are more willing to engage in corrupt behaviours when they know others around them are also being corrupt. These findings on human behaviour in general and corrupt behaviours in particular bring to the fore, the need to examine closely societal norms vis à vis individual values.

Focusing particularly on social norms, some studies have found that norms sometimes work better than formal rules (Dixit, 2009; Jancsics, 2013; Hira, 2016). In fact, social norms may neutralise and overpower any effect formal laws or institutions may have depending on the context but particularly in countries with weak formal institutions (Fadahunsi and Rosa, 2002; Chang et al., 2000; Pottenger, 2014b,a). In lieu of this, there has been a call in anti-corruption reform for "more order without more law" using social norms as an anti-corruption channel (Huang and Wu, 1994). One crucial finding from the literature is that corruption erodes trust in societies through encouraging the buildup of a "norm of corruption tolerance" (Banerjee, 2016). This implies that corruption has the potential of altering norms even as norms also might alter individual's attitudes towards corruption. With this macro-micro interaction of social factors shaping corruption proclivities and corrupt behaviours also altering social norms, it becomes expedient to not only focus on either macro or micro level factors but to analyse corruption proclivities in a cross-level form of analysis. That is, identify complementarities or substitution effects between social factors at the macro [and meso level] and individual factors at the microlevel which may lead to moral disengagements in favour of corruption. Such cross-level forms of analysis are largely missing in corruption research.

One crucial factor that has been under-researched in corruption literature is the role of self-efficacy under the broad umbrella of human agency - the ability to decide for oneself the different possible trajectories of action based on past experiences, future expectations and practical evaluation (Bandura, 1997, 2001). Thus, individuals are not just victims of the social environment within which they find themselves, but are likely to also shape the workings of the environment through adaptation, evolution and recreating the social environment based on decisions

and (inter)-actions taken. They are also able to make decisions irrespective of what the social environment dictates. Such agentic behaviours have been widely researched within the social cognitive theory (Bandura, 2001) and structuration theory (Giddens, 1984), and applied to understand certain unethical behaviour including terrorism (Bandura, 2004). However, the emphasis has been on understanding the process of developing ethical efficacies rather than how such agentic behaviours lead to moral disengagements, in our case, justifiability of corrupt behaviours. We aim to fill this gap within corruption research and social cognitive studies by analysing the effect of individual agency particularly self efficacy on corruption justifiability.

We use six waves from the World Values Survey dataset for 308,901 individuals and macro data from different sources from 1984 to 2014 for 98 countries. We showed that, individuals with a high sense of human agency are less likely to develop a moral disengagement towards corruption. We observe however that, aside the singular effect of human agency on corruption justifiability, the effects of "good norms" such as low corruption norms on corruption, are re-inforced for individuals with a high sense of agency while the effects of social mores such as tax evasion mores on corruption are lower for individuals with a high sense of agency. Our results also show that, bonding and bridging networks both have a negative effect on corruption justifiability. However, regardless of the structure of a network, what matters for corruption is the strength of ties within networks; strong ties within closed networks of family or open networks with colleagues will still lead to a similar result of increasing the probability of justification of corrupt behaviour.

We present four main contributions to corruption research through our multi-level analysis of corruption proclivities. Firstly, we account for the effect of differing norms at the macro level on individual corruption proclivities (structure-effect). Given that most corruption research focus on either a purely macro perspective or a purely micro perspective, this multi-level analysis presents additional insights into the role of societal structures on corruption proclivities, unlike other studies that focus on corruption at the country level. Secondly, we also identify the mediating roles of macro-level social structures on the networks-corruption relationship (structuration effect). With this, not only are we able to gain a better understanding of the role of norms of trust and conformity but also how different types of networks affect corruption proclivity deveopment in different contexts. Thirdly, though there have been some experiments conducted to test the role of individual agency on human behaviour, this research presents the first empirical multi-level analysis where we assess the effect of human agency controlling for both individual level and country level social capital. This helps in our understanding of the strong role human agency is likely to play, inspite of unequal levels of social capital both at the individual and country levels, in shaping corruption proclivities . Fourthly and finally, we study the role of different network structures at the meso level (bonding and bridging) on corruption proclivities (structuration effect). Aside this, we also contribute to the discussion on social networks and corruption by introducing novel network variables which are related to different network structures but unrelated to corrupt behaviours. Therefore, unlike previous cross country studies that focus on voluntary organisations as the proxy for social networks, we employ new set of variables that allows us to reduce the bi-directional nature of the social

networks-coruption relationship we explore.[1]

The remainder of the paper is organised as follows- Section 2 presents a review of relevant literature. Section 3 describes the micro and macro data used in the analysis. Section 4 presents the estimation strategy employed. Section 5 presents and discusses the findings. The paper is concluded in Section 6.

2   Review of relevant literature

2.1   *Social Capital- Norms, Trust, Networks*

Social capital theories in recent years have been applied widely to various economic phenomena in attempts at either explaining or purporting plausible solutions to these issues. According to social capital theory, the positive power wielded by social capital is what gives people higher incentives to cooperate, more than they would otherwise do in a collective undertaking (Paldam, 2000). This is what socio-economic approaches of corruption aim to capture succinctly.

Social trust, one of the forms of social capital, is believing that other people are honest, reliable and have a sense of integrity. Some researchers see trust as the "glue" from which excess cooperation is achieved within and between groups (Olson, 1977; Putnam, 1995; Ostrom, 2000; Paldam, 2000; Fukuyama, 2002). A lot of studies have analysed the differences in trust levels across countries and the role corruption plays in explaining these differences (Rothstein and Uslaner, 2005; Rothstein and Eek, 2009; Richey, 2010; Uslaner, 2012, 2004). Few studies have however analysed the opposite effect, that is the role of social trust in explaining corruption differences across countries (Bjø rnskov, 2003; Paldam and Svendsen, 2002; Uslaner, 2004, 2012).They find that high social trust leads to lower levels of corruption at the macro-level (Pena Lopez and Sanchez Santos, 2014). This finding is robust even after accounting for the bi-directional nature of the corruption-social capital nexus (Uslaner, 2002, 2004; Bjø rnskov, 2003). This positive finding holds colossal policy implications- that countries with high levels of corruption should aim at increasing their social capital though the cyclical nature of the relationship may actually prevent them from doing so as countries with already widespread corruption may not be able to leave this vicious cycle (see Svendsen (2003)).

From a theoretical point of view, social trust tends to alter the costs associated with engaging in corrupt acts. Therefore in settings where corruption is frowned upon by the society, social trust increases the moral cost of acting in a corrupt manner as a result of good collective reputation. On the other hand, corruption is less costly for the individual when there is low social trust as a result of wide spread corruption in a society thus making it a social norm (Tirole, 1996; Acemoglu, 1995). The risky nature of corrupt transactions require that an individual finds persons they can trust to engage with in such corrupt acts (Lambsdorff et al., 2005). Particularised trust therefore reduces the cost of corrupt transactions and allows people to engage in more

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[1]   We explicate more on our social network variables in the section 3

risky transactions (Lambsdorff et al., 2005). Therefore, by focusing on generalised trust, we expect to see the opposite effect. With these theoretical insights, there remains a clear empirical gap on whether it is just an individual's ability to trust generally which affects his or her attitude towards corruption or whether macro-level social trust levels can also affect individual justification of corrupt acts, looking more at the processorial nature of corruption rather than corruption states at the macro-level .

Aside trust, there are also general norms. Norms, as defined in this paper, are the informal rules of the game in a society. They dictate how individuals should behave in a society (Huang and Wu, 1994). When majority of the society are accustomed to a particular way of behaviour for a certain period of time, it creates an unwritten law in that society that this is what is acceptable (Graeff, 2005). Failure to comply to this unwritten law leads to some form of self-regulatory punishment both by the inndividual (sometimes) and by the society (Huang and Wu, 1994). Norms could be good or detrimental to the society depending on its effects on the society. There are different types of norms, the most common ones in relation to corruption however are social norms (mores), civic norms, religious norms, norms of citizenship and lastly corruption norms. We explain corruption norms and social norms which are the focus of the study.

Social norms are the rules that dictate how an individual should behave in the social sphere whereby failure to comply may result in unwritten societal sanctions (Ostrom, 2000). In this paper, we focus on the opposite term, social mores, which are basically the anti-social "norms" that exist in a society and thus go contrary to the social norms. Studies that have researched into the relationship between social values and corruption at the micro level have found that exposure to corruption erodes trust and this effect is increased by other anti-social behaviours (Banerjee, 2016). At the macrolevel, Lee (2013) finds that social norms, proxied by non- tax evasion have negative and significant effects on perceived levels of corruption. This implies that social mores have the potential of contributing to the creation of the vicious cycle of high corruption-low trust in societies. They also have the potential of shaping corruption proclivities in individuals. This however requires more empirical investigation. Following Lee (2013), we proxy *social mores* by proportion of people in a country who report that tax evasion is justifiable.

The second type of norms, corruption norms, is where corruption is widely accepted by the society as either a necessary evil for survival or as a normal phenomenon which must not be frowned upon (Kingston, 2008). We proxy corruption norms by corruption indices at the macro level from the ICRG database which reflects perceptions of corruption at the country level. A purely micro study found that perceived pervasiveness of corruption, otherwise known as descriptive norms, is more likely to increase corrupt behaviours (Kobis et al., 2015). This is confirmed by a study that investigates how individuals behave when they perceive others around them to also be corrupt. Here they find that indeed, contagion effects are observed and previously honest people tend to move towards dishonesty (Innes and Mitra, 2013). This brings us to the contention between norms and agency. Here the question arises whether norms are

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[1]   The only study known so far that has analysed the role of trust in shaping corrupt behaviours is that of Guerrero and Rodriguez-Oreggia (2008) using Mexican data, and they find no significant effect of social trust on corrupt behaviours

more potent in overcoming the agency of individuals; in the instance of Innes and Mitra (2013), honest people abandoning honesty for dishonesty as a result of perceived norms of dishonesty tolerance, or that certain characteristics can come together to build strong anti-corruption personality which makes individuals exercise their agency in saying no to pre-existing norms which may not favour anti-corruption. We return to this contention later.

