Journal of Economics and Sustainable Development
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.3, No.9, 2012

The Study on Corruption in the Public Services: Evidence from Urban Slum Areas of Pakistan.

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Abstract
Corruption is a multidimensional global fact having diverse pros and cons, as it easily camouflages in almost all types of political and economic settings. Development researchers consider the complexity of the phenomenon of corruption a single most threat to the humanity causing meek poverty and deprivation in developing economies. In Pakistan, corruption particularly petty in nature has gone unchecked for a long period of time and it has devastating impact not only on the economic growth but also on the development of the whole society. Therefore in this study an attempt has been made to identify the determinants of corruption in the public services delivery mechanism in the slum areas of Karachi. As corruption and governance go hand in hand, therefore their implications on poverty are enormous. This study empirically investigates the attributes of the respondents and their relation with the bribe paying activities. In this way it provides important guidelines to the policy makers for formulating the anticorruption policies targeting the poor driven class of the society in Pakistan.
Keywords: Corruption, Public Services, Urban Slums and Pakistan.

1.1 Introduction

To speed up the process of economic development, human development is the necessary condition. To meet this condition, government is responsible for the provision of basic utilities like water, sanitation, energy, transport, health and education particularly to the underprivileged class. According to the World Bank report 2004, government's spends a one third of their budget to the social sector (health & education), which is mostly enjoyed by the non-poor[1]. "By financing, providing, regulating the services that contribute to health and education outcomes, governments around the world demonstrate their responsibilities for the health and education of the people. Why? First, these services are replete with market failures—with externalities, as when an infected child spreads a disease to play mates or a farmer benefit from a neighbor's ability to read. So the private sector, left to its devices, will not achieve the level of health and education that society desires. Second, basic health and basic education are considered fundamental human rights. The Universal Declaration of Human Rights asserts an individual's right to a standard of living adequate for the health and well being of himself and his family, including medical care and a right to education that is free, at least in the elementary and fundamental stages. No matter how daunting the problem of delivery may be, the public sector cannot walk away from health and education. The challenge is to see how the government in collaboration with the private sector, communities, and outside partners—can meet this fundamental responsibility."[2]

The phenomenon of globalization and economic integration has been flourishing on the structural adjustment programs by the International donor agencies affecting all countries of the world whether rich or poor. Pakistan had become the 10th largest recipient of World Bank / IMF loans in the year 1980 (Gardezi, Hassan N. 2004). The international donor agencies have made it obligatory for all the loan recipient countries to ensure the implementation of accountability and transparency as part of every policy and planning. This has resulted in the enhancement of curiosity of the development researchers in subject of on issues of public sector performance in service provision particularly in social sector programs across South Asia. The increase in demand by the poor economies for budgetary support from the donors indicates that the public delivery systems are inefficient. Due to this, large number of studies has been initiated to search for the reasons of why and how to make these systems more efficient and corruption free. Several reports have been devoted to this subject.

This research deals with the incidence of corruption in the service delivery mechanism in the slum areas in Pakistan. For this purpose a questionnaire-based survey has been conducted in the slum areas of Karachi. Therefore target population consists of all the people who are living in the Katchi Abadies of Karachi. According to the recent report of Sind Katchi Abadies Authority (SKAA) there are nearly five hundred and forty four

[1] In Nepal 46per cent of education accrues to the richest fifth quintile, only 11per cent to the poorest. In India the richest fifth receives three times the curative health care subsidy of the poorest fifth. In Morocco only 11per cent of the poorest fifth of the population has access to safe water while everybody in the richest fifth does. (World Bank report 2004)
[2] World Bank report 2004 page: 3

Katchi Abadies, which are spread in the five districts of Karachi. The total population residing in these areas is estimated to 2.158 million. To collect the needed information on the prevalence of corruption, survey based on questionnaire was conducted in all the selected Katchi Abadies of Karachi. The sample consists of twenty-five Katchi Abadies; nearly five hundred respondents were contacted in these areas. Educated respondents of the selected sample were given the questionnaire to fill the required information. In many cases where respondents were illiterate the information was gathered by interview from such respondents.

