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CORRUPTION AND FIRM PERFORMANCE: EVIDENCE FROM PAKISTANI ENTERPRISES

Corrupção e desempenho da empresa: evidências de empresas paquistanesas

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ABSTRACT

Corruption is a curse in Pakistan, neither public office nor any structure immune from this phenomenon. Inspired by this, the study commits to examine two significant research issues. First the study assesses to find whether corruption greases the wheel or sanding it. Second, the study commits to determine what causes corruption in firms. This study is based on the World Bank's enterprise survey, data of Pakistani firms. This study tries to associate the effects of corruption on firm performance after controlling for firm specific factors. We check two sets of variables; first set is the variables that cover firm specific characteristics and other is variable that cover intervention with government agencies. The overall conclusion depicts a mixed approach on corruption effects. Our evidence shows that there is a negative association of corruption on firm performance which supports that the hypothesis of 'sand the wheels' is widely applicable in Pakistan. The results conclude that younger firms, directly exporting firms, large size firms are more likely to experience a deteriorating effect on their performance. Our study interestingly shows that bureaucratic complexities faced by the firms increases the performance of the firms which supports 'Grease the wheels'. Study finds that firms struggling in terms of sales growth, younger firms, firms in growing competition, large firms are more likely to pay bribes.
Keywords: Corruption; bribe, firm performance; bureaucratic complexities; Pakistan

CORRUPÇÃO E DESEMPENHO DA EMPRESA: EVIDÊNCIAS DE EMPRESAS PAQUISTANESAS

Corruption and Firm Performance: Evidence from Pakistani Enterprises

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RESUMO

A corrupção é uma maldição no Paquistão, nem cargo público nem qualquer estrutura imune a esse fenômeno. Inspirado por isso, o estudo se compromete a examinar duas importantes questões de pesquisa. Primeiro, o estudo avalia para descobrir se a corrupção lubrifica a roda ou a lixa. Em segundo lugar, o estudo compromete-se a determinar o que causa a corrupção nas empresas. Este estudo é baseado na pesquisa empresarial do Banco Mundial, dados de empresas paquistanesas. Este estudo tenta associar os efeitos da corrupção no desempenho da empresa após o controle de fatores específicos da empresa. Verificamos dois conjuntos de variáveis; o primeiro conjunto são as variáveis que abrangem as características específicas da empresa e o outro é a variável que abrange a intervenção junto aos órgãos governamentais. A conclusão geral retrata uma abordagem mista sobre os efeitos da corrupção. Nossas evidências mostram que há uma associação negativa da corrupção no desempenho da empresa, o que apóia que a hipótese de 'areia as rodas' é amplamente aplicável no Paquistão. Os resultados concluem que as empresas mais jovens, empresas exportadoras diretas, empresas de grande porte são mais propensas a experimentar um efeito de deterioração em seu desempenho. Nosso estudo mostra de forma interessante que as complexidades burocráticas enfrentadas pelas empresas aumentam o desempenho das empresas que apoiam o 'Grease the wheels'. O estudo constata que as empresas que lutam em termos de crescimento de vendas, empresas mais jovens, empresas em crescente concorrência, grandes empresas são mais propensas a pagar subornos.
Palavras-chave: Corrupção; suborno, desempenho firme; complexidades burocráticas; Paquistão

INTRODUCTION

Corruption is generally defined as the abuse of public office for private gain and is unfortunately an endemic in Pakistan. No public office nor any structure is immune from this phenomenon, it has reached to every organization, from low level to executives and beyond. In Pakistan the corruption has put its claws even on Politics, Judiciary, Military, Police, Custom, Health Sector, and Legislation. This phenomenon has affected each sector of the state. It is so widespread in the country that it is ranked as 120th in the transparency international corruption perception index of 2019 and according to the Global corruption barometer survey (2017), Pakistan is the 4th most corrupt country in the Asia Pacific. Corruption in Pakistan mainly occurs in form of Money Laundering, Bribery, Tax Evasion, Perjury, Nepotism, Favoritism, Ghost Workers Payroll and others. Corruption has been responsible for the political instability in the country. Corruption has its deep impact on businesses in Pakistan. According to a survey of World economic forum, corruption is the most problematic factor for doing business in Pakistan (WEF 2017, p230). Different theorists have different approaches towards corruption. The question is "is corruption detrimental or beneficial for economic activity?". Some theories argue that its social and economic consequences are detrimental to economic activity while other believes that it may boost performances of economic activity.