Though such a collective view of social capital (trust and social norms) has the advantage of helping us understand the impact of societal factors on corruption, they however have the disadvantaged potential of missing out on the structuralisation itself (individual mechanisms that shape structures of social relations). Therefore aside social trust and differing norms at the macrolevel, an individual's social networks cannot be understated in social capital research. Particularly for corruption, it is social interactions and its related effects that gradually form norms which spell out the informal costs and benefits of corrupt transactions. Elements of reciprocity and conformity within societies and networks tend to affect an individual's perception and hence behavior towards corruption (Guerrero and Rodriguez-Oreggia, 2008). Peoples' attitudes towards corruption therefore, tend to be conditional on what immediate others around them are also doing as well as what the "norm" of that society dictates. Thus the joint relationship between meso and macrolevel norms and how they affect corrupt behaviours are important (Bicchieri and Xiao, 2009; Dong et al., 2012; Weisel and Shalvi, 2015; Banerjee, 2016; Acemoglu, 1995; Banuri and Eckel, 2012). Unfortunately, in understanding individual corrupt behaviours, not much is known of this cross-level effect of norms and networks on corrupt behaviours. Whether networks have conditional or conditioning effects on norms in shaping corrupt behaviours is largely unknown.

The social networks approach, views social capital in terms of the network ties and the resources within such ties. Based on the classification of Putnam (1995), two different forms of social capital are studied: bonding and bridging social capitals. These two can be traced back to the concept of closure by Coleman (1988, 1990) and weak ties arguments by Granovetter (1973). Bonding social capital refers to closed networks and the dense ties that exist within these closely knit groups of family and friends. Theoretically, bonding social capital is exclusive in nature and thus has the tendency of fostering what Fowler and Kam (2007) term as altruism by social identity. Though this type of social capital can foster shared norms and increase cooperation, Fukuyama (2002) warns that this affinity tends to produce inward looking behaviours that is likely to breed corruption due to strong feelings of obligation within groups. Banfield (1967) also warns of the breeding of "amoral familism"-the tendency to bend rules to favour close family ties. Bridging social capital, on the other hand, refers to open networks and the weak ties between individuals in heterogeneous groups. Bridging is seen as outward looking and therefore perceived to widen the radius of trust, allowing diversity to be appreciated (Fukuyama, 2002; Putnam, 1995).

The social networks dimension of corruption has been studied both theoretically and empirically. Empirical studies have found that bonding forms of social capital lead to higher levels of corruption, thus, confirming Fukuyamas hypothesis (Lipset and Lenz, 2000; Harris, 2007; Fowler

and Kam, 2007; Pena Lopez and Sanchez Santos, 2014). Going a step further in this inquiry, Harris (2007) finds that not every form of bonding social capital is exclusive and inward looking. He discovers that outward looking bonding social capital has a significant correlation with lower levels of corruption. The limitation of these studies is that they focused on a macro-level analysis and are mostly Eurocentric. Such empirical finding provides the incentive to conduct an in-depth study on how different networks of associations are likely to affect corruption.

Some corruption studies have also built on the use of network theory to study organized crime and criminal networks to understand how corruption functions (Lauchs et al., 2011; Jancsics, 2013). Gehlbach (2001), one of the first researchers to make such an inquiry using a game theoretic approach, found that social networks are likely to act as substitutes to bribery by reducing extortion-type of corruption. He also observed that, social networks could also act as complements by reducing the hold up of having to search for a corrupt official. These, he found, have grave welfare effects on the low income class as they are more likely to have poor networks and thus may have to pay higher bribes. A recent inquiry was also made by Uribe (2014). By focusing on closed and open networks, he found that open networks are less likely to induce corruption due to information asymmetry which creates additional costs of corruption beyond economic costs. These models, however, do not incorporate how the agentic behavior of individuals in a network alters the payoffs of the players in the game. What they have failed to recognise is the strong will of individuals based on certain individual characteristics developed over time as a result of the environment within which they are shaped as well as the experiences they have gone through over a period of time. This sometimes allows some individuals to resist a social norm though it might be costly initially (Bicchieri and Rovelli, 1995). Such agentic behaviours prove that rational-actor models, though very insightful, do not explain fully how corruption proclivities are shaped. Hence, we turn to structuration theory as proposed by Bandura (2001) and Giddens (1984) for some further insights which we introduce as a further contribution in this research.

2.2 Individual Agency and Structuration Processes

Individuals have capabilities that enable them to have control over their actions; planning alternative scenarios, self reflection and regulation, and learning from previous experiences (Bandura, 1997, 2001). Such capabilities create an enabling ground for the build up of personal beliefs about the course of action one ought to take to attain a desired outcome. This personal belief system is referred to as self- efficacy beliefs within social cognitive theory. People's actions, contrary to rational choice, are based more on these self-efficacy beliefs than on objectivity (Bandura, 1997). The development of these self efficacy beliefs is what translates into human agency- the ability to take control of one's own actions and self-regulate one's behaviour (Palmer, 2013). Individuals with a high sense of agency therefore, are likely to moderate the effects certain societal norms may have on their behaviour as they ultimately have a sense of "ownership" and thus responsibility for actions taken. However, as the capabilities resulting in the build up of an individual's agency are partly also informed by existing societal structures, it is important

to stress that agency and structure are not considered as opposing forces but rather, following Giddens (1984) structuration theory and Bandura (1997)'s social cognitive theory, we focus on the re-inforcing process between these two elements which generate certain actions and behaviours from individuals.

There is mostly a dichotomy between humanists (proponents of an individual's agency) and structuralists (proponents of the supremacy of structural forces on human outcomes). While humanists relate human outcomes to the exercise of individual agency, structuralists attribute outcomes to the workings of pre-existing systems and structures (Loyal and Barnes, 2001). However, as Oppong (2014) points out, the dualism of structure and agency neglects the recursive relationship existing between these two as elucidated by Giddens (1984). Accounting for human outcomes such as corrupt behaviours with a singular perspective on either structure or agency neglects the mutually dependent nature of these two. The framework which is therefore advocated for, to understanding human outcomes is found within the structuration theory of Anthony Giddens and the social cognitive theory of Bandura. Both structuration theory and social cognitive theory posits that, structure and agency have an equal effect in shaping human behaviours as a result of complex interactions between these two which makes human actions "partially constrained" by societal structures, but still having certain individual choice elements nonetheless, depending on the level of agency one possesses and exhibits (Oppong, 2014, p.113). Placing emphasis on one at the expense of the other will therefore not be a true reflection of the mutually constitutive processes that result in the human behaviours we observe.

Sen's capability approach offers great insights on how an individual's agency can be shaped through the build up of certain capabilities (Sen, 1999). We therefore do not concentrate on how agencies are shaped. What we focus on however, is the role of both agency and structure, as two sides of the same coin, in shaping human behaviour, in our case, corruption proclivities. Most corruption studies have analysed the role of societal structures as earlier mentioned. However, such impacts in tandem with the role of individual agency is largely missing. But as opined by Sen (1993, 1999), between capabilities and functionings, is the agency of individuals to employ their capabilities to enable them attain certain functionings. Therefore, to fully understand why certain individuals choose particular actions irrepsective of the capabilities the society has enabled them to achive, we must know the level of agency of individuals and the role of these agentic behaviours in shaping their individual choices and hence, differing levels of functionings. Research works conducted on the role of individual agency have largely been within the psychology and social-psychology disciplines. Within the development economics and sociology disciplines, the role of human agency, in line with Sen and Nussbaum's capability approach, has been researched mainly in its contributions to broad development. Human agency is seen as an end in itself but also as a means to achieving other developmental targets (Sen, 1999; Nussbaum, 2011; Alkire, 2005).

In relating human agency to corruption, recent experiments have shown that an individual's intrinsic motivation reduces his or her corruption tendencies contrary to rational self-seeking notions (Schulze and Frank, 2003). We therefore hypothesise that people are not likely to justify

corrupt behaviours when they have a high sense of responsibility for their own actions. They are less likely to blame the society or existing structures for the choices they make. In spite of pre-existing structures, they can still make choices that are socially desirable and attribute such actions to themselves and not to others. Thus, they are likely to be more careful in choosing to engage in corrupt transactions than people with a low sense of agency who are more controlled by societal factors and are ready to point accusing fingers at others rather than themselves for their choices to be corrupt.

3 Data Description

As outlined earlier, our data consist of two types; individual data from the World Values Survey and aggregated country level data from various sources. This section describes the combined dataset and the variables used in the analysis.

3.1 The World Values Survey

We use repeated cross sectional data from six waves of the World Values Survey (WVS) which surveys individuals in 98 countries between 1981 and 2014.[2] A total of 308,901 individuals were surveyed in all the rounds between the ages of 18 and 99 years. This survey is conducted on nationally representative samples accounting for 85% of the worlds population.[3] Table 1 presents a description of the different waves which make up our longitudinal dataset.