This survey revealed that in the slum areas 96.9per cent respondents have heard the word corruption in the slum areas of Karachi. The ninety one percent respondents have given the rank of one in corruption to the Police department. Around fifteen percent respondents feel that Health & Education are second in terms of corruption. The Department of Land Administration, Electricity and Union Council offices have been given the rank of three by ten percent, twenty one percent and eight percent respectively. However twenty eight percent respondents think that Water Board is fifth in terms of corruption. The Sui Sothern Gas has been given the rank five by approximately twenty two percent respondents. Please refer Table No. 1.1

Table 1.1

Rank of Public Departments in Corruption

Rank	Departments	Percentage
1	Police	90.90%
2	Health	15.10%
2	Education	14.00%
3	Land Administration	10.30%
3	Electricity	21.40%
5	Water Board	27.60%
5	Gas	22.70%
3	Union Council	8.20%

Source: Author's own calculations based on the survey of Katchi Abadies of Karachi

63.7per cent of the total respondents think that high-ranking officials of public departments are the most corrupt. However 23.1per cent respondents feel that all office bearers are corrupt. 51.1per cent respondents think that during the General Pervaiz Musharaf Period corruption was at its peak, followed be Zia ul Haq period (16.7per cent) respondents. Only 12~13per cent respondents are of the view that corruption was high during the Benazir and Nawaz Sharif period, this is may be because of the fact that both Benazir and Nawaz Sharif were the elected persons and have many supporter in these slum areas of Karachi. According to the 34.8per cent of the respondents the main reason for the increase in corruption during the General Pervaiz Musharaf period is increase in the rate of bribe. 19.8per cent of people feel that discretionary power of officials has increase, which in turned increased the corruption. While 16.5per cent of total respondents feel that political interference is the main cause of corruption.

The objective of this research is to estimate the impact of various factors on the petty corruption in the service delivery mechanism in the slum areas in Pakistan. Since corruption and governance go hand in hand, therefore their implications on poverty are enormous. Therefore this study empirically investigates the attributes of the respondents and their relation with the bribe paying activities. The present study will add to the existing literature by filling gap in the existing literature. In this way it provides important guidelines to the policy makers for formulating the anticorruption policies targeting the poor driven class of the society in Pakistan. The remainder of this paper is organized as follows: Section 1.2 contains the data description and methodology. Empirical results are presented in section 1.3 while concluding remarks are given in the final section.

1.2 Data and Methodology

The literature available suggests a framework for evaluating the relationship between corruption and its determinants as:

$$Y_n = \alpha_n \sum_1^n X_n + \xi_n \quad (1.1)$$

or

$$Y_n = \alpha_1 X_1 + \alpha_2 X_2 + \ldots + \alpha_n X_n + \xi_n \quad (1.2)$$

Where Y_n is a measure of corruption and X_n are its determinants. Here corruption is equal to the amount of bribe (irregular payments) paid by the respondent in order to obtain the publicly provided services[3]. The greater the

[3] These services include the services provided by the Karachi Electric Supply, Sui Southern Gas Company, Union Council office, public sectors educational institutions and hospitals, and land administration.

amount paid, the greater is the corruption and vice versa. X_n s are the determinents of corruption, To apply the above mention model let's assume that consumers pay bribe to the public officer whose job is to provide their services to society. But the amount of bribe paid is different in different district[4] in Karachi. As the independent variable here are the dummy variables therefore let the intercept be equal to zero. (This equation is used to estimate model1 for which results are presented in table 4.3). The following equation represents the amount paid as bribe to officials in different district.

$$\ln(\text{bribe}) = \lambda_0 Dkcent + \lambda_1 Dkeast + \lambda_2 Dkmalir + \lambda_3 Dksouth + \lambda_4 Dkwest + \mu_i \quad (1.3)$$

The coefficients of district show the payments of bribe by the residents in Dkcent (District central), Dkeast (East district), Dkmalir (Malir district), Dksouth (South district) and Dkwest (West district). The level of education is considered as one of the major causes of corruption in the literature[5]. This issue addresses educational qualifications of the respondents who claim to have paid bribe to the public officers. In view of the education level in Pakistan, three levels of education have been considered in this study, which is matriculate, intermediate and graduate. To incorporate these variables the equation (1.3) becomes:

$$\ln(\text{bribe}) = \lambda_0 Dkcent + \lambda_1 Dkeast + \lambda_2 Dkmalir + \lambda_3 Dksouth + \lambda_4 Dkwest + \lambda_5 Dmatric + \lambda_6 Dinter + \lambda_7 Dgrad + \mu_i \quad (1.4)$$