The World Bank (2009) indicates corruption as the greatest hurdle to achieving economic growth, social development and reduction of poverty. Corruption inhibits economic growth (Méndez and Sepúlveda 2006) common wisdom views corruption to have an adverse effect on the productivity of different firms. Corruption is likely to lower the productivity. The existent literature presents a mixed approach towards the effect of corruption on performances of firms. The main objective of this study is to determine effect of corruption on the performance of firms in Pakistan, weather it enhances the performance or reduces the performance and to determine what causes corruption in firms.

This study is to associate the effect of corruption on the firm performance after controlling for firm specific factors. We take two sets of variables for accessing the effects, one set is the variables that covers firm specific characteristics and other set is variables that covers interaction with government agencies. The above literature arises several questions about the study. The main questions regarding the effect of corruption on the performance of firms in Pakistan and what causes corruption on firm level are; Does fair competition, large sized firms compared to smaller firms and younger firms compared to older firms, are more likely to contribute to corruption? In terms of ownership status, does state ownership in firms increases the level of corruption in firms?

In search of evidences that supports arguments of corruption being detrimental , the study found that there is a good amount of literature present on country level corruption , for example the finding of (Ades and Di Tella 1999, Méon and Sekkat 2005, Asiedu and Freeman 2009, Agostino, Drago et al. 2011) found that corruption is detrimental to the economic growth of a country. However, at firm level there is a very limited number of literature present to gauge the adverse effect of corruption on the performance. Also, the study found that there is limited amount of literature present to justify argument of corruption being beneficial for the performance of firms. The current study is an effort to determine the factors associated with corruptions in Pakistani firms and addresses the effect of corruption on the performance.

1.   LITERATURE REVIEW

Generally, the hypothesis that supports the adverse effects of corruption on the performance of firm is known as 'sand the wheels' hypothesis which states that corruption deteriorates the performance of firms. While the hypothesis which suggests that corruption boost or enhance the performance of firms is known as 'grease the wheel' hypothesis. Grease the wheels supports that corruption is beneficial for the performance of the firm. By giving bribery to government officials firms can circumvent slow and sluggish processes. According to the hypothesis of (Sklar 1969) corruption may be beneficial for the performance in second world countries because it lessens the distortions caused by ill functioning institutions.

Effect of corruption has a varying result on economic development. Many theorists however believe that it has an adverse effect on achieving economic development. Corruption hampers the economic growth of a nation and showcase dire consequences for the economic development. This argument might not be in proportion

in the presence of weak institutions (Méon and Sekkat 2005) The adverse effect of corruption on the economic development consequently causes reduction in private investment, hampers the rate of economic growth and lowers the rate of productivity. These arguments are supported by rent-seeking theories of (Krueger 1974) To gauge the effect of corruption on investment (Mauro 1995) also found proportional evidence supporting the adverse of corruption on investment.

On the firm level, corruption and its effect on firms portray a varying image. The results of different enterprise level surveys might find its effect to be a performance booster, but the most prominent view is of its devastating effects on the performance of the firm. Literature provides the adverse effects of corruption on the productivity of firms and sales growth. The study believes that corruption renders firms unable to achieve its desired targets even if corrupt practices proves beneficial for the short run, for example bribing a bureaucrat to achieve desired results might be considered beneficial by the firm at times but can actually prove harmful because bureaucratic involvement increases with increase in corrupt practices , thus , when a situation where there is no need of giving bribes to achieve desired results a bureaucrat might create opportunities to extract bribes from the firm and thus a favorable and smooth process might be halted. A growing body of literature provides supports that firms can benefit from corruption by exercising practices like tax evasions, though this practice might seem beneficial for short time but in the long run it can prove very harmful for the firm because such acts in the long run can create a behavior for more corrupt practices, as the literature explains it can increase bureaucratic intervention and red-tapeism (Sahakyan and Stiegert 2012) Supports this argument that such practices where firm engage in corruption for gain in the short run will eventually create a behavior for more acts and will offset any gain in the future. Thus, it will start behaving like a plague and will wipe out any gain in the short and long run.