Table 1: *WVS-Data Description*

Wave	No. of Countries	No. of Observations	Survey Period
1	10	13, 586	1981- 1984
2	18	24,558	1990-1994
3	57	77,129	1995-1998
4	41	59,067	1999-2004
5	58	83, 975	2005-2009
6	60	86, 274	2010-2014
Total	98	308,901	1981-2014

A. Corruption proclivities

Our main dependent variable is 'corruption proclivities' of individuals- an individual's inclination or predisposition towards corruption, not necessarily the act of corruption itself. This is because, some studies have shown that ordinary citizens engaged in corrupt acts especially bribery may be victims rather than active participants of corruption (Quinones, 2000). Therefore, focusing on corrupt acts themselves may not do much to identify individuals who have the *tendency* to choose regularly to engage in corrupt behavior. Thus, by focusing rather on

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[2]   We use all available data from the World Values Sruvey in the analysis
[3]   see http://www.worldvaluessurvey.org/WVSContents.jsp for more information on the WVS

corruption proclivities, we can better understand what causes individuals to have such an active inclination towards corruption thus paying more attention to the supply of corruption. We also employ corruption proclivities as our dependent variable because, for anti-corruption policy formulation, though there are myriad of research conducted on corrupt behaviours, it becomes impossible to prevent corruption if there is not much information on why people develop such corruption proclivities in the first instance.

Our corruption variable is based on the question of the survey that asks- *Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between (Someone accepting a bribe in the course of their duties)*. The possible answers range on a scale of 1 to 10, with 1 being "never justifiable" and 10 being "always justifiable". We dichotomise the variable into a dummy 0- never justifiable- and 1 -justifiable. We dichotomise our corruption variable as we are interested in individuals who are likely to justify corrupt behaviours regardless of what the level of justifiability is. We believe we do not lose much qualitative information by dichotomising. We, however, also use the ordered scale from 1 to 10 in some regressions and find qualitatively similar results. Though this question is framed to put the burden of corruption on the public official, it allows the citizen the freedom to express his/her opinion on corrupt behaviours in general as it takes the burden away from the citizen unto the public official. Table 2 presents the descriptive statistics for our core variables. The data reveals a high rate of non-justifiability of corruption (73.5%), showing low corruption proclivities. We divide our key explanatory variables into three main categories, socio-economic and demographic variables, social network variables and human behaviour variables. [4]

B. Socio-Economic and Demographic Variables

Socio-economic and demographic variables used are age, sex, education, employment and income. *Age_cat* is the variable that is used to represent the various age categories in our sample. Based on the UN statistics classification of economically active population, we categorise our data into three age categories: 18-24 years, 25-64 years and over 65 years. Majority of our sample lies between the ages of 25 and 64 years (72.11%). We also observe higher percentage of females to males (51.7% to 48.2%). The Education variable captures highest educational level attained by respondents. The Education variable is categorized into no formal education (5.47%), primary education (37.22%), secondary education (17.73%) and post- secondary education (39.58%). Education levels are considerably high in our sample with 57.31% of our sample having at least secondary education. Employment status is categorized into three: employed, unemployed and students. To capture an individual's economic or financial status, we employ the social class variable. Social class is a subjective measure of ones social standing in five categories: upper class, upper middle class, lower middle class, working class and lower class. Only 21.05% of our sample perceive themselves to be within the upper middle income class and above.

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[4]   We previously included political variables such as political corruption, vote buying and confidence in civil service in our estimations. However, we failed to obtain convergence with the inclusion of these variables which therefore prevented us from leaving them in the final estimations.

C. Social networks

Our social network variables are broken into two main categories; bonding and bridging social capital. Under bonding social capital, we are interested in relations between families and friends. We therefore use six variables to measure one's relations with their families and friends. Three of these variables; love parents, importance of family and importance of friends reflect the presence or absence of a bonded form of social capital. These are all dummy variables with 0 representing bonding social capital and 1, the absence. The remaining two measures, time spent with family and time spent with friends, measure the intensity of the relationship between the individual's closely knit network of family and friends. Therefore, one could have a closed network, that is, a relationship with family and friends, but weak ties between these networks, which is, the intensity of relations may be strong. These different set of variables allow us to capture network relations.

To shed light on bridging forms of social capital, we employ two variables; time spent with colleagues- a dummy variable measuring the strength of relations with colleagues- and time spent with others- measuring the strength of relations with others other than ones close relations. These two variables allow us to measure open networks and the strength of ties between these open networks.

Contrary to previous research works which measure bonding and bridging social capital with civicness à la Putnam (2000), we choose the above variables. This is because, civicness variables capture whether one is a member of a set of voluntary organizations. However, when analysing corrupt behaviours, using an individual's membership in certain groups might suffer from self selection bias where certain groups in different countries might favour corruption or not which might be the very reason for individuals choosing to identify with these groups in the first place. By employing variables directly from one's family, friends, colleagues and other random people, we are less likely to run into self selection biases as for example, a person does not choose his or her family in most instances. We therefore aim to reduce self selection bias and bi-directional issues by employing this relatively new set of structural social capital variables.

D. Human behaviour

One of our main explanatory variables is Freedom of choice and control. This variable is from the statement: Some people feel they have completely free choice and control over their lives. In the WVS survey, responses are based on a scale of 1 to 10 where 1 means "no choice at all" and 10 means "a great deal of choice. We maintain this ten point scale to reflect the increasing freedom. We observe a mean response of 6.9 and a standard deviation of 2.37 meaning though on average respondents in our sample lean towards having more control hence exercising their human agency, there is some variation across the different individuals within the sample which can be exploited. We also measure other behavioural factors such as risk attitudes, proper behaviour and level of peer influence. Risk attitudes measures the risk behaviours of individuals; risk loving, risk neutral or risk averse. Proper behaviour is a variable that captures responses of individuals to whether it is typical of them to behave properly. The interpretation of proper

behaviour is not very clear in the survey. However, it broadly captures morality of individuals in relation to the societal norms. Finally, the level of peer influence measures how much a respondent believes his or her actions are influenced by their friends. The descriptives of these human variables are presented in Table 2.

Table 2: *Descriptive Statistics of Individual level Data*

Variables	Categories				
Corruption	Never Justifiable	Justifiable			
	73.53%	26.47%			
Socio-Economic & Demographics					
Age	18-24years	25-64years	65+		
	17.94%	72.11%	9.95%		
Sex	Male	Female			
	48.23%	51.77%			
Education	No Formal	Primary Education	Secondary Education	Post- Secondary	
	5.47%	37.22%	17.73%	39.58%	
Employment Status	Employed	Unemployed	Students		
	54.95%	37.19%	7.86%		
Social Class	Upper class	Upper Middle	Lower Middle	Working class	Lower Class
	1.84%	19.21%	37.42%	28.20%	13.33%
Citizenship	Citizen	Migrant			
	98.57%	1.43%			
Human Behaviour					
Behave properly	Like me	Somewhat like me	Unlike me		
	56.25%	32.73%	11.02%		
Risk attitude	Risk loving	Risk neutral	Risk averse		
	25.38%	34.67%	39.95%		
Peer Influence	Agree strongly	Agree	Disagree	Disagree strongly	
	15.70%	37.10%	35.76%	11.44%	
Social Capital					
Bonding Social Capital					
Love Parents	Always	If earned			
	85.26%	14.74%			
Time spent with family	Frequently	Not frequently			
	85.18%	14.82%			
Make parents proud	Agree	Disagree			
	84.01%	15.99%			
Time spent with friends	Frequently	Not frequently			
	81.54%	18.46%			
Importance of friends	Important	Not important			
	86.46%	13.54%			
Importance of family	Important	Not important			
	98.74%	1.26%			
Bridging Social Capital					
Time spent with colleagues	Frequently	Not frequently			
	55.11%	44.89%			
Time spent with others	Frequently	Not frequently			
	28.27%	71.73%			
Mean and Standard Deviations for categorical variable (with more than five categories)					
	Mean	S.D	Min	Max	
Freedom of choice and control	6.908	2.369	1 (None)	10 (A great deal)	

3.2 Country level variables

We use variables at the country level to assess the role of societal effects in directly or indirectly shaping corruption proclivities. Here, we focus on the main macrolevel factors identified in the literature as relevant in influencing corruption; level of economic development, human capital, formal institutions, informal institutions (norms and trust), inequality and ethnic fractionalisation. We present the descriptive statistics of our country level variables in table 3 below.[5]

Table 3: *Descriptive Statistics for country level variables*

Variable	Observations	Mean	Std. Dev.	Min	Max	Source
Social Norm	83	2.423	0.742	1.123	4.185	WVS
Social Trust	83	0.282	0.153	0.049	0.680	WVS/CANA
Ethnic Tensions	142	4.108	1.329	0.667	6	ICRG
Log_Real GDP per capita	127	9.058	1.073	6.686	11.066	WDI
Polity	136	6.022	5.267	-10	10	Polity IV
Bureaucratic Quality	142	2.567	1.015	0	4	ICRG
Gini	130	41.029	10.834	23.7	67.4	WIID
Human capital	125	2.526	0.677	1.136	3.642	PWT
Corruption	144	3.194	1.343	0.167	6	ICRG

Our social norm variable is measured as the mean values for each country to the question *Justifiable: Someone cheating on taxes-* from the question: *Please tell me for each of the following actions whether you think it can always be justified, never be justified or something in between. Someone cheating on taxes* from the WVS. From Table 3, the social norm variable has figures which range between 1.1 and 4.2; from low social mores to high social mores. On average, countries within our sample tend to lie somewhere in between the minimum and maximum. Our social trust variable is measured as the percentage of people for each country who answer '*Most people can be trusted* to the question, *Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?*. From Table 3, we observe that the country with the lowest trust levels has 4% of its sample population trusting most people and the country with the highest, having 68% of its sample population trusting most people. On average, countries within our sample are less trusting having an average of 28%.

Other variables used were the log of real GDP per capita as a proxy for the level of economic development obtained from the World Development Indicators. *Gini* is also used as a proxy for inequality from the World Inequality Index Database. Polity is used as a proxy for type of formal institution from the Polity IV score together with Bureaucratic Quality from the ICRG. The level of human capital obtained from the Penn World Tables is also employed. Finally, corruption perceptions is used as a proxy for low corruption norms. The corruption's index used is obtained from the ICRG. The lowest values represent high corruption perceptions, that is a high corrupt norm, and the highest values represent a low corruptions perception, thus a low corruption norm.

