

Governance in Provision of Public Services and Standards of Living in Pakistan

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ABSTRACT

In this study we analyze the differences in state of governance in provision of public services in rural and urban areas and its impact on the perception about the standards of living in Pakistan. The study is based on nationally representative survey conducted in 2013 at the end of five years tenure of a democratically elected government. The results of the generalized ordered logit model and ordered logit model shows that in rural areas the ownership of productive assets matter more than monthly consumption expenditure while with usage of most of the public services, except rural health units, courts and Banzir Income Support Program (BISP), there is higher likelihood of deterioration in standards of living. Contrary to rural areas, in urban areas, higher monthly consumption expenditures increase the likelihood of rise in living standards, while, ownership of assets do not. As in case of rural areas, most of the public services have negative impact on the perception about standards of living except NADRA and courts.

KEYWORDS: Banzir Income Support Program, Standard of living, Governance; Public Services; Rural Health

INTRODUCTION

Various international sources on governance indicators have shown that Pakistan ranks low among countries in most areas of governance. Moreover they, also show that the quality of governance has been declining over the years since the mid-90s. For example, studies carried out by the World Bank on Pakistan's control of corruption gave the country a low percentile ranking of 13 against the rest of the world. Furthermore, Transparency International's annual Corruption Perception Index has placed Pakistan among 20 percent of the world's most corrupt countries.

Literature provides strong evidence that governance has statistically significant impact on economic growth, progress on millennium development goals and on human development. Given the importance of governance and Pakistan's poor rating in the international arena, there is a strong need to investigate the state and role of governance on standards of living of the society.

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The World Bank almost two decades ago defined governance as “the manner in which power is exercised in the management of a country’s economic and social resources for development”. More recently governance has been defined as the traditions, rules and institutions by which authority in a country is exercised. This includes the process by which governments are selected and replaced, the capacity of the government to formulate and implement sound policies, and the effective functioning of institutions that govern economic and social interactions among citizens and the state.

However, governance is characterized by activities backed by shared goals among various stakeholders within an economy. In this period of global change, national governments are finding it hard to contend with the process of globalization and decentralizing dynamics. Hence, there is a need for various institutions, both public and private to work towards shared goals to make governance more efficient and demand driven. The overall system of governance embraces government institutions but also incorporates non-governmental agencies.

The role of ‘good’ governance lies in the allocation and management of resources for the maximum public benefit. In the process of supply of public goods, governance needs to be guided by principles such as equal access, democratic values, transparency, participation and decentralized power sharing, rule of law and accountability.

‘Good’ governance promotes the reduction of poverty, deprivation and violence. This includes the strengthening of democratic institutions by free, fair and frequent elections; a representative legislature, media and judicial independence; transparent and accountable institutions; and a civil society which projects and defends the needs of the most vulnerable people.

LITERATURE REVIEW

The measure of a person’s well-being has been equated to his or her command over commodities. Therefore in practice, money income or wealth is widely used as measure of wellbeing as it takes care of preferences over different commodities. This approach has been criticized by various economists because of its weakness to encompass multiple dimensions of wellbeing. Various studies have found that well-being is closely associated with health, productivity and many other factors in the physical and social environment.

The traditional approach of measuring well-being in terms of monetary income or wealth has come under attack from Sen (Sen, 1977a; Sen, 1984, Sen, 1985a; Sen, 1987a) who puts as the “value of the living standard lies in the living, and not in the possessing of commodities, which has derivative and varying relevance”. What matters most, according to Sen, is the “capabilities” to function such as avoiding mortality, morbidity, hunger, so on and so forth.

There are no disagreements in literature on whether income matters. However, the literature is divided on the extent to which private income matters in raising the standard of living compared to capabilities approach. The World Development Report (World Bank, 1990) and (UNDP, 1190) offer comparison of these two approaches where the former focused on the income centered or economic growth approach in reducing poverty as fundamental objective of human development and the later was broadly consistent with the “capabilities” approach. Therefore, the leading instrument, as proposed by HDR, is provision of public services for human development and relative less emphasis is given to the economic growth.

There is plethora of literature based of different methodologies which predicts positive effects of higher incomes on health outcomes and education and same is true in the case of public services (Dollar & Kraay, 2002). For more than two decades the all of the efforts at the World Bank Group and United Nations are put together in two goals: ending extreme poverty and increasing the income of the bottom 40 percent of the population in each country. In achieving these goals access to essential public services, such as health, education, and safe drinking water, in equitable manner has been considered critical and stressed all along. In 1990 the Human Development Report stated,

“Human development is a process of enlarging people’s choices. The most critical of these wide-ranging choices are to live a long and healthy life, to be educated and to have access to resources needed for a decent standard of living”.