In search of evidences that supports arguments of corruption being detrimental , the study found that there is a good amount of literature present on country level corruption , for example the finding of (Bliss and Tella 1997, Méon and Sekkat 2005, Asiedu and Freeman 2009, Agostino, Drago et al. 2011) who found that corruption is detrimental to the economic growth of a country. However, at firm level there is limited literature present to gauge the adverse effect of corruption on the performance.

Corruption in Pakistan started to bloom from the mid-90s to present[1]. Although it has been an element of problems since the independence of the country. Based on which governments were overthrown, different various businesses fell victim to it. Taking favors from a junior clerk to gaining a government contract or license from a senior bureaucrat, such   practices happen on regular basis in the country. Domestic, international as well multinational businesses all fall prey to the rent-seeking of bureaucrats and government officials.

For businesses to indulge in corrupt practices the most important factor is environment, if they are able create the corrupt environment, they can easily get away with violations of government regulations, non-transparent financial statements, dishonest audit report, kickbacks, tax evasions, obtain contracts and licenses even though non-deserving and for other illegal benefits. In Pakistan the businesses create such environment by interacting with government officials. A perfect example would be the case of Microsoft which according to an article of the Wall Street Journal (2013)[2] an informant emailed Microsoft that the management of the company in Pakistan paid for a luxury trip of a government official and his spouse in luxurious hotel to win 3-year contract, so the company can provide the government with Microsoft Office software.

2.   HYPOTHESES DEVELOPMENT

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[1] According to the transparency international Pakistan perceived corruption index 1995-2019 , in 1996 Pakistan was 53rd most corrupt country in the world while in 2005 the country was 144th most corrupt country in the world and in the 2019 ranking Pakistan was 120th most corrupt.

[2] The allegation made by the informant was for the year 2009 and the article was published in the wall street journal in 2013 titled ' Microsoft bribe probe reaches into Pakistan, Russia Deals, justice department reviewing allegations involving deals in five countries by Christopher M Mathews and Shira Ovide

Firms in growing competitions are more likely to pay bribes. Firms that face high competition want to complete its procedures and processes fast and efficiently. so, they have to pay bribe to government officials so to be able to compete in the market. Competitive industry is more likely to bribes(Alexeev and Song 2013).

Prior studies such as (Dutta and Mishra 2004, Emerson 2006, Aidt, Dutta et al. 2008, Campos, Estrin et al. 2010) argued that entrance fee enforced on firms by fraudulent officers for entering to the market and decrease the competition, comparatively to a total free entrance issue. However, the prevailing rules, corruption can bring greater outcome entrance than the in the case of sincere officials because to the bribe the officials can be lower costly than following the rules.(Dutta and Mishra 2004) stated that by following the rules wealth variation can result increased in market competition but also high corruption. As (Shleifer and Vishny 1993) argued that exaction is hard to hide than fight for cost decreasing corruption like when the official is bribed by the importer instead of custom tax or if a firm bribe the official to hide costly rules.

H_{1A}: *competition is positively associated with corruption.*

Size of the firms contributes to the level of corrupt practices. Larger the firm, more it is vulnerable to corruption. A large size firm relative to small size firm is more associated with corruption this is supported by(Sahakyan and Stiegert 2012) A possible reason for this is that large-sized firms have high number of employees which results in less check and balance in Pakistani Enterprises another possible reason is that higher the number of employees, more will be unions among them which results in defending even the corrupt practices of its members.

Similar to (Svensson 2003) empirically analyzed the hypothesized bargaining power of larger firms can be more susceptible and unprotected to excretion by crooked officers due to their huge ability of payment. In addition, small firms can easily involve in unofficial engagements for preventing rules, duties and facing the administrators(Schiffer and Weder di Mauro 2001) This paper also states that the association between the corruption and firm size is not linear. Large firms manage to have high rejection power, political impact, and scales of economy. The feature of resiliency could moderate extra experience to ask more from fraudulent officers because of increase in income capability (Schiffer and Weder di Mauro 2001) And bribery to officials could fix cost on the firm, so these costs might easily be absorbed by large firm. Therefore, we hypothesize that:

H_{1B}: *large size firm is positively associated with corruption.*

The age of the firm influences the level of corruption in the firm. An old firm is more likely to be less involved in corruption because of their experience to tackle corrupt practices while new firms are more likely to pay bribes.