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[5]   We present the correlation co-efficients of our variables in the appendix

4 Estimation Strategy

4.1 General Framework

Our response variable, $Corruption_{ij}$, is a latent variable, which is a binary response for individual i in country j. We have individuals (level 1) grouped into countries (level 2). We define $P_{ij} = P(y_{ij} = 1|X_{ij})$ as the probability that an individual has a proclivity towards corruption (that is whether an individual justifies corruption) conditional on X_{ij}. We express this probability in a logit function as

$$Pr(y_{ij} = 1|X_{ij}) = [1 + e^{-v_{ij}}]^{-1} \tag{1}$$

where

$$v_{ij} = \beta_{00} + \beta_1 X_{ij} + \beta_2 X_{jt} + \beta_3 Wave_j + u_j + \tau_{ij} \qquad u_j \sim N(0, \theta_u^2) \tag{2}$$

$$i = 1 \ldots I, j = 1 \ldots J$$

The vector X_{ij} represents characteristics of individual (i) in country (j) while X_{jt} represents socio-economic and institutional factors at the country level over time (t). Since individuals within our sample are clustered in countries, it is likely that there would be correlation between individual error terms at the country level which will lead to an underestimation of standard errors should traditional regression techniques be employed. We therefore employ a multilevel modelling approach to take into account such clustering (Hox, 2010). This is done by allowing our intercept β_{00} to vary across individuals and countries. u_j and τ_{ij} are the random components of our model; u_j is the country-specific effect and τ_{ij} is the individual level error term. We also include a vector $Wave_j$ of wave dummies to control for the different waves in our data.

To know whether indeed there is a correlation between individuals within the same country, we calculate the intra-class correlation which measures the level of correlation within clusters (Hox, 2010). The intra-class correlation formula is given by;

$$\rho = Corr(v_{ij}^*, v_{i'j}^*) = \frac{\gamma^2}{\gamma^2 + \theta^2}$$

ρ is therefore the correlation between the responses i and i' from the same group j. θ^2 is the variance of the random component u_j and γ^2 equals $\pi^2/3$; π is the mathematical constant.

4.2 Measuring Indirect effects

We measure indirect effects by including cross-level interaction terms between $Networks_{ij}$ and X_{jt} as shown in the specifications below;

$$v_{ij} = \beta_{00} + \beta_1 X_{ij} + \beta_2 X_{jt} + \beta_3 Networks_{ij} + \beta_4 Wave_j + \beta_{12} Networks_{ij} * X_{jt} + u_j + \tau_{ij} \quad (3)$$

Where β_{12} captures the re-inforcing or moderating effect of macro-level social capital ($Networks_{ij}$) on the networks -corruption relationship. This tests the structuration hypothesis of structure and agency mentioned earlier in shaping corrupt behaviours.

5 Results

5.1 The role of human agency in shaping corruption proclivities

Table 4 presents the results obtained from the multilevel logit regression without controlling for any country level characteristics. Thus, we regress the justifiability of corruption on a set of individual level variables. Model 1 is the null model. [6] From this, we are able to calculate the intraclass correlation co-efficient (ICC) (Hox, 2010). The ICC indicates the proportion of variance explained by country specificity (Hox, 2010). For example, in our null model, we have an intraclass correlation of 0.13 which implies that 13% of the variance is explained at the country level thus giving credence to the use of multilevel regression techniques which takes care of such clustering effects at the country level and thereby improves the quality of our standard errors. We subsequently include first our main variable of interest in this table, human agency and progressively, other individual socio-economic and behaviour-related variables. We also calculate ICC for each model presented. We report the ICC values at the bottom of the table. We also report some goodness of fits; the Akaike Information criterion (AIC), the Bayesian Information Criterion (BIC) and log likelihood values. From these, though the lowest AIC and BIC is for model 8, we select model 7 as the base model for subsequent analysis as a high number of countries and individuals are still retained.

Across all 10 model specifications in Table 4, the coefficient of human agency is negative and statistically significant at 1%. This means that the higher a person's agentic behaviour, the lower the probability of developing a corruption proclivity. This result is robust across all specifications with additional controls. Looking at the other covariates used, we find that individuals below the age of 65 are more likely to develop corruption proclivities compared to individuals over the age of 65. This result is expected as the aged are less likely to be as engaged in social and economic activities that will expose them to corrupt transactions.

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[6]   A null model is a model without any covariates.

We also find a significant negative relationship between females and corruption proclivities. This means that females tend to be less inclined to corrupt behaviours than males. Lee and Guven (2013) find similar results when analysing the role of gender in determining corrupt behaviours. They attribute this to the risk averse nature and less competitive behaviour of females compared to males, on the average. Looking at education, we find a negative and significant relationship between education, at all levels, and corruption proclivities as compared to individuals with no formal education. This confirms results from previous studies that have highlighted the importance of education in reducing corrupt behaviours (Truex, 2011; Richards and Heath, 2016). In the same vein, unemployed individuals are also less likely to have corruption proclivities as compared to employed people. This is because, employed people, compared with unemployed individuals, are more likely to engage in activities that may expose them to corrupt acts. Considering the effect of one's self reported social class on corruption proclivities, we find that compared to individuals who associate themselves with the upper class, individuals of lesser social classes are less likely to develop corruption proclivities. This is in line with the findings from Mocan (2004) where individuals in higher income quintiles are more likely to be corrupt. As people in the upper class are in a better position to pay higher bribes, and also to identify who to engage with due to their relatively higher level of connectedness within the society, they are more likely to justify corrupt behaviours and potentially also engage in some. We also investigate the effects of some behavioural variables. We find a positive and highly significant coefficient for very high peer influence which implies that, on average, individuals with high levels of peer influence are more likely to justify corruption while people who do not agree to having any peer influence are less likely to engage in corruption proclivities. This finding is also reflected in the results from the second part of our analysis when we look specifically at the effects of social networks on corruption proclivities. We also find a negative and significant effect of risk averse behaviour on the shaping of corruption proclivities compared to individuals who are risk loving. We find no significance for risk neutral individuals. This is also in line with previous findings where risk loving traits are associated with the risky nature of corrupt transactions (Becker, 1968; Lee and Guven, 2013). Finally, looking at individuals who like to behave "properly", we find a strong positive and significant relationship which implies that compared to those who like to always behave properly, those who do not, are more likely to justify corruption and thus develop a proclivity towards corruption. Proper behaviour can be associated with morality and ethics. This finding therefore tends to establish the results from other studies that advocate for the morality of individuals to be harnessed in reducing corrupt behaviours (Moore, 2008; Everett et al., 2006)

Table 4: Determinants of corruption proclivities

Reference group	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Null										
	Human Agency		-0.041***	-0.044***	-0.045***	-0.043***	-0.044***	-0.046***	-0.040***	-0.051***	-0.046***
			(0.007)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.007)	(0.010)	(0.010)
	Age										
65+ years	18-24 years			-0.328	-0.783***	0.775***	0.744***	0.728***	0.791***	0.535***	0.455***
				(0.570)	(0.068)	(0.064)	(0.063)	(0.065)	(0.068)	(0.097)	(0.093)
	25-64 years			-0.678	-1.136***	0.430***	0.399***	0.387***	0.416***	0.272***	0.220***
				(0.582)	(0.059)	(0.038)	(0.037)	(0.038)	(0.039)	(0.059)	(0.057)
	Sex										
Male	Female				-0.158***	-0.152***	-0.138***	-0.133***	-0.141***	-0.060**	-0.052**
					(0.018)	(0.017)	(0.016)	(0.018)	(0.019)	(0.025)	(0.026)
	Education										
No Formal Education	Primary Education					-0.133***	-0.143***	-0.157***	-0.189***	-0.101*	-0.106*
						(0.045)	(0.045)	(0.047)	(0.067)	(0.060)	(0.058)
	Secondary education					-0.130***	-0.144***	-0.148***	-0.224***	-0.162**	-0.177***
						(0.050)	(0.049)	(0.053)	(0.073)	(0.068)	(0.065)
	Post Secondary					-0.210***	-0.233***	-0.263***	-0.319***	-0.284***	-0.307***
						(0.055)	(0.051)	(0.058)	(0.077)	(0.084)	(0.079)
	Employment										
Employed	Unemployed						-0.069***	-0.069***	-0.097***	-0.093**	-0.083**
							(0.019)	(0.020)	(0.025)	(0.040)	(0.041)
	Students						-0.015	-0.030	-0.051	-0.082	-0.071
							(0.026)	(0.028)	(0.040)	(0.069)	(0.070)
	Social Class										
Upper class	Upper middle class							-0.281***	-0.193*	-0.375***	-0.400***
								(0.077)	(0.115)	(0.128)	(0.132)
	Lower middle class							-0.330***	-0.256**	-0.430***	-0.458***
								(0.093)	(0.130)	(0.146)	(0.148)
	Working class							-0.414***	-0.331**	-0.462***	-0.489***
								(0.092)	(0.129)	(0.129)	(0.131)
	Lower class							-0.318***	-0.195	-0.355**	-0.406***
								(0.101)	(0.138)	(0.154)	(0.152)
	Peer influence										
Agree strongly	Agree								0.221***	0.222***	0.136*

