Paradigms
Print ISSN 1996-2800, Online ISSN 2410-0854
2020, Vol. 14, No. 2 Page 1-7
DOI: 10.24312/2020140201

Triggers of Sustainability Reporting in the Banking Industry of Pakistan

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Cite this paper: Ashraf, Y., Nazir, M. S., & Rashid, M. A. (2020). Triggers of sustainability reporting in the banking industry of Pakistan. *Paradigms*, *14*(2), 1-7.

The scope of the corporate reporting field has widened in the last few decades and now stakeholders demand information on sustainability performance in addition to mandatory financial reporting. Prior literature indicates that developed economies have realized the importance of sustainability disclosure and now legislations are in place in many regions of the world to make it compulsory for the companies to report their sustainability performance. However, developing and emerging economies are lagging in this area. Due to scarce literature in developing economies, the present study attempts to explore the triggers of sustainability reporting in the Pakistani context. Using balanced panel data from annual reports of 20 commercial banks for 2010-18, our study finds that board size, board independence, women representation on board, awards, bank age, bank size, and leverage significantly influence sustainability reporting. The study contributes to the existing literature by investigating the underexplored research area of sustainability reporting in the context of emerging economies that may help formulate the policy guidelines regarding additional non-financial reporting for corporate stakeholders reducing information asymmetry and agency problems.

Keywords: sustainability reporting, board independence, ownership structure, gender diversity, sustainability awards, social media visibly

INTRODUCTION

Today's rapidly changing business environment has caused a dramatic change in the expectations of the stakeholders and now they demand business entities to report their economic, environmental, and social activities that fall beyond mandatory financial information reporting. Therefore, to survive in today's competitive markets, corporations are forced to make additional information disclosure by revealing their sustainability performance. Many studies indicate the limitations of conventional mandatory financial disclosure. Financial reporting is used to measure past performance, does not talk about value creation, and is, therefore, not forward-looking (Cohen et al., 2012; Holder-Webb et al., 2009; Ngu & Amran, 2018). Due to these limitations, sustainability reporting (SR hereafter) has gained importance in the recent past. Reports on sustainable developments are now prepared and issued by 93% of the world's biggest 250 corporations (KPMG, 2017).

There is no single agreed-upon definition for SR and as a concept, it keeps on evolving (Dissanayake et al., 2016). The concept of SR cannot be well understood unless and until one knows what Corporate Social Responsibility (CSR hereafter) and Sustainability / Sustainable Development are. European Commission (2011) defines CSR as "the responsibility of enterprises for their impacts on society … to integrate social, environmental, ethical, human rights, and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders". World Commission on Environment and Development defines sustainable development as "to ensure that humanity meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland et al., 1987). A widely used definition of SR is "an organization's practice of reporting publicly on its economic, environmental, and/or social impacts, and hence its contributions – positive or negative – towards the goal of sustainable development" (GRI, 2016). Other phrases synonymous with SR are CSR Reporting, Integrated Reporting, and Environmental and Social Reporting (Reddy & Gordon, 2010).

Several prior studies (Belal & Owen, 2007; Sobhani, Amran, & Zainuddin, 2009; Dilling, 2010; Bui & de Villiers, 2017; Dissanayake, Tilt, & Qian, 2019) have discussed the reasons for the increased sustainability performance disclosure. These reasons include changing expectations of the stakeholders (Birth et al., 2008), pressures coming from different corners (Belal & Owen, 2007), and numerous social and environmental problems that companies have been blamed for (Sobhani et al., 2009; Małgorzata & Przemysław, 2013). The extant literature on most of the triggers of SR provides inconsistent findings and some factors (e.g. internal aspects of corporate governance) are under-researched (Hahn & Kühnen, 2013).

This study makes a significant contribution to the SR literature by investigating the impact of different aspects of corporate governance (board size, board independence, CEO duality, gender diversity in the board) on SR. This study also attempts to check the impact of ownership structure on SR on which the literature is inconclusive. Dienes et al. (2016) found media visibility as neglected triggers in SR literature. The present study attempts to fill this gap by considering the social media visibility of banks in the model.