H_{1E}: *Firm age is negatively associated with corruption.*

Corruption is practiced in both private and state-owned enterprises, corruption deteriorates the performance of private owned enterprises however its implications on state owned enterprises are not detrimental (Nguyen and Van Dijk 2012) state owned enterprises.

According to the agency management of the SOEs of seek to increase their own wealth instead of the firm or state, and it results agency problems or deficiency of monitoring from outside.(Jensen and Meckling 1976, Grossman and Hart 1983) Executives in SOEs are not controlled by the risk of insolvency and takeover as it is in the private business(Nguyen, TB LE et al. 2006) .Private firm's management is well-organized by outside regulator mechanism like labor industry for corporate control and management and also by internal regulators mechanism like management compensation(Cuervo and Villalonga 2000) .Politicians represent the state ownership, often exercise deficient efforts to monitor the management of SOEs. Firstly, they manage to worried about promotion or reelection instead of regulating the activities of SOEs, second, in general the relation of SOEs management and government officials is strong(Nguyen, TB LE et al. 2006) .The private regulators as the SOEs owner provide opportunities in resource distribution to SOEs. However, most of the politicians get the top management positions for increasing their power in the system. The prior working association also encourages private officers to contract with SOEs in more positive way due to these relationships the SOEs having more opportunistic approach and alliance of private regulators to have favorable environment for progress and development.

H_{1F}: *corruption is negatively associated with the performance of state-owned enterprises.*

Corrupt practices may cause delays that would have otherwise not happened. A dishonest government official may create opportunities to extract bribes even though the process was supposed to be on time. Which means corrupt practices is detrimental for the performance of firms. This is commonly known as "Sand the wheels hypothesis" By giving bribery to government officials firms can circumvent slow and sluggish processes which would cause delays otherwise. Firms can obtain licenses, contracts from government officials and boost the performance of firms. This is commonly known as "Grease the wheels hypothesis"

The association between firm performance and corruption is the most debated issue in the literature of corruption. Such as the effect of corruption on country level on growth, the firm level studies did not provide a satisfactory answer that how the growth and progress of the firms can be affected by corruption. Some of the prior theoretical studies argued in favor of effective corruption and stated that performance can be affected by corruption such as 1) assisting firms to avoid copious rules and perform the business in more efficient way(Leff 1964, Huntington 1968) 2) to supply public commodities and facilities to the firms which is valuable for them mostly with help of illegal payments and bribe the officials(Beck and Maher 1986, Lien 1986).

And (3) To create competition among government bureaucrats with ultra-perks illegal payments which results improvement in governance(Leys 1965, Bayley 1966) In comparison, the current and empirical studies figure out that there is negative impact of corruption on growth and firm performance(Kaufmann and Wei 2000, Gaviria 2002, McArthur and Teal 2002, Fisman and Svensson 2007) .The authors studied the comparison of taxation's effects and corruption on the growth of firm and finds that corruption's effects magnitude is three times larger than of taxation(Fisman and Svensson 2007). These results are in line with(Shleifer and Vishny 1993) who stated that the increase in negative effects of corruption is because of increase in cost which is linked with insecurity and privacy. (Kaufmann and Wei 2000) debated that if bribes helps to increase the single transactions with officials but will result be fail in the long-term due to the increase in such transactions will leads to loss in prospective gains.

H_{2A}: *Corruption is negatively associated with firm performance*
H_{2B}: *Corruption is positively associated with firm performance*

3. METHODOLOGY

To measure the impact of corruption on firm performance we consider two sets variables, the first set of variable cover firm specific characteristics the second set include the variables that mainly cover the interaction with government agencies.