Reference group	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
									(0.043)	(0.077)	(0.070)
	Disagree								0.107	0.092	-0.023
									(0.067)	(0.113)	(0.106)
	Strongly disagree								-0.081	-0.128	-0.217**
									(0.066)	(0.115)	(0.104)
	Risk attitude										
Risk loving	Risk Neutral									0.026	-0.056
										(0.061)	(0.059)
	Risk averse									-0.510***	-0.544***
										(0.060)	(0.061)
	Proper behaviour										
Very much like me	Like me										0.448***
											(0.049)
	Somewhat like me										0.713***
											(0.080)
	A little like me										0.826***
											(0.080)
	Not like me										0.755***
											(0.088)
	Not at all like me										0.805***
											(0.111)
	Constant	-1.079***	-0.087	0.565	1.105*	-0.416	-0.172	0.119	-1.132***	-0.002	-0.269
		(0.074)	(0.648)	(0.854)	(0.663)	(0.675)	(0.627)	(0.659)	(0.237)	(0.648)	(0.631)
	var(_cons[Country])										
	Constant	0.534***	0.504***	0.519***	0.525***	0.508***	0.521***	0.535***	0.679***	0.432***	0.438***
		(0.102)	(0.100)	(0.103)	(0.104)	(0.100)	(0.103)	(0.104)	(0.134)	(0.097)	(0.090)
	Log Likelihood	-176971.700	-166410.335	-163030.854	-160708.602	-151116.295	-144540.067	-129574.303	-78758.209	-29608.021	-29098.612
	AIC	353947.4	332872.7	326117.7	321475.2	302288.6	289140.1	259214.6	157576.4	59264.04	58253.22
	BIC	353968.8	333149.3	326415.3	321783.1	302584.2	289455.4	259557.7	157874.5	59477.49	58502.11
	No. of Countries	99	98	98	98	97	97	94	80	45	45
	Observations	325878	308901	305069	301725	283790	270600	242369	152724	53824	53567

Note: This table reports the results of the base multilevel regression identifying determinants of corruption proclivities. The dependent variable is justifiability of corruption. Wave dummies are included. Standard errors are reported in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table 5, we investigate our next question; whether the inclusion of social norms and other macro level factors affect the impact of human agency of corruption justifiability. Also, we investigate the effects of these macro-factors, particularly differing norms and trust, on corruption justifiability. We therefore include macro level variables; social norms (tax evasion), social trust, ethnic tension, polity, level of human capital and corruption perceptions. The effect of human agency on corruption justifiability remains negative and highly significant even after controlling for different types of norms at the macro level. This shows that human agency has a distinct impact on corruption proclivities irrespective of the existing norms. We also observe a positive and significant relationship between social norms of tax evasion and corruption justifiability. This means that the higher the negative social norm in a country, the more likely individuals are going to justify corruption thus developing a proclivity towards corruption (while controlling for the agency of individuals). We do not find other macro level factors to be significant aside our social norm variable. It is highly likely that these macro factors act as mediating factors through certain individual characteristics rather than on their own, to affect choices of individuals.We examine indirect effects from sections 5.3 to 5.5.

Table 5: Determinants of corruption proclivities- with country level variables

Reference group	Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Corruption						
	Human Agency	-0.044***	-0.045***	-0.051***	-0.051***	-0.051***	-0.051***
		(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)
	Age						
65+ years	18-24 years	0.732***	0.723***	0.706***	0.700***	0.699***	0.711***
		(0.064)	(0.071)	(0.077)	(0.076)	(0.076)	(0.078)
	25-64 years	0.386***	0.382***	0.380***	0.379***	0.379***	0.387***
		(0.037)	(0.040)	(0.043)	(0.043)	(0.043)	(0.045)
	Sex						
Male	Female	-0.137***	-0.152***	-0.149***	-0.148***	-0.147***	-0.149***
		(0.020)	(0.020)	(0.022)	(0.022)	(0.022)	(0.023)
	Education						
No Formal Education	Primary Education	-0.149***	-0.107**	-0.095*	-0.094*	-0.091*	-0.100*
		(0.050)	(0.054)	(0.056)	(0.054)	(0.054)	(0.053)
	Secondary education	-0.156***	-0.121*	-0.111	-0.108	-0.106	-0.115*
		(0.058)	(0.064)	(0.068)	(0.067)	(0.067)	(0.065)
	Post Secondary	-0.278***	-0.240***	-0.241***	-0.241***	-0.238***	-0.253***
		(0.062)	(0.067)	(0.070)	(0.069)	(0.069)	(0.067)
	Employment						
Employed	Unemployed	-0.087***	-0.090***	-0.094***	-0.091***	-0.092***	-0.088***
		(0.021)	(0.022)	(0.024)	(0.023)	(0.023)	(0.024)
	Students	-0.031	-0.032	-0.029	-0.025	-0.025	-0.029
		(0.031)	(0.033)	(0.032)	(0.032)	(0.032)	(0.033)
	Social class						
Upper class	Upper middle class	-0.273***	-0.267***	-0.316***	-0.310***	-0.310***	-0.317***
		(0.088)	(0.098)	(0.092)	(0.093)	(0.093)	(0.095)
	Lower middle class	-0.332***	-0.308***	-0.361***	-0.353***	-0.354***	-0.361***
		(0.103)	(0.114)	(0.106)	(0.107)	(0.106)	(0.110)
	Working class	-0.399***	-0.385***	-0.452***	-0.444***	-0.445***	-0.448***
		(0.104)	(0.115)	(0.099)	(0.100)	(0.100)	(0.103)
	Lower class	-0.307***	-0.293**	-0.327***	-0.319***	-0.321***	-0.333***
		(0.109)	(0.121)	(0.116)	(0.116)	(0.116)	(0.119)
	Country level						
	Social Norm	0.565***	0.633***	0.661***	0.642***	0.632***	0.632***

Reference group	Variable	(1)	(2)	(3)	(4)	(5)	(6)
		(0.123)	(0.096)	(0.087)	(0.105)	(0.106)	(0.110)
	Social Trust		1.017	1.177	1.206	1.239	1.250
			(0.913)	(0.912)	(0.888)	(0.863)	(0.867)
	Ethnic Tension			-0.062	-0.057	-0.039	-0.052
				(0.090)	(0.091)	(0.090)	(0.092)
	polity				-0.015	-0.010	-0.019
					(0.037)	(0.037)	(0.039)
	Corruption					-0.072	
						(0.075)	
	Human capital index						0.530
							(0.498)
	Constant	-1.647***	-2.091***	-1.897***	-1.801**	-1.657**	-3.283*
		(0.543)	(0.518)	(0.712)	(0.788)	(0.803)	(1.749)
	var(_cons[Country])						
	Constant	0.329***	0.365***	0.388***	0.398***	0.399***	0.508**
		(0.067)	(0.085)	(0.095)	(0.105)	(0.107)	(0.241)
	Log Likelihood	-107515.495	-93646.836	-83731.189	-83128.726	-83120.457	-80446.032
	AIC	215097	187361.7	167528.4	166325.5	166310.9	160960.1
	BIC	215434	187703.7	167857	166663.9	166659.3	161297.4
	No. of Countries	85	71	64	63	63	60
	Observations	201413	172942	156261	155287	155287	150602

Note: This table reports the results of the multilevel regression identifying determinants of corruption proclivities including country level variables. The dependent variable is justifiability of corruption.
Wave dummies are included. Standard errors are reported in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5.2 The role of social networks in shaping corruption proclivities

Introducing social networks of individuals into our analysis in Table 6, we aim to test for the effects of structural social capital of individuals on their tendency to be corrupt or condone corruption. The results show a negative and highly significant effect of human agency on corruption. This finding is consistent with results shown in Table 5.

In assessing the effect of bonding social capital, we used five variables: 1) *Love Parents*: Whether an individual feels the need to love the parents always or only if the love is earned; 2) *Importance of family*: Whether an individual thinks the family is important or not; 3) *Time spent with family*: Whether an individual spends time frequently with family or not 4) *Importance of friends*:Whether an individual thinks friends are important or not; and 5) *Time spent with friends*: Whether an individual spends time frequently with friends or not.

Out of the five variables used to represent bonds with family and friends, we observe consistent results for family networks in Table 6, that is, the two variables representing how an individual is connected to his or her family, *Love Parents* and *Importance of family*. We find very interesting results here. We find that, in assessing *Love Parents*, those who believe loving parents should be earned are morely to justify corruption than those who love their parents always. We also find that, in assessing *Importance of family*, individuals who do not see family as important

are also more likely to justify corruption than those who think family is important. These two findings are consistent throughout Table 6 (Models 1-10).

Contrary to concepts such as amoral familism (Banfield, 1967) and altruism by social identity (Fowler and Kam, 2007) which argue against bonding social capital, we find opposite results. We find that for individuals who do not express strong familial ties, they are more likely to justify corruption. This is shown in the positive and statistically significant coefficients of *Love Parents* and *Importance of family*. This finding may be due to the fact that indeed, not all forms of bonding social capital are bad (Harris, 2007). Distinguishing between inward and outward bonding social capital, Harris (2007) finds that bonding social capital only becomes potentially dangerous to corruption when it breeds in-group loyalties and particularism. On the other hand, when there are strong anti-corruption norms within familial networks, bonding social capital has the potential of fostering such shared norms leading to a lesser likelihood of corruption justifiabiity for individuals within these groups (Fukuyama, 2002).

We also observe a positive and significant effect of *Peer Influence* on corruption justifiability for individuals who are strongly influenced and a negative and significant effect of *Peer Influence* on corruption for individuals who are not strongly influenced by their peers. This implies that, even within bonding social capital, though familial networks may be seen as benign, ties between friends may not. This is because, unlike within familial networks where values are instilled and norms created, ties between friends have the tendency of breeding in-group trust and particularism; differentiating between those friends and 'others'. This differentiation could then lead to partiality and the condoning of such acts. This finding therefore expands on that of Harris (2007) by identifying the types of closed networks which could be more inward than others and as such the caution we should take when engaging in such networks.