The banking sector of a country is closely related to its economic development. After the global financial crisis, there has been deep concern over the financial sustainability of the banks so that banks may better meet their obligations towards investors and society (Patelli et al., 2011). However, there is a lack of research on SR of the banking sector of developing economies (Sharif & Rashid, 2014). SR literature is mostly limited to Bangladesh, China, India, and Malaysia (Fifka, 2012). In the Pakistani context, to the best of researchers' knowledge, there are only a few studies on SR. Thus, this study explores the SR phenomenon in the context of Pakistan, an emerging and developing country that would make future studies on cross-country comparisons of SR practice in developing and developed economies much easier.

LITERATURE REVIEW

Due to contradicting and diverse findings, the literature lacks a consensus on what explains the phenomenon of SR (Hahn &

Kühnen, 2013; Sobhani et al., 2009). Legitimacy theory is based on the concept of a social contract between a corporation and society (Deegan, 2002). This social contract explains why a company gets involved in sustainability activities. SR, as a tool, ensures that stakeholders can see if the companies are acting in congruence with societal expectations (Campbell et al., 2003). The stakeholder perspective is also one of the widely used theoretical perspectives in explaining SR (Belal & Roberts, 2010; Dissanayake et al., 2019). Unlike traditional financial reporting, which serves primarily to satisfy the informational needs of shareholders, SR can be used to cater to the informational needs of a wide range of stakeholders (Hahn & Kühnen, 2013). Signaling theory, closely related to agency theory, proposes that in the case of asymmetric distribution of information, one party tends to effectively pass on the information to the other party (Connelly et al., 2011). Corporate economic, social, and environmental performance can be considered asymmetric information and by adopting SR practice, companies try to reduce such asymmetry. According to Institutional theory, corporate actions do not follow a rationale rather institutionalized expectations of the environment (Meyer & Rowan, 1977). According to DiMaggio & Powell (1983), institutional isomorphism would determine the adoption, extent, and quality of SR instead of external factors.

Studies on SR in developed countries, like the USA, the UK, Australia, Japan, Canada, New Zealand, and Germany, find that the number of companies involved in SR practice is increasing (Adams, 2002; Buhr, 2007; Gray et al., 1995). As compared with SR in Western countries, relatively less amount of literature is available in Asian countries (Chapple & Moon, 2005). A piece of evidence shows that Asian corporations appear to do less than European corporations in reporting their sustainability performance (Baughn et al., 2007), however, the trend is rising upwards. Pakistan, an important Asian country, severely lacks research work in respect of SR (Mahmood, 2015; Naeem & Welford, 2009). Presently, the SR situation is not favorable in the country. SR is at the infancy stage and unregulated in Pakistan (Kemp & Vinke, 2012; Mahmood et al., 2017). Many non-profit seeking organizations, professional bodies, and research organizations are promoting sustainability practices by announcing different incentive awards (Mahmood et al., 2017). In 2011, ICMAP and ICAP jointly took the initiative of awarding the corporations with the Best Sustainability Report (BSR) Award to promote responsible reporting by entities covering the economic, environmental, and social performance of the business.

Corporate governance leads to the optimum use of the firm's resources to work in the best interest of all the stakeholders. In this way, the corporate governance structure may influence corporate managers to increase or decrease their engagement in sustainability performance and its disclosure. Although a notable number of studies have investigated the impact of corporate governance structure on SR, only a few results are vital (Dienes et al., 2016). Board size, as an indicator of the supervisory mechanism of corporate governance, two opposite views are present in the extant literature on it. One view is that smaller boards are more efficient but they are more likely to be influenced by management. The other view is that larger boards bring directors with different expertise and are less likely to be influenced by the managers. Previous studies have found a positive effect of board size on SR (Jizi et al., 2014; Shamil et al., 2014). Similarly, for the number of independent directors on the board, different views are found in the literature. Sharif and Rashid (2014) and Nguyen and Nguyen (2020) found that more independent directors on board lead the banks towards more engagement in SR, whereas, Li et al. (2013) found that an independent board and SR are negatively correlated. Agency theory proposes to separate the functions of chairman and CEO to reduce CEO power. Thus, CEO duality weakens board independence and influences management regarding information disclosures to the stakeholders. However, the literature is mixed and inconclusive in this relationship. While Jizi et al. (2014) and Shamil et al. (2014) found a significant positive association between CEO duality and SR, Lim, et al. (2008) find a negative correlation, and Said et al. (2009) do not observe any association at all.