Therefore, the standard equation of corruption that impacts firm performance I as follow:
Y = X + Z. Here **Y** shows the firm performance and it is measured by sales growth, labor productivity, export performance, and product innovation. In the above equation **X** shows the government interaction which is measured by bribe payment, policy obstacle and bureaucratic complexities and the **Z** represent firm specific factors which are firm size, firm age, ownership and competition. Specification of the firm performance are as following:

$Y = \beta_1 P\_Obst + \beta_2 B\_Payment + \beta_3 B\_comp + \beta_4 S\_Own + \beta_5 Age + \beta_7 Compt + \beta_8 Size + \beta_9 innovatiion + \epsilon$

Where β is the coefficient vector and ϵ represent an error term, P_Obst is the policy obstacles to the current operations of the firm measured by developing additive index of policy obstacles faced by the firms comprising of questions asked from the respondents whether which factors among tax rates, tax administration, business licensing and permits, political instability, corruption, courts, transports and trade regulations are obstacles to the performance of the firm, B_payment is bribe Payment measured by Informal payments and bribes paid to government officials, B_Comp is the bureaucratic complexity faced by the senior management of the firm while interacting with government officials。

S_Own represents state ownership measured by the degree of ownership by the state in the enterprise, Age represents when the establishment started its operations, Compt represents competition faced by the firms in the market, Size represents in terms of employment, product innovations represents the degree of whether the firms introduced or improved any new products. In the above equation bribes, policy obstacle, bureaucratic

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complexity are bribe payment dummy, policy obstacle is the firm average score and age and foreign ownership is also dummy.

In the second part to test the determinant of corruption we also include three set of variables and the equation is given as: Corruption = Y + W + Z

In this equation **Y** variable is related to governance, government policy, and bureaucracy which include policy obstacle and bureaucratic complexity. The second variable **W** cover firm specific factors which include, audit, sales growth and government selling. And the third variable **Z** represent general specific characteristics of the firm which include the firm size, age, foreign ownership, labor intensity and competition. The empirical model of corruption (bribes) which test the hypothesis as follow:

$$\text{Corruption} = \beta_1 P\_Obst + \beta_2 B\_Comp + \beta_3 Ex\_Audit + \beta_4 S\_Growth + \beta_5 S\_Govt + \beta_6 Size + \beta_7 Age + \beta_8 S\_Own + \beta_9 Lab\_int + \beta_{10} Comp + e$$

Where β is coefficient and e is the error term, P_Obst is the policy obstacles to the current operations of the firm , B_Comp is the bureaucratic complexity faced by the senior management of the firm while interacting with government officials, Ex_Audit is the external audit, S_Growth is the sales growth which the total annual sales of the establishment minus last 3 years sales , S_Govt is selling to the government, Size represents in terms of employment, Age represents when the establishment started its operations S_Own represents state ownership, Lab_int represents labor intensity in terms of wages like salaries and other contributions, Comp represents competition among firms in market

3.1   Data

The data used in this paper are from the World Bank enterprise surveys carried out in 2013-2015 worldwide. A total of 1247 Pakistani firms were surveyed, across 9 sectors, in major cities of Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan and Islamabad. Business owners and top management were interviewed from May 2013 to May 2015. The enterprise surveys are conducted by the World Bank and its partners across all geographic regions and cover small (in Pakistan 5-19 number of employees), medium (20-99 number of employees) and large (100+ number of employees) enterprises. The enterprise surveys focus on many factors that shape the business environment including corruption, crimes, productivity, competition, age, ownership, international exposure, size in terms of employees, innovation, obstacles and others.

4.   RESULTS AND DISCUSSION

Table 1 provides the descriptive statistics for the variables used in the model. The firm specific variables include Age, Size, Labor_intent, innovation, Stat_Own and Foreign_Own. The variable Compet is a market structure variable which is obtained from a question asked about the number of competitors the firm face in the market. The mean value of P_Obst is 10.66 results and the standard deviation of P_Obst is 12.36 meaning the variable varies across firms. The P_Obst are the obstacles faced by the current operations of the firms.

The data from this variable has been obtained by questions asked from the respondents whether which factors among tax rates, tax administration, business licensing and permits, political instability, corruption, courts, transports and trade regulations, are to what degrees an obstacle faced by the current operations of the firm. The size variable is obtained by taking natural logarithm of total number of firm's employees the value of which is 3.400 which is deviated by 1.515. Observing the variables Audit, Foreign_Own and innovation, though the study observes a positive correlation with performance in Table 4.2, statistical significance present for them is not observed. A reason for this may be because of its lower mean value. And firms in Pakistan are mostly small and there are less chances of foreign ownership in these firms. The mean value of Audit is 0.385, while that of Foreign_Own is 1.006 and of innovation is 0.182.