The λ_5, λ_6 and λ_7 are the coefficients of the dummies showing the qualifications of the individuals paying bribes to the public officers. To identify the officials involved in the corrupt practices two dummy variables are used which represent the entire staff at the public office in to two main groups i.e. the high-grade officials and the low-grade officials. The former case includes all the officers whereas later case includes all the clerical staff and other lower staff present at the public offices. The junior staff is represented by the dummy variable Djrstf and high-grade officials are shown by the dummy variable Dsrstf. Now the equation (1.4) becomes as

$$\ln(\text{bribe}) = \lambda_0 Dkcent + \lambda_1 Dkeast + \lambda_2 Dkmalir + \lambda_3 Dksouth + \lambda_4 Dkwest + \lambda_5 Dmatric + \lambda_6 Dinter + \lambda_7 Dgrad + \lambda_8 Djrstf + \lambda_9 Dsrstf + \mu_i \quad (1.5)$$

The coefficients of λ_8 and λ_9 show that the respondents have bribed the junior level staff and or the senior staff. To incorporate the impact of wealth of the respondents in the payment of bribes, the dummy for the ownership of the house has been used. The Dselfown represents it. Dfemale has been used for the female head of the family. The dummy Dhighincome is equal to one if the respondent has relatively high income otherwise it is equal to zero and wmen is the quantitative variable measuring the total working family members. Incorporating these variables in the equation (1.5) we get:

$$\ln(\text{bribe}) = \lambda_0 Dkcent + \lambda_1 Dkeast + \lambda_2 Dkmalir + \lambda_3 Dksouth + \lambda_4 Dkwest + \lambda_5 Dmatric + \lambda_6 Dinter + \lambda_7 Dgrad + \lambda_8 Djrstf + \lambda_9 Dsrstf + \lambda_{10} Dselfown + \lambda_{11} Dfemale + \lambda_{12} Dhighincome + \lambda_{13} Wmem + \mu_i \quad (1.6)$$

Similarly to capture the idea of the main factors related to the governance behind the corrupt activities of the public officials we have introduced five dummies representing the variables lack of accountability and transparency, discretionary and power monopoly low salaries and other factors, shortages, power of influential people and lengthy and difficult procedure (DC12, DC34, DC59, DC6 & DC78). Again adding these variables in the equation (1.6) we can write:

$$\ln(\text{bribe}) = \lambda_0 Dkcent + \lambda_1 Dkeast + \lambda_2 Dkmalir + \lambda_3 Dksouth + \lambda_4 Dkwest + \lambda_5 Dmatric + \lambda_6 Dinter + \lambda_7 Dgrad + \lambda_8 Djrstf + \lambda_9 Dsrstf + \lambda_{10} Dselfown + \lambda_{11} Dfemale + \lambda_{12} Dhighincome + \lambda_{13} Wmem + \lambda_{14} DC_{12} + \lambda_{15} DC_{34} + \lambda_{16} DC_{59} + \lambda_{17} DC_6 + \lambda_{18} DC_{78} + \mu_i \quad (1.7)$$

The procedure of multiple regression analysis is used to estimate the equation (1.7) for the cross-section data covering twenty-five Katchi Abadies of Karachi from the five districts. Here semi log regressions are used to estimate above equation. This version of the equation has been used to estimate model no. 3 (Table 4.5). As all the explanatory variables are quantitative in nature, corruption being the continuous variable is been expressed in logarithmic form. This study uses a unique data set on corruption of the public officials that occur during the

[4] There are five districts in Karachi; these are Central, East, South, West and Malir.
[5] Ehrlich and Lui (1999), Tanzi and Davoodi (1997), Mauro (1998), Gupta, et.al (1998), Glaeser and Saks (2004).

provision of social services in the slum areas of Karachi. The data has two striking features: not all the respondents report that they need to pay bribes and there is significant disparity in reported graft across individuals facing problems in order to obtain same public services.