Women usually have a closer feeling towards sustainability (Ciocirlan & Pettersson, 2012), show more engagement in charities (Bernardi, 2006), a greater tendency to respond to socially desirable actions, and are more sensitive to ethical matters than men (Williams, 2003). Regarding the effect of gender diversity on SR, Shamil et al. (2014) suggest a negative relationship, whereas, Khan (2010) and Amran et al. (2014) find that gender diversity does not determine SR. Another study (Fernandez-Feijoo et al., 2014) concludes that the presence of at least three women on the board of directors improves SR. From an external corporate governance perspective, conflicts between shareholders and managers are likely to increase where shares are widely dispersed among shareholders (Gamerschlag et al., 2011) leading to a high need for reducing information asymmetry by increasing the information disclosure. Thus, ownership dispersion is deemed to increase SR. Gamerschlag et al. (2011) find evidence in support of this assumption. Said et al. (2009) hypothesize a negative association between social disclosure and ownership concentration.

A little credit for the growing popularity of SR may go to various awards and incentives offered to the reporting firms. Awards/incentives encourage the adoption of SR and enhance the quality of reporting (Amran & Haniffa, 2011). In Pakistan, ICMAP and ICAP jointly offer the BSR Award every year to the companies that prepare top-quality sustainability reports following International Practices. In summary, it is expected that awards/incentives also have a positive impact on increased SR. The prior studies have attempted to explore the relationship between media visibility and SR. This correlation can be explained by more pressure on companies to produce sustainability reports to avoid negative impressions held by media users. This may affect firms' reputation in the market and therefore stakeholders may lose confidence in such firms (Dienes et al., 2016). Several studies (e.g. Raquiba & Ishak, 2020) suggest a positive significant impact of media exposure on corporate sustainability performance disclosure. On the other hand, Clarkson et al. (2011) find no significant influence of media visibility on SR. Although a positive relationship is widely acknowledged, research is considered scarce on this factor.

Finally, the present study uses firm size, firm age, and leverage as control variables in the study. Following (Ashraf et al., 2021), bank size is calculated by taking a log of total assets.

Several studies (Kent & Monem, 2008; Sharif & Rashid, 2014; Dissanayake et al., 2016, 2019) find firm size as a significant driver of SR. A very few studies, for example, (Dilling, 2010; Nikolaeva & Bicho, 2011) report no effect of corporate size on SR. Hence, the significant influence of firm size is widely acknowledged. Moreover, companies show different tendencies, based on their age, to disclose sustainability information due to their varying levels of legitimacy threat (Dissanayake et al., 2016). Using multiple regression analysis of 158 Indian firms, Bhatia and Tuli (2017), find a significant positive impact of firm age and SR. The results of the studies examining the link between SR and firm age are inconclusive overall (Dissanayake et al., 2016) and therefore, no reliable explanation is possible (Dienes et al., 2016). Companies, that need more capital, show a greater concern for the provision of additional voluntary disclosure beyond mandatory disclosure to the capital providers (Dienes et al., 2016). Similarly, Haniffa and Cooke (2005) argue that highly geared companies tend to legitimize their activities to lenders as well as shareholders. On the contrary, Drobetz et al. (2014) argue that high leverage brings an extra burden and therefore organizations spend less on sustainability activities and limit their sustainability disclosure. As a few studies have reported connections between gearing and SR (Dienes et al., 2016), a little theoretical explanation can be inferred for a link. The above discussion gives rise to the following hypotheses that test whether corporate factors have an impact on the SR in Pakistan.

H_1: There is a positive association between board size and SR.

H_2: There is a negative association between board independence and SR.

H_3: There is a significant association between CEO duality and SR.

H_4: There is a positive association between gender diversity of board and SR.

H_5: There is a negative association between ownership concentration and SR.

H_6: There is a positive association between awards/incentives and SR.

H_7: There is a significant association between social media visibility and SR.