Table 1- Descriptive statistics

VARIABLES	N	mean	Sd	min	max
Perform	1,245	-2.283e+06	4.604e+07	-1.394e+09	199
P_Obst	1,247	10.66	12.36	-72	32
Age	1,247	19.46	16.07	-9	77
Size	1,238	3.400	1.515	0	9.616
Audit	1,129	0.385	0.487	0	1
Corruption	1,230	-3.493	6.418	-9	50
B_Complex	1,247	2.881	11.60	-9	100
Stat_Own	1,246	0.0337	3.382	-9	55
Foreign_Own	1,246	1.006	8.164	-9	100
Compet	903	4.004	35.13	-9	500
Exports	1,247	7.315	24.56	-9	100
Labor_inten	1,225	9.305e+07	2.180e+09	-9	7.500e+10
Innovation	1,216	0.182	0.386	0	1

Source: Authors calculations (2020)

Table 2 provides correlation matrix, considering the unconditional relationships among variables. Initial evidence shows that there is positive relationship among corruption and firm performance which supports hypothesis `$H_{2b}$`to measure the corruption all variables at firm level are positively correlated. While size exports and innovation are more negatively statistically significant on firm performance. Statistical Correlation coefficient for size is 0.109. Larger the firm, more it is vulnerable to corruption supported by(Sahakyan and Stiegert 2012)

The study also observed negative relationship between performance and exports. Exports are highly negatively significant of the firm performance because whenever the firm exports more they will pay more amount in the form of tax, duties, tariff and will follow different rule regulation which reduce the firm performance. Innovation have statistically correlation with the firm performance and shows negative association. Innovation shows negative correlation on performance because the innovative firm spends more amount to the development of new products which negatively affect firm performance.

Table 2 - Correlation matrix

	(1) Perform	P_Obst	Age	Size	Audit	Corruption	B_Complex	Stat_Own	Foreign_Own	Compet	Exports	Labor_inten	Innovation
Perform	1												
P_Obst	0.00950	1											
Age	0.0195	0.155***	1										
Size	-0.109**	0.140***	0.204***	1									
Audit	0.0318	0.104**	0.142***	0.396**	1								
Corruption	0.0426**	0.114**	0.174***	0.0277	0.0929**	1							
B_Complex	0.0135	0.177***	0.0749*	0.107**	0.144***	0.106**	1						
Stat_Own	0.110**	-0.0266	0.0978**	0.0246	0.0911*	0.0504	0.0213	1					
Forei_Own	0.0509	0.0166	0.101**	0.0666	0.124***	0.0311	0.0195	0.314***	1				
Compet	0.0117	0.0447	0.119***	-0.0235	0.0163	0.0657	0.0833*	0.00831	0.00343	1			
Exports	-0.252***	0.0789*	0.0604	0.278**	0.0672	0.0267	0.0625	-0.0159	-0.00219	-0.0292	1		
Labor_inten	0.00236	0.0112	0.0868*	0.0542	0.0631	0.0294	0.107**	0.000611	0.0210	0.000389	-0.00255	1	
Innovation	-0.0843*	0.112**	0.0947**	0.186**	0.138***	0.0923*	0.0538	0.0749*	0.111**	0.0413	0.156***	0.00630	1

$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

P_Obst is policy obstacles, ,B_payment is bribe Payment, B_Comp is bureaucratic complexity, , S_Own is state ownership, Compt is competition, stat own is state ownership, forei own is foreign ownership, compet is competition, lobor inten is labor intensity

Table 3: Impact of Corruption on Performance

VARIABLES	(1) OLS	(2) OLS
Corruption	-.0842814**	-.314,709*
	(91405)	(119351.6)
Age	-210,367**	-215,440**
	(91,406)	(92,162)
Size	-2.788e+06***	-2.300e+06**
	(960,528)	(1.007e+06)
B_Complex	221,138*	207,065*
	(119,352)	(119,807)
Stat_Own	1.231e+06***	1.183e+06***
	(422,567)	(423,447)
Foreign_Own	165,166	139,370
	(174,124)	(175,356)
Exports	-211,950***	-223,019***
	(59,217)	(61,793)
Innovation	4.676e+06	4.308e+06
	(3.695e+06)	(3.743e+06)
Constant	1.143e+07***	1.026e+07**
	(3.670e+06)	(4.859e+06)
Observations	1,153	1,153
R-squared	0.042	0.052
Industry FE	NO	YES