In our analysis of bridging social capital in models 6 and 7 of Table 6, we find evidence of benign bridging capital in our sample. We find that, individuals who do not frequently spend time with either their colleages or others (when analysing *Timespent_Friends* and *Timespent_Others*), are less likely to justify corrupt behaviours compared to those who frequently spend time with either their colleagues or other people. This is consistent with findings from other research works on social capital such as Pena Lopez and Sanchez Santos (2014). From our estimation results, we find that the strength of ties, denoted by time spent within one's network is very important. We find evidence of Granovetter (1973)'s strength of weak ties argument here. From our estimations, individuals who do not spend a lot of time within their open networks are less likely to justify corrupt behaviours than those who do. This raises the need to not bundle all bridging social capital as benign. This is because, within such open networks, new alliances are formed, more opportunities are created for upward mobility and all these are desirable for development. However, with an increase in such development enhancing networks, opportunities to also identify people to engage in corrupt transactions are also created. With the creation of such opportuntiies, the stronger the ties within these networks, the higher the potential for corruption increases. Again, after introducing macro-level indicators of social norms, low corruption norms and social trust, we find only social norms to be positive and statistically

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significant. All other macro variables are not significant in our estimations.

Table 6: Determinants of corruption proclivities-The role of social networks

Reference group	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Human Agency	-0.030***	-0.028***	-0.059***	-0.059***	-0.060***	-0.061***	-0.063***	-0.062***	-0.069***	-0.072***
		(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
	Bonding social capital										
	Love Parents										
Always	If earned	0.397***	0.387***	0.410***	0.407***	0.404***	0.389***	0.392***	0.377***	0.366***	0.352***
		(0.018)	(0.019)	(0.039)	(0.039)	(0.039)	(0.040)	(0.041)	(0.041)	(0.043)	(0.046)
	Importance of family										
Important	Not important		0.437***	0.288**	0.285**	0.284**	0.322**	0.326**	0.331**	0.341**	0.297*
			(0.055)	(0.135)	(0.136)	(0.137)	(0.139)	(0.141)	(0.143)	(0.150)	(0.158)
	Timespent$_{Family}$										
Frequently	Not frequently			-0.045	-0.043	-0.033	-0.030	-0.025	0.009	0.016	0.015
				(0.035)	(0.035)	(0.036)	(0.037)	(0.037)	(0.038)	(0.040)	(0.043)
	Importance of friends										
Important	Not important				-0.028	0.005	0.011	0.017	0.003	0.044	0.037
					(0.037)	(0.038)	(0.039)	(0.040)	(0.041)	(0.042)	(0.044)
	Timespent_Friends										
Frequently	Not frequently					-0.103***	-0.059	-0.030	0.001	0.030	0.031
						(0.035)	(0.036)	(0.038)	(0.038)	(0.040)	(0.043)
	Bridging social capital										
	Timespent_Others										
Frequently	Not frequently						-0.197***	-0.171***	-0.160***	-0.168***	-0.156***
							(0.028)	(0.029)	(0.030)	(0.031)	(0.033)
	Timespent_Colleagues										
Frequently	Not frequently							-0.149***	-0.119***	-0.115***	-0.091***
								(0.028)	(0.030)	(0.031)	(0.034)
	Socio-economic characteristics										
	Age										
65+ years	18-24 years								0.779***	0.788***	0.769***
									(0.067)	(0.070)	(0.077)
	25-64 years								0.417***	0.429***	0.433***
									(0.061)	(0.063)	(0.069)
	Sex										
Male	Female								-0.088***	-0.078***	-0.086***
									(0.028)	(0.029)	(0.031)

Reference group (10)	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9)
	Education										
No Formal Education	Primary Education								-0.247***	-0.224***	-0.230***
									(0.069)	(0.074)	(0.077)
	Secondary education								-0.401***	-0.393***	-0.430***
									(0.074)	(0.080)	(0.083)
	Post Secondary								-0.409***	-0.413***	-0.443***
									(0.071)	(0.076)	(0.080)
	Employment										
Employed	Unemployed								-0.032	-0.033	0.004
									(0.033)	(0.034)	(0.037)
	Students								-0.071	-0.112**	-0.093*
									(0.051)	(0.053)	(0.056)
	Social class										
Upper class	Upper middle class									-0.026	0.010
										(0.095)	(0.102)
	Lower middle class									-0.160*	-0.102
										(0.093)	(0.100)
	Working class									-0.274***	-0.195*
										(0.095)	(0.103)
	Lower class									-0.125	-0.070
										(0.098)	(0.105)
	Peer Influence										
Agree strongly	Agree									0.225***	0.190***
										(0.042)	(0.046)
	Disagree									0.084*	0.050
										(0.045)	(0.048)
	Strongly disagree									-0.197***	-0.270***
										(0.059)	(0.064)
	Country level variables										
	Social Norm										1.372***
											(0.223)
	Social Trust										1.884
											(1.148)
	Corruption										-0.068
											(0.120)

... continued

Reference group (10)	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9)
	Constant	-0.952	-0.968	-0.750	-0.745	-0.729	-0.597	-0.559	-0.665	-0.626	-5.289***
		(0.585)	(0.596)	(0.679)	(0.680)	(0.680)	(0.679)	(0.680)	(0.705)	(0.721)	(1.268)
	var(_cons[Country])										
	Constant	0.680***	0.705***	0.915***	0.917***	0.919***	0.915***	0.916***	0.968***	0.997***	0.481***
		(0.120)	(0.125)	(0.218)	(0.219)	(0.219)	(0.218)	(0.218)	(0.232)	(0.242)	(0.134)
	Log Likelihood	-69538.527	-64551.581	-21019.393	-20913.888	-20786.082	-19951.797	-19207.009	-18575.220	-17089.134	-14458.474
	AIC	139115.1	129137.2	42058.79	41849.78	41596.16	39929.59	38442.02	37194.44	34236.27	28980.95
	BIC	139302.1	129303.5	42146.58	41946.3	41701.39	40043.03	38563.48	37384.45	34484.56	29248.36
	ICC	0.17	0.18	0.22	0.22	0.22	0.22	0.22	0.23	0.23	0.13
	No. of Countries	66	66	37	37	37	37	37	37	36	28
	Observations	138962	130883	48036	47794	47500	45531	43312	41641	38635	31464

Note: This table reports the results of the multilevel regression identifying determinants of corruption proclivities including social network variables.

The dependent variable is justifiability of corruption. Wave dummies are included. Standard errors are reported in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5.3 The indirect effect of social structure on corruption proclivities

In our final step of analysis, we assess indirect effects of different social settings on corruption proclivities. We explore how two main forms of social networks-bridging and bonding- shape corruption proclivities in different social settings. We employ three bonding social capital variables and one bridging social capital variable. Two of the three bonding social capital variables employed represent an individual's family networks and the strength of the familial ties. The third bonding social capital focuses on strength of ties among friends. The bridging social capital variable employed represents the strength of ties among colleagues.[7]

5.3.1 Assessing the role of social networks on corruption proclivities conditional on differing social structure

The indirect effects of social norms on corruption proclivities

In model 1 of Table 7, we interact if love of parents is earned (*Love Parents*) with *Social Norm*. We find a positive indirect effect of *Love Parents*=1 on corruption justifiability as *Social norm* increases. This implies that the probability of an individual without family ties to develop a corruption proclivity increases in countries where social norms are corruption enhancing compared with individuals with family ties. We must note that in previous models where social norm is introduced without an interaction term, the co-efficient of social norm is positive and statistically significant (see Table 6 model 10 and Table 5 models 1-6). Therefore, in contexts with high negative social norms, having a familial bonding social capital can reduce an individual's responsiveness to the negative societal structure. This could be due to a strong socialisation within the home which can counter the effect social norms may have on the individual's choices as earlier mentioned. Ljunge (2014) in their study of family ties and civic virtues, lend credence to these results as they find that, individuals with family ties are less likely to approve of anti-social behaviours such as evading taxes, lying for one's benefit and corruption.

Looking at the effect of the interaction between *Time spent with family* and *Social Norm* in model 2 of Table 7, we see a positive effect of *Social Norm* on justifying corruption when Time spent with family is frequent. We however see a moderating effect when Time spent with family is not frequent on the norm-corruption relationship. This implies that an individual with strong ties to his/her family is more likely to justify corruption in an environment where social norms are corruption-enhancing than an individual with strong family ties. Thus, the stronger the ties of an individual with his or her family, the more likely he or she is, to justify corruption as social norms worsen. This finding is important in our understanding of the effect of familial bonds. As seen earlier, bonding social capital in itself, leads to a reduction in corruption proclivities. However, as the strength within this close network increases, it becomes less benign, also when the social context is taken into account. This is because, as research has shown, developing dense

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[7]   We drop other social capital variables because we fail to attain convergence in the estimation when these variables are included.

ties has the potential of breeding particularism which in turn increases corruption tendencies when the social norm within such an environment favours such (Rotondi and Stanca, 2015; Fowler and Kam, 2007). Our findings throw further light on previous research in that, bonding social capital or close networks becomes less benign when there are very strong ties within such networks. Therefore, distinguishing between types of networks and the strength of ties within these networks has very important implications. So even though previous studies seem to have found contradictory results on the effects of familial bonds, our results show that, familial bonds in themselves do not necessarily lead to amoral familism as Banfield (1967) observes, rather, strong ties within such family bonds is what is likely to cause such negative outcomes.

Finally, we analyse the indirect effect of bonds among friends on corruption proclivities. We interact *Time spent with friends* with *Social Norm* in model 3 of Table 7. Here, we find an overall positive effect of *Social Norm* on corruption proclivities. We find that, this positive effect is however reduced for individuals who do not frequently spend time with their friends compared with individuals who frequently spend time with their friends. Here, we observe that individuals who find themselves in environments of increasingly worse social norms are more likely to justify corruption than those who do not. However, if such individuals have weak bonds with their friends, they are less likely to justify corruption compared with individuals who have strong bonds with their friends. Here, we attribute such corruption-enhancing effects of bonding social capital to the breeding of particularism within strong ties which promotes altruism only within those bonds (Fowler and Kam, 2007; Fukuyama, 2002).