The extensive literature is available on role of education of respondents in presence of corruption. Higher levels of education increase the awareness and knowledge of the household to identify the illegal of corrupt activities of the public officials. People with better education are more likely to report corruption and they can avoid corruption. However households whose head are illiterates or have low levels of education are particularly prone to the high level of corruption. Therefore, it is expected that level of education of households have significant negative impact on the level of corruption. As education of the head (respondents) increases he/she is less likely to have to pay a bribe and more satisfied with service delivery and hence less of corruption. Higher level of expenditure is associated with higher disposable income at the household level. Increase in spending will improve the living conditions of the slum dwellers and thus help to reduce corruption. But the greater economic development of these dwellers does not guarantee to improve household information and knowledge regarding how to deal with corruption. Also greater income allows household to pay bribe in order to get a much needed public service say like health (for sick family member) or like admission in the educational institutions or electricity/gas connection. Hence there is no assurance that better income of these slum dwellers having low literacy rate will help to reduce corruption. In fact, with higher level of income rate of paying bribe can increase corrupt activities of the public officials.

However it has been proved for some cases people with lower income have to pay more in bribe as compare to high-income group.[6] In order to capture the impact of family income of the respondent on the bribe payments, the number of working members in the respondent's family is used. It has been observed during the survey of these Katchi Abadies that in most cases, the family size is very large. Due to large family size, young children in these families are seen doing low paid jobs like in workshops and barbershops as helpers and in small hotels as waiters etc. Consequently the disposable income of the family residing in these areas is equal to the total earnings of all the working family members.

As the city of Karachi is divided into five districts for management purpose, in this study sample of five slum areas of each of these districts is used. Here four dummies are used to represent these slum areas to capture possible regional differences. The main objective is to identify the prevalence and level of corruption in these areas. However, the co-efficient of these dummy's can be positive of negative. The positive sign of the regional dummy coefficient represents the existence of corruption faced by the residents of that locality. The regional dummy's are imperative as the variations in occupation, level of education, social characters, customs traditions and languages can have a significant impact on the experiencing, reporting and on the nature of service delivery of the utilities by the public officials. As these Abadies has been regularized during the term of different ruling parties, people in these Abadies are influenced from different political parties thus have different political affiliations. Hence these facts contribute a lot to determine the level of corruption in these areas.

To study the impact of wealth of consumers on bribe payment, the ownership of house along with its covered area is used as the indicator variable. It is expected that this variable have a positive coefficient. The wealth effect on the bribe payment is that persons having relatively more wealth will be relatively more willing to pay higher bribe to the public officials in order to acquire the much needed public service. Similarly to capture the idea of the main factors related to the governance behind the corrupt activities of the public officials we have introduced five dummies representing the variables lack of accountability and transparency, discretionary and power monopoly low salaries and other factors, shortages, power of influential people and lengthy and difficult procedure (DC12, DC34, DC59, DC6 & DC78). It is assumed that these variables have positive and significant coefficients. To identify the staff responsible for the act of corruption in the process of the service delivery we have used two dummies DGRSTF & DSRTF representing junior and senior staff of the public offices. The senior staff includes all the high ranking officials including directors, manager and the junior staff includes all the low ranking officials assistants, clerks etc.

1.3 Empirical Results

The empirical analysis of the data provides the substantial evidence of the presence of corruption and highlights the determinants of petty corruption in the public service delivery mechanism in the slum areas of Karachi. The results from the regression equations for the overall estimation of corruption are presented in detail in the table 1.2. The low value of co-efficient of determination may be because of the three reasons. Firstly, the regression

[6] Kaufmann, M. Garriga, & Recanatini (2008) have used the data of Peruvian citizens and public officials focused on the cost of bad governance and the relative importance of various governance determinants on access to public services. The authors find that bribery tends to act as regressive tax by panelizing low-income citizens more than the higher income citizens.

model do not control for the other factors (both quantitative and qualitative) of the corruption. Secondly, in this analysis objective is to obtain reliable estimations of the coefficients of the true population regression. According to Gujarati Damodar N. (2004) "the researcher should be more concerned about the logical or theoretical relevance of the explanatory variables to the dependent variable and their statistical significance" (Pg.222 ibid). Also in empirical analysis the method of model selection on the basis of greater value of coefficient of determination give rise to the "pretest bias". (Judge, George G. et al (1982). Thirdly, the regression models do not report the exogeneity or reverse causality of corruption[7].