METHODOLOGY

The population of this study comprises all the commercial banks listed on the Pakistan Stock Exchange (PSX). As of June 30, 2020, the total commercial banks listed on PSX are 20 in number, all have been included in the study sample. The present study uses panel data that covers a period of nine years from 2010 to 2018. The secondary data is collected from published annual audited reports of the banks, their websites, websites of the regulators, and financial analysis published by the State Bank of Pakistan. To meet the research objectives, the present study uses the following econometric model:

$$SR_{it} = \alpha_0 + \beta_1 \sum X_{it} + \beta_2 \sum CV_{it} + \epsilon_{it}$$

where α is a constant term, SR refers to the Sustainability Reporting, X represents all the independent variables such as board size (BSZ), ownership concentration (OWNCN), board independence (BIND), gender diversity on board (GNDV), CEO duality (CEOD), awards (AWARD), and social media visibility (MEDVS), CV denotes Control variables like bank size (SIZE), bank age (AGE), and leverage (LEV), and ϵ symbolizes error term. Appendix 1 defines the variables of the study.

The extant literature has measured SR in terms of its adoption, extent, and quality. The volume or extent of SR in annual reports has been measured frequently through what is known as 'content analysis' which is a widely used instrument in social sciences (Cohen et al., 2012; Gray et al., 1995; Khan et al., 2011; Sharif & Rashid, 2014). In the present study, we employ content analysis to measure the extent of SR. Different units of analysis have been used in the social reporting studies to measure the extent of SR such as the number of words; the number of sentences; the number of pages that pertain to social, environmental, and economic aspects of sustainability; absence or presence of disclosure; or a Sustainability Reporting Scoring Model/GRI disclosure score (Gray et al., 1995; Unerman, 2000). In the present study, the SR index is developed based on the disclosure score earned by each bank in three dimensions of SR. Within each dimension, disclosures on different items are analyzed. These items are taken from earlier researches in the area (Ehsan et al., 2018; Khan, 2010) and selected disclosure items from GRI standards. The final list consists of 6 items in the economic dimension, 6 items in the environmental dimension, and 28 items in the social dimension making a total of 40 items.

Appendix 2 provides the checklist of SR dimensions and items. While preparing the final checklist, an attempt has been made to select only those SR items that best match the Pakistani context. The presence or absence of each item in the annual report is assigned '1' or '0' respectively. To get a bank's score, the scores of all the items for that bank are added and the sum is divided by 40 (maximum likely score). Finally, the ratio is multiplied by 100 to express it in terms of percentage. For example, if a bank scores 10 out of 40, it means that the bank reports 25% of information related to sustainability.

$$SR\ Index = \frac{\sum d_i^{40}}{n_j}$$

Where d_i takes the value '1' if an item is disclosed and '0' otherwise; n_j represents the maximum score for a bank which is 40.

Along with descriptive statistics, regression estimation has been performed to test the hypotheses. Then, we use the VIF test to check the problem of any significant multicollinearity. We also apply the Cook-Weisberg test to check any existence of Heteroskedasticity. In case of any Heteroskedasticity, we perform robust regression to solve the problem.

RESULTS AND DISCUSSION

Table 1 provides the descriptive analysis of study variables. Except for a few, mean and medians are not much different for most of the variables. For example, banks vary a lot from one another in respect of their ages and some outliers cause median and mean to be different from each other. Standard deviation is also very high in this case showing a high level of variability around the mean. The minimum and maximum age indicate that the data set comprises younger as well as much older banks. Statistics for board size indicate that number of directors for a bank ranges from 4 to 13 whereas on average, there are 8 directors on a board. If values for board independence are carefully analyzed along with board size, it can be inferred that most of the directors on corporate boards are independent. The average CEO duality indicates that there are rare cases where the CEO is also acting as chairman.

Table 1: Summary Statistics

Variables	Mean	Median	SD	Min.	Max.
BSZ	8.64	8	1.64	4	13
BIND	7.28	7	1.68	3	12
CEOD	0.01	0	0.11	0	1
GNDV	0.17	0	0.37	0	1
OWNCN	0.48	0.51	0.25	0.07	0.99
AWARD	0.09	0	0.29	0	1
MEDVS	5.4	6	1.07	2	6
AGE	29.85	22	22.22	4	77
SIZE	19.73	19.82	1.03	17.23	21.78
LEV	0.92	0.92	0.04	0.74	0.98
SR	51.65	50.00	16.07	15.00	92.50