With the analysis of different types of bonding social capital: family ties and ties among friends, we observe that, contrary to previous research where bonding social capital is bundled together, there are different effects for different types of bonds, more so when social norms worsen. We find that, familial bonds are more benign, but only when there are no strong ties developed. We find ties among friends to be corruption enhancing. Unlike in section 5.2 where we examined bonds without any interaction terms, here, we find that in environments where social norms are bad, all forms of bonds lead to corruption proclivities, but stronger bonds more so than weaker bonds.

Focusing on bridging social capital in model 4 of Table 7, we are only able to assess the strength of ties within open networks or bridging social capital. We find that, individuals who do not frequently spend time with the colleagues are more likely to justify corruption in contexts where we do not observe social norms (*Social norm*=0). However, this positive effect reduces as social norms worsen. Therefore, Though weak bridges are found to be generally effective at reducing corruption proclivities, this effect is much more prominent in contexts of bad social norms than in contexts of good social norms. This could be because, having a bridging network may introduce individuals to diverse opinions and diverse "within network" norms which might be different from the broader social nroms existing. Given that not much time is spent with colleagues and thus, no strong bonds are forged within such bridges, a sense of obligation is not created (Fukuyama, 2002) which prevents individuals from deveoping a proclivity towards corruption.

The indirect effects of social trust on corruption proclivities

In model 5 of Table 7, we interact if *Love Parents* is earned with *Social Trust.* Here, we find an overall positive effect of social trust on corruption justifiability when *Love Parents* is earned. We find that, as the level of social trust increases, corruption justifiability also increases for individuals who love their parents always. This positive effect is however reduced for individuals who love their parents only if earned. Here, we observe that, unlike the macro-level effects of social trust, higher levels of trust leads to higher levels of corruption proclivities for individuals with bonding social capital. This could be because, as people with bonded social capital already possess particlularised trust, they are also likely to interpret such generalised trust within the society as signalling reduced transaction costs for corruption hence leading to an increased justifiability of corruption. As we do not find any significant effect of social trust on corruption procilivities when an indivdual has bridging social capital, we are not able to draw comparisons between differing social network structures.

However, we are able to assess the indirect effect of social trust on corruption proclivities for individuals with bridging social capital. In model 7 of Table 7, we find a negative effect of not frequntly spending time with friends on corruption justifiability when no social trust exists in a society. This effect however becomes positive with an increase in social trust. This implies that though weak bridges might be benign towards the development of corruption proclivities, the level of social trust in a country might encourage individuals with weak bridges to take advantage of these bridges to reach corrupt officials they wouldn't be able to reach otherwise. We observe the same effect for individuals who do not frequently spend time with colleagues in model 8 of Table 7. This leads us to conclude that, individuals are likely to be more prone to justify corrupt acts (petty corruption) in countries where social trust is high than in countries where social trust levels are low. There are two likely reasons for this finding. First, individuals in high social trust societies are likely to see corrupt acts as secluded necessary events and thus justify these acts. It is also likely that, as weak bridges are characterised by generalised trust, individuals who exploit their bridging social capital for corrupt gains thrive much better when social trust is high than when it is low.

The indirect effects of low corrupt norms on corruption proclivities

When we shift our focus to bonding social capital and low corrupt norms in model 9 of Table 7, we find that, at very high levels of corruption (0), an individual who love parents only if earned is more likely to justify corruption. However, as corrupt norms reduce, this effect lessens. We also find that, looking at the co-efficient of *Corruption*, individuals who love their parents always are less likely to justify corruption as corruption levels reduce. The effect is more negative for individuals who love parents only if earned, as corruption increases. This implies that, in countries with high corrupt norms, familial bonds may be more desirable. However, incountries where corrupt norms are low, individuals with weak familial bonds may be less likely to justify corrupt behaviours. In countries with high levels of corruption, the family is likely to play a large socialisation role to instill good moral values. As such, having a familial bond might be more desirable than not having one as society is less likely to place such a role effectively due to

the corrupt norms existent. However, in countries with already low corrupt norms, any strong familial bond may likely have the opposite effect of rather creating particularised trust which will then lead to the development of corruption proclivities. It is therefore very important to consider the social environment within which an individual finds him or herself in studying network roles. In models 10-12, we find that weak ties among family, friends and colleagues are likely to lead to increased corruption justifiablity in high corrupt settings. In low corrupt settings however, this positive effect is strongly moderated. This finding is in line with previous studies that have focused on corruption perceptions. They have found that when individuals perceive corruption as high in the society, they are more likely to also engage in corruption due to contagion effects (Kobis et al., 2015). However, when corruption levels are perceived to be low, it deters people from further engaging in corrupt behaviours. Here, we observe that such choices are however largely shaped also by an individual's network. When corrupt norms are high, weak ties are likely to serve as bridges for upward mobility aided by corrupt activities, however, in low corrupt settings where opportunities are more equal, corruption may not be needed for upward mobility and hence, bridges are able to maintain their benign characteristic.

Table 7: Indirect mechanisms affecting corruption proclivities

Variables	Social Norms (A)				Social Trust (B)				Low Corrupt Norms (C)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Human Agency												
	-0.050***	-0.072***	-0.073***	-0.073***	-0.050***	-0.072***	-0.073***	-0.073***	-0.050***	-0.072***	-0.073***	-0.073***
	(0.004)	(0.006)	(0.006)	(0.006)	(0.004)	(0.006)	(0.006)	(0.006)	(0.004)	(0.006)	(0.006)	(0.006)
Social Norm	-0.209**	1.356***	1.376***	1.418***	-0.176**	1.327***	1.335***	1.352***	-0.188**	1.325***	1.332***	1.348***
	(0.086)	(0.235)	(0.234)	(0.235)	(0.086)	(0.235)	(0.235)	(0.234)	(0.086)	(0.235)	(0.234)	(0.235)
Social Trust	0.885	1.777	1.786	1.914	1.073*	1.691	1.684	1.669	0.984*	1.759	1.765	1.922
	(0.563)	(1.207)	(1.204)	(1.204)	(0.563)	(1.210)	(1.211)	(1.206)	(0.564)	(1.210)	(1.205)	(1.212)
Corruption	-0.124***	-0.063	-0.064	-0.067	-0.127***	-0.064	-0.062	-0.067	-0.119***	-0.056	-0.043	-0.006
	(0.033)	(0.126)	(0.126)	(0.126)	(0.033)	(0.127)	(0.127)	(0.126)	(0.033)	(0.127)	(0.126)	(0.127)
Love Parents												
If earned	-0.206*				0.624***				0.724***			
	(0.109)				(0.061)				(0.073)			
Timespent_Family												
Not frequently		0.398***				-0.060				0.171*		
		(0.135)				(0.075)				(0.090)		
Timespent_Friends												
Not frequently			0.419***				-0.192***				0.349***	
			(0.126)				(0.072)				(0.100)	
Timespent_colleagues												
Not frequently				0.236**				-0.273***				0.272***
				(0.114)				(0.059)				(0.074)
If earned # Social Norm (Love Parents)	0.231***											
	(0.042)											
Not frequently # Social Norm (Timespent_Family)		-0.146***										
		(0.052)										
Not frequently # Social Norm (Timespent_Friends)			-0.184***									
			(0.048)									
Not frequently # Social Norm (Timespent_Colleagues)				-0.144***								
				(0.043)								

Table 7 continued from previous page

	Social Norms (A)				Social Trust (B)				Low Corrupt Norms (C)			
If earned # Social Trust (Love Parents)					-0.840***							
					(0.183)							
Not frequently # Social Trust (Timespent_Family)						0.384						
						(0.260)						
Not frequently # Social Trust (Timespent_Friends)							0.584**					
							(0.250)					
Not frequently # Social Trust (Timespent_Colleagues)								0.591***				
								(0.203)				
If earned # Corruption (Love Parents)									-0.098***			
									(0.019)			
Not frequently # Corruption (Timespent_Family)										-0.050*		
										(0.030)		
Not frequently # Corruption (Timespent_Friends)											-0.143***	
											(0.034)	
Not frequently # Corruption (Timespent_Colleagues)												-0.138***
												(0.023)
Constant	-0.460	-5.144***	-5.192***	-5.368***	-0.625	-5.031***	-5.051***	-5.120***	-0.589	-5.077***	-5.115***	-5.325***
	(1.260)	(1.333)	(1.329)	(1.330)	(1.261)	(1.334)	(1.335)	(1.329)	(1.271)	(1.335)	(1.329)	(1.339)
Constant var(Country)	1.440***	0.535***	0.531***	0.531***	1.441***	0.536***	0.537***	0.531***	1.468***	0.537***	0.532***	0.539***
	(0.371)	(0.149)	(0.148)	(0.148)	(0.372)	(0.149)	(0.149)	(0.148)	(0.379)	(0.149)	(0.148)	(0.150)
Log Likelihood	-33466.374	-16240.989	-16187.940	-15684.166	-33471.138	-16243.872	-16192.658	-15685.476	-33468.578	-16243.537	-16186.140	-15672.027
No. of Countries												
Observations	69568	35299	35176	34064	69568	35299	35176	34064	69568	35299	35176	34064

Note: This table reports indirect mechanisms between social networks and country level social capital variables: social norms, social trust and low corrupt norms. The dependent variable is justifiability of corruption. The following controls are included but not reported: Age, Gender, Education, Employment, and Social class. Wave dummies are included. Standard errors are reported in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Throughout our analysis, we have employed a dichotomised dependent variable. We now use the 10-category version of our dependent variable-justifiability of corruption to assess its determinants in Tables 9 and 10 below using an ordered logistic regression. We find qualitatively similar results.