Table 1.2
Model 1
The Regression Model for Corruption in the Slum Areas of Karachi
Interaction between the corruption and explanatory variables: Dependent variable shows the bribe paid by the respondents in the slum areas of Karachi to get the required public services.

Explanatory Variable	Coefficient	Std. Error	t-Statistic	Prob.
Lack Of Accountability And Transparency	4.183***	1.441	2.901	0.0039
Discretionary And Power Monopoly	7.443***	1.928	3.86	0.0001
Low Salaries And Other Factors	12.154***	1.778	6.834	0
Shortages	3.116	4.242	0.734	0.463
Power Of Influential People And Lengthy And Difficult Procedure	3.756	2.757	1.362	0.173
R-squared	0.285			
Adjusted R-squared	0.280			

Note: Coefficients are reported after division by 100, the included number of observations = 485
* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

In Model 1, corruption is measured by the extra money paid by the respondents in exchange of the public service they have received from the concerned public office. The results from this model demonstrate that, as expected, lack of accountability and transparency, discretionary and monopoly power and also the low salaries of the employees in the public offices are the significant factors contributing towards corruption. The current literature strongly supports the fact that in absence of accountability and transparency, corruption always flourishes. For example, Klitgaard, et.al (2000) concludes that "If someone has monopoly power over a good or service and has the discretion to decide whether someone gets that good or service or how much a person receives, and there is no accountability whereby others can see what that person is deciding, then we will tend to find corruption. This is true whether we are in the public or the private sector, whether we are in a poor country or a rich one, whether we are in Beira, Berlin or Beirut." Klitgaard (1998) famous formula for corruption also contains accountability as an important variable. Comparing the coefficients, it can be seen that the low salaries of the employees in the public offices is playing an important role in fostering the culture of corruption in the Katchi Abadies of Karachi. However, power of influential people, lengthy as well as difficult procedures of acquiring and the shortages of public services are insignificant. This is in line with one of our hypothesis that supply of public service is not the actual problem. Thus, the results provide evidence that issue of governance is one of the major tribulations hindering the public service delivery mechanism particularly with respect to the Katchi Abadies of Karachi. It is interesting to note that in the developing countries, the insufficient resources and hence the shortages in the supply of public services have been commonly regarded as the main problem in the service delivery mechanism. However, this investigation strongly suggests that the supply of public service is not the actual problem at least not in the slum areas of Karachi.

The Model 2 with the regional dummies added is presented in table 1.3. Here five dummies are used to represent the five districts of Karachi to capture the likely regional disparities. The main objective of introducing the regional dummies is to capture the prevalence and extent of corruption in these areas. The result shows a significant positive relationship between these regional dummies and the level of corruption. The positive sign of the entire regional dummies coefficient confirms the existence of corruption faced by the residents of these

[7] See Gupta, S. et al (2000) for the detail explanation of low coefficient of determination and application of regression in the analysis of social variables.

localities. The poor people living in the slum areas of the district of Karachi East are more vulnerable to the corrupt practices. The larger value of the coefficients show that they are paying more in bribes as compare to the household living in other districts including West, Central, South and Malir districts. Hence the phenomenon of corruption in the public service delivery seems to be more prevalent in the East district of Karachi. The regional dummies are very imperative as the variations in social attributes, economic characteristics, customs, civilization and linguistics can have a significant impact on the incidence, treatment and the nature of response of the residents in these slum areas to the corruption in the service delivery of the utilities by the public officials. In, addition to this, these Katchi Abadies have been regularized during the term of different ruling parties, people in these Abadies are influenced from different political parties thus have different political affiliations. Hence these facts contribute a lot to determine the level of corruption in these areas. All of these factors will be discussed in detail in the later models. Now, comparing the model 1 and model 2, all the variables of the model 1 are also significant in the model 2. Nevertheless, in case of the model 2 powers of influential people and lengthy difficult procedure have become significant. It should also be noted that the coefficient of this variable is relatively small suggesting its lower impact on the overall corruption. Furthermore the shortages in supply of the public services are still insignificant.

Table 1.3
Model 2
The Regression Model for Corruption in the Slum Areas of Karachi. Interaction between the corruption and explanatory variables: Dependent variable shows the bribe paid by the respondents in the slum areas of Karachi. Regional dummies are introduced as explanatory variables in this model.