Standard errors in parentheses   *** p<0.01, ** p<0.05, * p<0.1

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In this table, the study tries to find the effect of different variables on firm performance. Here it can be seen that corruption has a negative association with performance. Corruption shows statistically significant results on performance. The negative correlations support hypothesis 'H$_{2A}$.' This result is also backed up by the findings of (Mauro 1995, Brunetti and Weder 1998) , and (Mo 2001). Corruption deteriorates the performance, it proves harmful for investments, it decreases sales growth, decreases market price, eventually decreasing profitability of the firm. It means Pakistani Enterprises uses most of its resources on corrupt practices.

Corruption is our variable of interest and the negative association supports our hypothesis 'H$_{2A}$'. Younger firms' performance is more likely to deteriorate. A possible reason for this may be that young firms wants to be stable in the market, wants to face competition, and thus has to pay more bribes to sustain in the market and thus decreasing its performance. This association supports our hypothesis 'H$_{1E}$'. This association may be because of the older firm's ability and experience to tackle rent-seeking and bribe requests and techniques to induce corruption. Size in this table depicts to have a negatively significant association with performance. This result supports our hypothesis 'H$_{1B}$'. Bureaucratic complexity shows a highly significant positive correlation with performance which supports hypothesis H$_{2B}$. Government officials may help in circumventing certain processes in the favor of firms. State ownership shows a significant positive association with performance. The study failed to analyze any Association between foreign ownership and innovation. The table depicts that direct exports by the enterprises in Pakistan is negatively associated with performance.

Who Bribes?

Table 4 depicts that in Pakistan, the firms which struggle in terms of sales growth are more likely to pay bribes to government officials, however this result is not significant statistically. the study fails to analyze a clear association between sales growth and bribe payment.

Similarly, the table depicts that young Pakistani firms are more likely to pay bribes. In Size variable, Large firms are more likely to pay bribes then small firms.

Firms in growing competitions are more likely to pay bribes. Firms that face more competitors want to complete its procedures and processes fast and efficiently. So, they have to pay bribe to government officials so to be able to compete in the market. Intense labor is more likely to pay bribes, but the results shows that intensity is statistically insignificant. Innovative firms are less likely to pay bribes, but it also shows a statistically insignificant result Firms whose financial statements are audited by external auditors are more likely to pay bribes. To circumvent irregularities in statements they pay bribes to officials. Increased state ownership in firms is more likely to reduce corruption. State ownership in firms increase performance of the firms, increased performance decreases corruption in firms. Firms that face obstacles to their current operations are more likely to pay bribes to government officials.

Table 4 - Who bribes

VARIABLES	(1) Corruption	(2) Corruption	(3) Corruption	(4) Corruption	(5) Corruption	(6) Corruption
Perform	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001	-0.0001
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Age	-0.0086***	-0.0064**	-0.0085***	-0.0066**	-0.0078***	-0.0058*
	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]	[0.003]
Size	0.0730**	0.0829**	0.0561	0.0596	0.0637*	0.0688*
	[0.033]	[0.035]	[0.034]	[0.037]	[0.035]	[0.038]
Compet	0.0052**	0.0061**	0.0049**	0.0058**	0.0047**	0.0058**
	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]	[0.002]
Labor_inten	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Innovation	-0.2514*	-0.2488*	-0.2460*	-0.2490*	-0.2759**	-0.2903**
	[0.128]	[0.132]	[0.129]	[0.133]	[0.134]	[0.139]
Audit			0.1738*	0.2454**	0.1277	0.1958*
			[0.103]	[0.106]	[0.105]	[0.109]
Stat_Own			-0.0385**	-0.0341*	-0.0394**	-0.0343*

		[0.019]	[0.019]	[0.019]	[0.020]	
P_Obst				0.0021	0.0017	
				[0.006]	[0.007]	
B_Complex				0.0221***	0.0216***	
				[0.006]	[0.006]	
Constant	0.3235***	0.0313	0.3232***	0.0154	0.1989	-0.0932
	[0.118]	[0.149]	[0.118]	[0.149]	[0.141]	[0.164]
Observations	874	872	874	872	829	827
Industry FE	No	Yes	No	Yes	No	Yes
Pseudo-R:	0.029	0.089	0.035	0.096	0.055	0.117
Log-Likelihood:	-547.303	-512.742	-543.513	-508.363	-509.691	-475.397
Chi-squared	32.226	99.650	39.805	108.408	58.772	125.606
Prob Wald:	0.000	0.000	0.000	0.000	0.000	0.000