In early 1990s, in the light of changing approach towards human development, government actions around the world were focused on expenditure allocations towards public health and education services as well as on provision of other basic public services. Later the priorities have been on quality of services, efficiency and equity in delivery – thus governance reforms were given central importance. In developing countries, the key issue is effective community-level governance for development because people in remote and less developed areas are unable to access the services provided by higher level of government so they have to rely on the provision of public services by local government (World Bank, 2000). Despite the fact that one of major issue that developing countries face in pursuing the goals and targets set by World Bank is lack of good governance in the provision of public service, literature on governance of provision of public services provision and its impact on standards of living is scant mainly because of lack of data (Dethier, 1999).

Following the capabilities and commodities approach we intend to test the impact of assets, including the productive assets, and public services on the standards of living. Standard of living depends on the surroundings and environment, the productive assets as well as the type and quality of services in rural and urban settings. Consider, for example, in rural areas the ownership of productive assets like land and tractors can immensely increase the “functioning” in the society and therefore individuals may experience high standards of living over the years.

The provision of public services like health and education (the capabilities aspect) also improve the standard of living but in case of developing countries, however, these may unclear impact because of the issue of governance. The deteriorating governance in provision of public services may have negative impact on the perception about the standards of living overtime. Therefore one of the pertinent questions is; which public services are enhancing the standards of living and which are deteriorating.

Helliwell & Huang (2008) find that governance and life satisfaction are strongly associated. Based World Values Survey, they concluded that governments’ ability to efficiently deliver public services is more important for low income countries. While in case of countries in higher income group, where there is higher level of trust and efficiency, democratic institutions become relatively more important. Similarly, Inglehart & Klingemann (2000) also find strong link between wellbeing and governance, however, they pointed out that well-being has decreased in some post-communist societies despite increase in democracy.

Dorn et al. (2007) argue that citizen preferences get more priority and outcome are more aligned with needs of individuals. Therefore, participation in the democratic process in itself increases well-being. It is evident from literature on cross country analysis that governance matters for well being. Even, with in country the state of governance in government policies, departments and service delivery may produce undesirable outcomes. There are very few studies that analyzed the impact of governance on well-being on regional levels within a country. Alvarez-Diaz et al. (2010) is one of the few papers in this regard. They conclude that life satisfaction to sensitive to policies and governance differences among states of USA. Which means not only that governance matters for well-bring in general but it may matter in different ways within a country. Orviska et al. (2014) in a cross country analysis concluded that governance often differs within countries as well as between them. However, within country differences in state of governance is not evident in the high income countries. While, in case of within countries difference the impact is less significant for women and rich people.

Our study in case of Pakistan also gains importance, firstly, because the timing of the survey is considered appropriate as it was at the end of the tenure of five years of a democratically elected government. Secondly, it is a nationally representative survey which provides insights about the state of governance in provision of public services in rural and urban areas.

The objectives of this study are test whether productive assets increase the individual’s perception about their standards of living. In general, the provision of public services enhance the standard of living of individuals as the health services, education and justice increase the productivity and functioning of individual in the society and provide opportunities to get out of the poverty.

However, in this study we will analyze whether the provision of public services has positive or negative impact on the perception about standards of living –highlighting if governance is deteriorating in provision of public services. The standards

of living will also be analyzed separately for rural and urban areas in order to allow for different public services and productive assets that are specific to the rural and urban areas.

Along with the impact of public services, we will also test whether consumption expenditures, law and order condition and ownership of assets by individuals in rural and urban areas cause increase in their perception about standards of living of individuals.

State of Governance: The Citizen Score Card

The Citizen Score Card is a participatory survey of random selected households on the basis of a sample which is nationally representative. The survey provides an in-depth feedback, both quantitative and qualitative, on the access, efficiency and quality of public services. It acts also as an instrument to achieve a degree of public accountability.

Citizen Score Cards have been undertaken in a number of countries including the Philippines, Gambia, Malawi and certain states of India like Karnataka. The Pakistan Social and Living Standards Measurement Survey (PSLMS) of the Pakistan Bureau of Statistics (PBS), findings of which are based on a relatively large survey, is a Citizen Score Card, but focuses primarily only on the coverage and access to services (see table 1).