The mean value of gender diversity (0.17) indicates that there is a smaller number of cases where women are present on the board of directors for a bank. For ownership structure, there is a wide range of concentration (i.e., from 7% to 99%). A low average for awards indicates that Pakistani banks are frequently earning awards for showing excellence in sustainability disclosure. Minimum and maximum values for social media visibility show that a bank earns at least 2 scores out of 6 for being present on social media. A high average indicates that most of the banks are highly visible on social media. Average values for sustainability reporting indicate that almost 50% of sustainability items are being voluntarily disclosed by the Pakistani banks during 2010-2018 which is a good sign. The correlation matrix presented in **Table 2** provides information on the relationship between the variables. Values of correlation coefficient greater than 0.80 indicate a significant problem of multicollinearity (Gujarati et al., 2012). In our case, all values are under 0.80 and therefore no severe multicollinearity exists in the data.

Table 2: Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) BSZ	1.0										
(2) BIND	0.7	1.0									
(3) CEOD	-0.3	-0.3	1.0								
(4) GNDV	0.1	0.1	0.2	1.0							
(5) OWNCN	-0.3	-0.4	0.1	0.4	1.0						
(6) AWARD	0.0	0.0	0.0	0.2	0.1	1.0					
(7) MEDVS	0.1	0.2	0.0	-0.4	-0.6	0.0	1.0				
(8) AGE	0.1	0.2	0.2	0.0	-0.1	0.3	0.1	1.0			
(9) SIZE	0.1	0.2	0.1	0.2	-0.1	0.3	0.1	0.7	1.0		
(10) LEV	0.0	0.1	-0.1	-0.1	-0.4	0.0	0.7	-0.1	0.3	1.0	
(11) SR	0.4	0.4	0.0	0.2	-0.2	0.3	0.2	0.6	0.7	0.3	1.0

To test the hypotheses, we run OLS regression. To check any multicollinearity problem between the independent variables, we use the variance inflation factor (VIF). As all the VIF values are under 10, therefore, the dataset is free of any severe multicollinearity problem. To check if our data has any panel effects, we run Breusch and Pagan LM test. This test does not accept the hypothesis of panel effects and therefore, we keep our OLS regression results. After that, we run the Cook-Weisberg test to check any Heteroskedasticity problem. As the test indicates the presence of Heteroskedasticity in the data, we use robust regression estimation to solve the issue, and results are reported in **Table 3**.

Table 3: Robust Regression predicting SR

SR	Coef.	S.E.	t-value	p-value	VIF	1/VIF
Board Size	2.47***	0.38	6.54	0	6.77	0.15
Board Independence	-1.39***	0.37	-3.73	0	7.14	0.14
CEO Duality	1.22	2.48	0.49	0.623	1.31	0.76
Gender Diversity	3.00**	1.26	2.39	0.018	1.63	0.61
Ownership Concentration	-2.1	2	-1.05	0.296	1.84	0.54
Award	2.26*	1.33	1.7	0.09	1.19	0.84
Social Media Visibility	0.39	0.54	0.73	0.464	3.04	0.33
Bank Age	0.10***	0.03	2.95	0.004	3.81	0.26
Bank Size	2.23***	0.61	3.63	0	4.2	0.24
Leverage	27.50**	10.64	2.59	0.011	3.38	0.3
Constant	-59.91***	8.75	-6.85	0		
Number of observations	180		LM test		Prob > chibar2 = 0.747	
R-squared	0.629		Cook-Weisberg test		Prob > chi2 = 0.001	
Prob > F	0		Mean VIF		3.43	

*** p<.01, ** p<.05, * p<.1

While running the model, bank age, bank size, and leverage are taken as control variables. We find that board size, board independence, women representation on board, award, age, firm size, and leverage are powerful predictors of SR; however, the predictive power of awards is weaker than others.