Explanatory Variable	Coefficient	Std. Error	t-Statistic	Prob.
Lack of Accountability and Transparency	0.223***	0.052	4.269	0
Discretionary and Power Monopoly	0.316***	0.065	4.861	0
Low Salaries and other Factors	0.342***	0.067	5.109	0
Shortages	0.078	0.140	0.555	0.579
Power of Influential People and Lengthy and Difficult Procedure	0.208**	0.091	2.283	0.023
District Central	5.943***	0.180	32.919	0
District East	6.041***	0.150	40.215	0
District Malir	5.820***	0.152	38.349	0
District South	5.652***	0.187	30.169	0
District West	5.524***	0.174	31.699	0
R-squared	0.330			
Adjusted R-squared	0.312			

Note: The included number of observations = 350
* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

The results for model 3 are presented in table 1.4. As the variables used in the model 1 and model 2 only provides the difference, if they exists but does not identify the reasons for these differences. Differences in education wealth, slandered of living and gender may perhaps all have some impact. Therefore unless all the variables that can affect the bribe payment are taken into account one cannot pin down the differences in the causes of corruption prevailing in these slum areas of Karachi. For this purpose more variables are included in this model 3. These variables include: education, ownership of house, regions, staff and other reasons for corruption highlighted by the respondents.

Table 1.4
Model 3
The Regression Model for Corruption in the Slum Areas of Karachi. Interaction between the corruption and explanatory variables: Dependent variable shows the bribe paid by the households in the slum areas of Karachi.

Explanatory Variable	Coefficient	Std. Error	t-Statistic	Prob.
Lack of Accountability and Transparency	0.245***	0.063	3.912	0.0001
Discretionary and Power Monopoly	0.312***	0.078	3.999	0.0001
Low Salaries and other Factors	0.431***	0.077	5.604	0
Shortages	0.024	0.17	0.144	0.8853
Power of Influential People and Lengthy and Difficult Procedure	0.264***	0.106	2.488	0.0136
District Central	4.752***	0.916	5.185	0
District East	5.018***	0.87	5.766	0
District Malir	5.079***	0.882	5.755	0
District South	4.649***	0.876	5.309	0
District West	4.514***	0.901	5.009	0
Junior Staff	0.270	0.204	1.322	0.1875
Senior Staff	0.441**	0.207	2.134	0.0339
Female Head	-0.025	0.414	-0.06	0.9519
Illiterate	0.566**	0.233	2.43	0.0159
Matriculate	0.194	0.206	0.945	0.3456
Graduate	0.313	0.261	1.200	0.2312
Working Family Member	0.042	0.06	0.704	0.482
Log (Own House & Plot Size)	0.051	0.181	0.284	0.7768
R-Squared	0.426			
Adjusted R-Squared	0.383			

Note: The included number of observations = 244
* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

Results from the regression equation illustrate that, as expected coefficient of the dummy variable illiteracy is positive and significant showing illiteracy encourages corruption. Among other disadvantages of illiteracy, lack of understanding of how to report and encounter the corruption of the public officials is very important. The insignificant coefficients of the educational qualification dummies (matriculate and graduate) support our hypothesis discussed earlier that as level of education increases the awareness and knowledge of the household about how to identify the unfair and unauthorized activities in various public institutions providing basic public utilities and services like, electricity, water supply, gas and service of Police, health and education. In the presence of illegal or corrupt activities of the public officials, people with better education and awareness are more likely to report corruption and therefore can easily handle such situations to avoid corruption. However households whose head are illiterate or have low levels of education are particularly prone to the high level of corruption. The lack of education seems to be the major obstacle in curtailing corruption in these urban slums of Pakistan. Households whose head are illiterate or have only primary education are 57per cent more likely to have paid more money in bribes to the public officials. However only 31per cent of those households who have graduate level of education are likely to have paid bribes but the coefficient of graduate is statistically insignificant. Similarly if the respondents who have done matric are nineteen percent more likely to pay the bribes but their coefficient is also insignificant. This may be due to small sample size of the data. It can be concluded that as the education of the respondent increases chances of being victimized by the officials of the

public sector significantly reduces.