Table 1: Distribution of Sample by Province and City

Province/City	Urban	Rural	Overall
Punjab	53.8	59.8	56.3
Lahore	20.1	19.6	19.9
Islamabad / Rawalpindi	17.7	12.3	15.5
Faisalabad	10.0	14.7	11.9
Gujranwala	3.3	7.4	5.0
Sialkot	2.7	5.9	4.0
Sindh	36.8	19.6	29.8
Karachi	33.4	12.3	24.9
Hyderabad	3.3	7.4	5.0
KPK	6.0	13.2	8.9
Peshawar	3.3	7.4	5.0
Mardan	2.7	5.9	4.0
Balochistan	3.3	7.4	5.0
Quetta	3.3	7.4	5.0
Total	100.0	100.0	100.0

The Survey and the Questionnaire

The Citizen Score Card has been implemented on a sample of 500 households in February 2013. The distribution of the sample among the provinces is based on the respective population shares. Both urban and rural households have been covered. The sample was administered in ten districts including Islamabad/Rawalpindi, Karachi, Hyderabad, Lahore, Faisalabad, Sialkot, Peshawar, Mardan and Quetta. 60 percent of the sample is from urban areas and 40 percent from rural areas. The relative small size of the sample is due to the limited budgetary resources for this research.

The survey was administrated on a properly structured questionnaire with the following modules: location, description of respondents, economic status of the household, location of public services (distance from residence), access to line departments, residential services, social safety nets, quality of social services, quality of economic services, level of satisfaction with economic conditions and incidence of crime.

The major findings from the Survey are highlighted below. These are presented separately for urban and rural households respectively and wherever there is substantial variation by province.

Access to Services

Rural

The distances on average of rural households from different facilities/ services are given in Table 2. It is not surprising that given the low population density, distances are the largest in Balochistan. In economic services, the low rural penetration of bank branches is observed with average distances from households of 6 to 8 km. It is also somewhat surprising that the distance from a mandi is as high as 16 km in Punjab. This necessitates an extensive network of farm-to-market roads. Overall, it appears that the province of K-PK is relatively better covered by administrative and economic services in the rural areas.

Within social services, it is reassuring to note that throughout the country primary schools are located in close proximity to rural households. Similarly, Basic Health Units (BHU) are accessible within a distance of 2 to 5 km. Beyond this the distances to other social services are relatively large. Here again, K-PK appears to have achieved a better physical coverage of services.

Table 2: Average Distances from Facility/Service of Rural Households

	Punjab	Sindh	K-PK	Balochistan	Total
Post Office	3.9	5.5	3.6	8.4	4.5
Police Thana	7.8	5.9	4.3	7.5	7.0
Bank Branch	6.7	7.3	6.0	10.6	7.1
Bus Stop	3.6	3.2	1.8	4.7	3.3
Railway Station	27.3	23.4	25.1	16.3	25.5
Mandi	15.9	6.2	4.6	19.1	16.3
Tractor Repair Shop	9.7	6.7	6.6	7.9	8.6
Outlet for Fertilizer & Seed	9.9	6.7	6.7	7.5	8.6
Primary School	1.0	2.2	1.0	2.2	1.5
Middle School	2.3	5.0	1.4	4.9	3.1
High School	3.2	4.2	3.1	7.1	4.1
College	9.9	9.9	4.9	13.7	9.7
BHU	2.9	3.4	1.8	4.7	3.0
RHC	7.9	5.7	5.3	6.9	7.1
Public Hospital	14.4	8.4	6.7	15.0	12.3
Veterinary Center	4.5	6.2	6.2	7.1	5.3
Source: Citizen Report Card					

Urban

Turning to urban households, the average distances are presented in Table 3. As expected, these households are generally better served than their rural counterparts.

There is not much difference in access to services in the 10 major cities of Pakistan, although distances are somewhat longer in Sindh. This may be a reflection of the larger metropolitan area of the city of Karachi.

Table 3: Average Distances from Facility/Service of Urban Households

	Punjab	Sindh	K-PK	Balochistan	Total
Post Offices	1.7	2.3	2.1	1.2	2.0
Police Thana	2.4	2.5	1.7	0.9	2.3
Bank Branch	1.5	3.4	2.1	1.0	2.2
Bus Stop	1.1	0.7	1.8	0.8	1.0
Railway Station	8.6	16.2	8.1	1.7	11.1
Primary School	0.9	1.3	1.1	1.2	1.0
Middle School	1.3	1.5	1.2	1.0	1.4
High School	1.4	2.2	1.6	1.8	1.8
College	2.4	2.9	1.8	3.0	2.6
Public Hospital	3.3	3.8	3.0	2.8	3.5
Source: Citizen Report Card					

Levels of Satisfaction with Services

Rural

The extent of use of different services and levels of satisfaction thereof of rural households are given in Table 4. It is clear that the two services which are rated lowest in terms of level of satisfaction are police and the irrigation department. The highest level of satisfaction is with the basic health and family planning services provided in the villages by the lady health workers.