As our findings report a significant positive coefficient of board size, the results are consistent with earlier studies by Jizi et al. (2014) and Shamil et al. (2014). This implies that banks with larger boards are more effective in sharing sustainability information with their stakeholders. With regards to board independence, our findings are in line with Li et al. (2013). Our results on the significance of gender diversity are in contradiction with Khan (2010) and Amran et al. (2014) but parallel to Shamil et al. (2014) except for the sign of the coefficient

On the other side, CEO duality, social media visibility, and ownership structure fail to explain SR in Pakistani commercial banks during 2010-18. Thus, we support the findings of Said et al. (2009) who also provide evidence of no link between CEO duality and SR. All three control variables i.e., bank age, bank size, and leverage are also found to be significant estimators of SR in the Pakistani banking sector, thus going in line with Bhatia & Tuli (2017) and Nguyen & Nguyen (2020). Model R2 is 0.628 which means that 62.9% variations in SR are being explained by our study variable.

CONCLUSION

Due to several limitations and problems of conventional financial reporting and many social and environmental problems, stakeholders now put pressure on the companies to present their performance on sustainability in addition to mandatory financial reporting. In response to such changing expectations of stakeholders, many developed economies have started doing legislation in this regard so that it may be made compulsory for the companies to share their sustainability performance with their interacting players. However, as compared with developed economies, very limited literature is available on developing and emerging economies. Furthermore, the extant relevant literature indicates that developing and emerging economies are lagging in this particular area and there is a high need to explore what triggers sustainability reporting in these regions and what results in if sustainability disclosure is adopted here. The present study attempts to explore the triggers of sustainability reporting in the Pakistani context. Using balanced panel data from annual reports of 20 commercial banks for 2010-18, our study finds that board size, board independence, women representation on board, awards, bank age, bank size, and leverage significantly influence sustainability reporting. This study has implications for policymakers and regulators of the banking industry as well. They should consider the factors that drive sustainability disclosure. As this study is limited to the banking industry only, future researches can consider other important industries contributing to the development of the economy. Furthermore, some more corporate factors can be included in the model to estimate SR.

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Appendix 1: Variable Names and Measurement

Variable Name	Measurement
Ownership Concentration	% shares held by the largest shareholder
Board Independence	The ratio of independent directors to total directors
Board Size	Number of directors on board
Gender Diversity	1, if there is women representation on the board, 0 Otherwise
CEO Duality	1, if CEO & chairman are same, 0 Otherwise
Awards	1, if the bank has earned any award in SR field, 0 Otherwise
Leverage	The ratio of the book value of debt to book value of assets
Bank Size	Log of total assets
Bank Age	Bank age in years since inception
Sustainability Reporting	SR Index based on score made by disclosing sustainability items by a bank

Appendix 2: Checklist of SR dimensions and items

1: Economic	
1.1	Economic performance
1.2	Market presence
1.3	Tax benefits for employing fresh graduates
1.4	Tax benefits for donations to any NGO or any approved institution, foundation, board, society, trust, or fund for tax purposes
1.5	Tax benefits on worker's welfare fund and workers' participation fund
1.6	Tax benefits on donations to any board of education, any university established by Federal or Provincial law or any educational institution, any hospital or relief fund established or run by Federal or Provincial government
1.7	Indirect economic impacts
2: Environmental	
2.1	Environmental protection/improvement
2.2	Pollution control or carbon emission control
2.3	Waste management or reuse of by-products
2.4	Greening the environment
2.5	Water
2.6	Energy
3: Social	
3.1	Acknowledgment of sustainability
3.2	Corporate objectives or policies for sustainability
3.3	Donations for people affected from floods/earthquake/terrorism/army operation
3.4	Poverty alleviation and development programs for less developed/remote/underprivileged areas
3.5	Donations/Assistance to different trusts
3.6	Sponsoring various sports activities/events
3.7	Women's empowerment and development program
3.8	Other general community welfare activities
3.9	Contribution to the education sector
3.10	Contribution to the health sector
3.11	Employee training
3.12	Number of employees
3.13	Career-development programs
3.14	Employee benefits
3.15	Employee health and safety
3.16	Employee diversity and equal opportunity
3.17	Child labor
3.18	Product or service information
3.19	Customer privacy
3.20	Socioeconomic compliance
3.21	Product/service, equipment/plant or technology innovation, development or improvement
3.22	Customer health and safety
3.23	Statement of ethics and business practices or code of ethics/statement of internal control
3.24	Stakeholder approach
3.25	Risk management committee/practices
3.26	Disclosing information about customer service or customer relationship
3.27	Anti-corruption