Standard errors in brackets   *** p<0.01, ** p<0.05, * p<0.1   y = Pr (Corruption) (predict)   = .79564653

Table 5 - Marginal effects after probit: (dy/dx)

VARIABLES	(1) Corruption	Mean
P_Obst	0.0021	13.3981
	[0.006]	
B_Complex	0.0221***	3.2497
	[0.006]	
Audit	0.1277	.338963
	[0.105]	
Stat_Own	-0.0394**	.027744
	[0.019]	
Perform	-0.0000	-748767
	[0.000]	
Age	-0.0078***	19.3607
	[0.003]	
Size	0.0637*	3.35378
	[0.035]	
Compet	0.0047**	4.23402
	[0.002]	
Labor_inten	0.0000	130000000
	[0.000]	
Innovation	-0.2759**	.147165
	[0.134]	
Constant	0.1989	
	[0.141]	
Observations	829	
Pseudo-R:	0.055	
Log-Likelihood:	-509.691	
Chi-squared	58.772	
Prob Wald:	0.000	

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 5 depicts that 0.2 % marginal change in Policy Obstacles from average of 13.3981 is associated with 1% increase in bribe payment to government officials. The 2% marginal change in Bureaucratic Complexities from average of 3.2497 is associated with 1% increase in bribe payment. The association between External Audit and Corruption could not be found statistically. The marginal effect from this table depicts that firms with State Ownership have a 3.9% lower probability of paying bribes to government officials then firms with no state ownership. While the Association between Performance and Corruption could not be found

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statistically. Older Firms have 0.78% lower probability of paying bribes to government officials than younger firms. The 6.3% marginal change in Size from the average of 3.35378 is associated with 1% increase in bribe payment to government officials. While 0.47% marginal change in Competition from the average of 4.23402 is associated with 1% increase in bribe payment to government officials. While the association between Labor Intensity and Corruption could not be found statistically. The marginal effects from this table depict that Innovative Firms have 27% lower probability of paying bribes to government official then non-innovative firms.

CONCLUSION

Corruption is unfortunately an endemic in Pakistan, no public office nor any structure is immune from this phenomenon, from low level to executives and beyond, it has reached to every organization. Global survey (like the global barometer survey and World Economic Forum survey), perception indexes (like the transparency international perceived corruption index) and standard literature also indicates the presence of corruption in Pakistan and all these data indicate serious consequences for the developing aspects of the country. Observing these data, the study is committed to contribute to the standard literature.

Two main objectives of the study are, first the effect of corruption on the performance of firms and second, to determine what causes corruption in firms. For the empirical analyses, we used the World Bank's enterprise survey data for Pakistani firms. The study tried to associate the effect of corruption on the firm performance after controlling for firm specific factors. Two sets of variables are used for assessing the effects, one set is the variables that cover firm specific characteristics and the other is variables that cover interaction with government agencies. The evidence shows that there is a negative relation between corruption and performance of firms.

The study corroborates the findings of(Mauro 1995) and the findings of Mauro was supported by (Mo 2001) . The initial evidence shows that a younger firm's performance is more likely to deteriorate. The size of the firm shows a negative impact on performance of the firm, the study interestingly finds that the bureaucratic complexities faced by the firms increases the performance of the firms. The results show significant evidence that the state ownership in firms increases the performance of firms. The study finds that firm which struggles in terms of sales growth are more likely to pay bribe. Similarly, the study reveals that young firms, large sized firms and firms in a competitive environment are more likely to pay bribe. This study finds supports for Sanding the wheels hypothesis, which is, firms involved in bribery are outperformed by their counterparts.

The study tried to achieve as many accurate results as possible, but some limitations might have prevented the study from achieving most accurate desired results and the study would encourage for others to explore areas this study could not. In this study is one time data is used and is based on a survey data that is firm level data, a broad sample of data is recommended for future studies. The study could not find any significant association whatsoever between innovation, foreign ownership and performance and recommends future studies to fill this gap.

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