Table 4: Extent of Use and Levels of Satisfaction with Services of Rural Households

	% of Households Accessing the Services*	Rating of the Service (%)			Total
		Excellent	Good	Bad	
Police Thana	21	1	39	60	100
Family Planning (LHWs)	22	10	80	10	100
Land Revenue Department	9	3	87	10	100
Session Courts	7	-	80	20	100
Irrigation Department	16	1	47	52	100
NADRA Office**	43	2	55	43	100
*during the last year					
**for NIC or Passport					
Source: Citizen Report Card					

One of the surprising revelations of the survey is the low use and somewhat negative perceptions of a significant percentage of households of public schools in rural areas, as shown in Table 5. The overall percentage of rural households who send their child to a public school is 63 percent. This implies that the percentage of enrolment in private schools has gone up to as much as 37 percent even in rural areas, with the highest percentages being reported from Punjab (43 percent) and K-PK (41 percent). The largest incidence of complaints is with the lack of provision of facilities like tap water and latrines for the children in schools.

Table 5: Level of Satisfaction of Rural Households with Public Schools and Reasons for Dissatisfaction

	% of children in Public Schools	Rating of the Service (%)			Total
		Excellent	Good	Bad	
Total Sample	63	19	37	44	100
Reasons for dissatisfaction*:	(%percent of households reporting*)				
Teacher Absenteeism		69			
Poor Quality of Teaching		83			
Poor Facilities (water, latrine,etc)		91			
**Among households with a child in a public school. Multiple responses have been given by individual households.					
Source: Citizen Report Card					

Urban

Administrative and legal services

The levels of satisfaction with different services of urban households are given in Table 6. The most highly rated facilities are the emergence service (like the 1122 service in Lahore), followed by NADRA. As in the rural areas, police services are rated poorly.

Table 6: Extent of Use and Levels of Satisfaction with Services of Urban Households

	% of Households Accessing the Services*	Rating of the Service (%)		Total
		Good	Bad	
Police Thana	18	25	75	100
Excise & Taxation Department	26	49	51	100
Emergency Services	12	73	27	100
Session Courts	5	56	44	100
NADRA Office	28	57	43	100
*during the last year				
Source: Citizen Report Card				

Public schools

The survey confirms the high share of children going to private schools in urban areas. For the overall sample it is 68 percent. Reasons for the dissatisfaction of households sending their child to a public school are given in Table 7. It is interesting that despite lower rates of enrolment, the levels of satisfaction with public schools are somewhat higher in the urban areas. Lack of proper facilities and poor quality of teaching are the main reasons for dissatisfaction.

Table 7: Level of Satisfaction of Urban Households with Public Schools and Reasons for Dissatisfaction

	% of children in Public Schools	Rating of the Quality of Service (%)			Total
		Excellent	Good	Bad	
Total Sample	32	17	45	38	100
Reasons for dissatisfaction*:	(%percent of households reporting*)				
Teacher Absenteeism		62			
Poor Quality of Teaching		97			
Poor Facilities (water, latrine,etc.)		94			
**Among households with a child in a public school. Multiple responses have been given by individual households.					
Source: Citizen Report Card					

Public hospitals

Turning to public hospitals, less than half of the respondents have accessed this facility in urban areas, even in presence of a 'catastrophic' illness. The levels of satisfaction are given in Table 8. The majority, 56 percent have rated the services provided as 'bad'. Primary reasons for dissatisfaction are high level of congestion (and long waiting times), no availability of free medicines and no proper testing facilities.

Table 8: Level of Satisfaction of Urban Households with Public Hospitals and Reasons for Dissatisfaction

	% of respondents going to Public Hospital	Rating of the Quality of Service (%)			
		Excellent	Good	Bad	Total
Total Sample	49	17	45	38	100
Reasons for dissatisfaction*:	(%percent of households reporting*)				
Absence of Doctor		52			
Poor Nursing Care		63			
Too many Patients		95			
Non-Availability of Free Medicines		91			
No Proper Testing Facility		95			
**Among households with a child in a public school. Multiple responses have been given by individual households.					
Source: Citizen Report Card					

Residential Services

The levels of access to residential services like garbage disposal, tap water, sanitation, gas and electricity are given in Table 9. Urban households generally have access to most residential services, with the exception of garbage disposal, which is a basic municipal function.