Table 1.5
Determinants of Petty Corruption in the Slum Areas of Karachi
Comparison of all three estimated models

Explanatory Variables	Model 1		Model 2		Model 3	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
Lack of accountability and transparency	4.183***	2.900	0.223***	4.270	0.246***	3.910
Discretionary and Monopoly power	7.443***	3.860	0.316***	4.860	0.312***	4
Low salaries and other factors	12.154***	6.830	0.342***	5.110	0.431***	5.600
Shortages	3.116	0.730	0.078	0.560	0.025	0.140
Power of influential people and lengthy difficult procedure	3.757	1.360	0.208**	2.280	0.264**	2.490
District Central			5.943***	32.920	4.752***	5.180
District East			6.041***	40.210	5.018***	5.770
District Malir			5.820***	38.350	5.079***	5.760
District South			5.652***	30.170	4.649***	5.310
District West			5.524***	31.700	4.515***	5.010
Junior Staff					0.27	1.320
Senior Staff					0.441**	2.130
Female Head					-0.025	-0.060
Illiterate					0.566**	2.430
Matriculate					0.194	0.950
Graduate					0.313	1.200
Working family members					0.042	0.700
Own house & plot size					0.051	0.280
R-squared	0.286		0.330		0.426	
Adjusted R-squared	0.280		0.312		0.383	

* Significant at the 10% level, ** Significant at the 5% level, *** Significant at the 1% level

Another fundamental factor in model 3 is the staff involved in corrupt practices in the public service delivery mechanism. The study suggests that the senior staff at the public offices is actively involved in the corruption activities. The coefficient of senior staff is found to be statistically significant and positive. The chance that a senior official is contributing to corruption in their respective offices is around forty four percent that is much higher as compared to the coefficient of the junior staff of the public office. Moreover, coefficient of the junior staff is found to be insignificant. Consequently, the study finds that involvement of the higher-ranking public officeholders in corruption is deep rooted. The data does not provide enough evidence for involvement of the low-grade officers. As expected the coefficient of working family members is found to be positive but it is insignificant. To study the impact of wealth of consumers on bribe payment, the ownership of house along with its covered area is used as the indicator variable. This variable can also capture the increase in wealth of the

respondents by incorporating the size of the house owned. The greater the covered area of the house own by the respondent reflects greater wealth. It is found that this variable also has a positive coefficient but insignificant.

Table 1.5 provides the comparison of all the three models of the determinants of petty corruption in the sum areas of Karachi. Model 3 is similar to the model 1 and model 2; all the variables of the model 2 are also significant in the model 3. However in the model three more explanatory variables are included as compared to the other models. The magnitude of coefficients for the factors related to the governance decline measurably when the other economic factors are added to this model. It is interesting to note that shortages in the supply of public services have remained insignificant. The major reason according to this model is also the low salaries of the public sector employees. Finally there are marked difference in the behavior and knowledge across the five districts in Karachi. The poor people living in the districts of Malir and East are more vulnerable to the corrupt practices. They are paying more in bribes as compare to the household living in other districts including West, South and central districts. Hence the phenomena of corruption in the public service delivery seem to be more prevalent in the Malir and East districts of Karachi.

1.4 Conclusion

This study empirically examines the determinants of petty corruption in the slum areas of Karachi by using the survey-based data collected from the Slum Areas. The results provide strong evidence for the existence of relationship between education and corruption. Households whose head are illiterates are particularly prone to the high level of corruption. Hence illiteracy is playing the role of major determinants of corruption in the slum areas of Karachi. The study also indicates that the senior staff at the public offices is actively involved in the corruption activities may be due to low salaries of these employees. It is interesting to note that shortages in the supply of public services have no contribution in corruption. However the incidence of corruption in the public service delivery seems to be more prevalent in the Malir and East districts of Karachi.

The analyses recommend that in these slum areas policies should target the education and knowledge of corruption. As the level of education increase the awareness and knowledge of the household about how to identify the unfair and unauthorized activities in various public institutions providing basic public utilities and services like, electricity, water supply, gas and service of Police, health and education also increases. In the presence of illegal or corrupt activities of the public officials, people with better education and awareness are more likely to report corruption and therefore can encounter corruption. Moreover, greater attention should be given to the basic public service delivery mechanism in the Districts of Malir and East as the corruption is more prevalent in these areas and poor people living in these slum areas are paying more bribes as compared to other Districts.

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