Table 8: Determinants of Corruption proclivities (Using categorical dependent variable)

Reference Group	Variable	(1)	(2)	(3)	(4)
	Human Agency	-0.043***	-0.046***	-0.045***	-0.046***
		(0.010)	(0.008)	(0.007)	(0.008)
	Age				
65+	18-24 years	0.466***	0.686***	0.773***	0.697***
		(0.093)	(0.078)	(0.080)	(0.080)
	25-64 years	0.220***	0.367***	0.412***	0.375***
		(0.058)	(0.045)	(0.046)	(0.046)
	Sex				
Male	Female	-0.055**	-0.149***	-0.156***	-0.149***
		(0.024)	(0.022)	(0.022)	(0.023)
	Education				
Formal Education	Primary Education	-0.128**	-0.124**	-0.185**	-0.133**
		(0.051)	(0.062)	(0.079)	(0.060)
	Secondary education	-0.187***	-0.139*	-0.251***	-0.146**
		(0.065)	(0.075)	(0.092)	(0.072)
	Post Secondary	-0.332***	-0.280***	-0.347***	-0.295***
		(0.079)	(0.078)	(0.094)	(0.075)
	Employment				
Employed	Unemployed	-0.070*	-0.090***	-0.089***	-0.088***
		(0.038)	(0.022)	(0.027)	(0.022)
	Students	-0.064	-0.026	-0.037	-0.030
		(0.062)	(0.028)	(0.032)	(0.029)
	Social Class				
Upper class	Upper middle class	-0.458**	-0.339***	-0.302**	-0.346***
		(0.182)	(0.096)	(0.119)	(0.098)
	Lower middle class	-0.539***	-0.399***	-0.357***	-0.407***
		(0.198)	(0.112)	(0.136)	(0.115)
	Working class	-0.574***	-0.493***	-0.444***	-0.497***
		(0.179)	(0.101)	(0.125)	(0.104)

Reference Group	Variable	(1)	(2)	(3)	(4)
	Lower class	-0.475**	-0.367***	-0.275*	-0.379***
		(0.196)	(0.112)	(0.149)	(0.116)
	Peer influence				
Agree strongly	Agree	0.093			
		(0.065)			
	Disagree	-0.097			
		(0.109)			
	Strongly disagree	-0.251**			
		(0.117)			
	Risk attitude				
Risk loving	Risk Neutral	-0.068			
		(0.051)			
	Risk averse	-0.539***			
		(0.062)			
	Proper behaviour				
Very much like me	Like me	0.402***			
		(0.052)			
	Somewhat like me	0.673***			
		(0.075)			
	A little like me	0.796***			
		(0.071)			
	Not like me	0.743***			
		(0.086)			
	Not at all like me	0.844***			
		(0.111)			
	Social Norm		0.613***	0.391	0.610***
			(0.103)	(0.259)	(0.105)
	Social Trust		1.075	-0.230	1.062
		(0.869)	(0.970)	(0.874)	
	Ethnic Tension		-0.013	-0.164*	-0.024

Reference Group	Variable	(1)	(2)	(3)	(4)
			(0.086)	(0.091)	(0.089)
	Polity		-0.014	-0.003	-0.022
			(0.035)	(0.028)	(0.037)
	Corruption		-0.068		
			(0.074)		
	Log_RGDPpc			0.212	
				(0.191)	
	Human capital index				0.476
					(0.431)
	Constant	3.662***	5.126***	6.177***	6.560***
		(0.666)	(0.775)	(1.611)	(1.544)
	var(_cons[Country])				
	Constant	0.469***	0.387***	0.530***	0.474**
		(0.110)	(0.118)	(0.176)	(0.197)
	Log Likelihood	-58793.625	-165058.896	-129020.977	-159964.108
	No. of Countries	45	63	57	60
	Observations	53567	155287	128756	150602

This table reports the results of the multilevel ordered logistic regression identifying
determinants of corruption proclivities-including country level variables.
The dependent variable is justifiability of corruption, measured on a scale of 1-10.
Year dummies are included. Standard errors are reported in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Interactions between Social Norms and Networks

Reference Group	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Love one's parents							
Always	If earned	0.005						
		(0.060)						
	Social Norm	0.263***	0.586***	0.593***	1.073***	1.091***	1.100***	1.140***
		(0.032)	(0.014)	(0.015)	(0.165)	(0.164)	(0.165)	(0.166)
	If earned*Social Norm	0.155***						
		(0.022)						
	Importance of family							
Important	Not important		0.389***					
			(0.121)					
	Not important* Social Norm		0.035					
			(0.041)					
	Importance of friends							
Important	Not important			0.074				
				(0.047)				
	Not important*Social Norm			-0.016				
				(0.016)				
	Timespent with family							
Frequently	Not frequently				0.251**			
					(0.119)			
	Not frequently*Social Norm				-0.106**			
					(0.046)			
	Timespent with friends							
Frequently	Not frequently					0.353***		
						(0.110)		
	Not frequently*Social Norm					-0.161***		
						(0.042)		
	Timespent with colleagues							
Frequently	Not frequently						0.090	

Reference Group	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
							(0.097)	
	Not frequently*Social Norm						-0.102***	
							(0.037)	
	Timespent with others							
Frequently	Not frequently							0.098
								(0.109)
	Not frequently*Social Norm							-0.118***
								(0.042)
	var(_cons[Country])							
	Constant	0.480***	0.349***	0.350***	0.411***	0.408***	0.407***	0.402***
		(0.090)	(0.054)	(0.054)	(0.104)	(0.103)	(0.103)	(0.102)
	Log Likelihood	-130785.983	-269441.677	-268718.961	-39063.652	-38972.230	-37306.697	-37421.333
	No. of Countries							
	Observations	140708	262767	261927	48142	48049	45179	46058

This table reports the results of the multilevel ordered logistic regression with interaction terms between

Norms and network variables. The dependent variable is justifiability of corruption, measured on a scale of 1-10.

Year dummies are included. Standard errors are reported in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

6   Conclusion

Within the New Institutional Economics and New Economic Sociology disciplines, the role of informal institutions of norms and trust in shaping human behavior have been largely emphasised (Lambsdorff et al., 2005). Also, the embeddedness of corrupt transactions within social networks and informal institutional arrangements have brought to the fore not only the importance of social networks, but also a need to analyse the determinants of the behaviour of both consumers and suppliers of corruption, that is public officials and citizens. Particularly in countries with perceptions of high corruption where formal institutions are weak and ineffective, the role of social structures in shaping corrupt behaviours become crucial. However, though actions of individuals are determined to an extent by these social structures, the freedom of individuals to choose certain actions and take ownership of these actions is not altogether shaped by their institutional settings, but also by an increased sense of agency which allows one to sometimes deviate from and also shape the existing institutions (Oppong, 2014; Giddens, 1984). What becomes more important in analysing the determinants of corruption proclivities therefore, is not whether the social structures are strong enough to influence behaviour, nor whether individuals have a high sense of agency. What is relevant and requires merit, is how both structure and agency condition each other to shape an individual's actions.

Using variables from the World Values Survey as well as country level variables from Penn World Tables, ICRG and Polity IV database among others, we estimated a multilevel model that allowed us to interrogate the multi-level effects of structural factors and micro factors that together shape corruption proclivities. Our analyses revealed that, both social structures, particularly social norms, and human agency have significant effects on corruption justifiability. While bad social norms are corruption- promoting, a high sense of human agency is corruption-inhibiting. We also found that, bridging and bonding social networks, contrary to pre-existing literature, are neither benign nor harmful respectively, to encouraging corruption. We find that what is crucial is the ties that develop between individuals within networks; strong ties lead to high probabilities of corruption justifiability than weak ties for both bonding (closed) and bridging (open) networks. From our analyses, we also find that presence of familial networks in particular, aid in reduce the development of corruption proclivities in countries with high levels of corrupt and anti-social norms. Finally, our analyses also revealed that, networks with weak ties have a conditioning effect on how norms influence individual's corruption justifiability. Here, ties within networks are very important in determining the moderating role played by a particular network; strong ties re-inforce the effect of bad social norms on corruption justifiability while weaker ties re-inforce the effect of low corruption norms on corruption. We find mixed results on the role of societal trust levels on individual corruption proclivities.

Our findings hold colossal implications for anti-corruption policy formulation and implementation efforts. First of all, the self-efficacy beliefs of individuals need to be shaped through the build of capabilities as proposed by Sen (1993) as well as through socialisation efforts tailored towards households (familial networks) and educational institutions. This is to tailor the capabilities of individuals towards functionings that are corruption prohibiting rather than

corruption-enhancing. Also, the power wielded by informal institutions of norms and trust on human behaviour cannot be over-emphasised, much more so in countries with weak institutions where corruption is both pervasive and persistent. In such societies, though formal institutions must be strengthened, how informal institutions can be made more benign towards corruption should also be included in the anti-corruption policy design. Results from studies that focus on how universalism can be encouraged rather than particularism should be employed to promote these values within the larger society. Once values of individuals are altered, coupled with the high sense of agency of individuals, norms will likely be transformed in these societies. Finally, the role of citizens in corruption transactions should not be downplayed. Citizens are not always victims in corrupt transactions, some are very active suppliers of corruption and as such, anti-corruption efforts which target public officials should also be extended to citizens. Anti-corruption programs such as 'I paid a bribe' and 'Naming and shaming' could also have extensions for citizens who demand public officials to engage in corrupt transactions. This is likely to work better in small communities, be it school communities, townships or even professional communities.

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