The levels of satisfaction are moderate to high in the case of tap water, sanitation and garbage disposal. As expected, the level of satisfaction is the lowest with electricity supply, given the exceptionally high levels of loadshedding.

Incidence of Bribes

Rural

The incidence of payment of bribes by the sample rural households in the process of receiving services is given in Table 10. Almost 95 percent of the households paid a bribe for filing a FIR or a complaint at the local Police Thana. The average amount of bribe paid is Rs 2150. Accordingly, if the sample is blown up to the national level, then the magnitude of corruption by police officials is estimated at over Rs 46 billion in the rural areas of Pakistan. This is at least as much as the annual salaries and allowances received by these officials.

Table 9: Access to and Levels of Satisfaction of Urban Households with Residential Services

Services	% indicating Access	Rating of the Quality of Service*			Total
		Excellent	Good	Bad	
Gas	96	6	40	54	100
Electricity	100	4	16	80	100
Tap Water	90	17	62	21	100
Sanitation	90	15	59	26	100
Garbage Disposal	48	15	57	28	100
*by households with access					
Source: Citizen Report Card					

Table 9: Experience with Corruption of Rural Households

	% Accessing the Service	No. of Times Last Year	% Accessing who Paid a Bribe	Average Amount of Bribe (Rs)
Police Thana	21	2.2	95	2150
Sessions Court	7	1.8	35	1130
NADRA	43	3.2	15	280
Revenue Dept	9	2.6	47	1280
Source: Citizen Report Card				

Urban

The corresponding figures for urban households are given in Table 11.

Table 10: Experience with Corruption of Urban Households

	% Accessing the Service	No. of Times Last Year	% Accessing who Paid a Bribe	Average Amount of Bribe (Rs)
Police Thana	18	2.0	65	1870
NADRA	28	2.7	4	410
Sessions Court	5	1.6	15	1500
Source: Citizen Report Card				

A comparison of the payment of bribes by urban and rural households reveals that, first, the incidence of corruption by the police is lower in the cities and, second, that NADRA has a record of delivering services with the least frequency of 'speed money'. On average, NICs and passports are delivered in about 30 days. Sessions courts are more prone to corruption in the rural areas. The relatively high presence of corruption in the rural areas has seldom been highlighted.

The Benazir Income Support Program

Rural

The extent of access of the sample rural households to the BISP is given in Table 12. There is significant variation among the provinces in the extent of participation in the BISP. The highest percentage is in Sindh of almost 35 percent followed by Balochistan at 33 percent. Overall, according to the sample, about 3 million rural households are participating in the BISP.

It appears that among households receiving the benefit, one in six had to pay a bribe to participate in the program. The incidence of corruption is the highest in Balochistan. It is significant that no household from K-PK reported any payment of bribe.

Table 11: Experience with BISP of Rural Households by Province

Provinces	% of Household Receiving Payments	% who have Paid a Bribe to Participate in BISP
Punjab	20	15
Sindh	35	20
K-PK	19	0
Balochistan	33	60
National	23	17
Source: Citizen Report Card		

Table 12: Experience with BISP of Urban Households by Province

Province	% of Household Receiving Payments	% who have Paid a Bribe to Participate in BISP
Punjab	5	21
Sindh	3	25
K-PK	17	20
Balochistan	20	50
National	6	23
Source: Citizen Report Card		

Urban

The extent of participation of urban households in the BISP is low in comparison to rural households. As shown in Table 13, only 6 percent of the sample households were receiving BISP payments. However, the incidence of bribes appears to be somewhat higher, at close to one in four households. The highest coverage is in Balochistan and K-PK. According to the survey about 0.5 million households are participating in the BISP in the cities and towns of the country. As such, the BISP appears to have a rural focus with 86 percent of the households benefiting from the Programme living in villages. In terms of targeting efficiency, 57 percent of the households participating in the BISP are the lowest income households (with monthly expenditure less than Rs 15,000 per month).

Incidence of Crime and Disputes

The Citizen Score Card has revealed startling facts about the incidence of crime in the country.

Rural

The incidence of different crimes in the rural areas is given in Table 14.

Table 13: Crime and Dispute Incidence Reported by Type by Rural Household (percent of households surveyed*)

% Reporting Crime during last year	Punjab	Sindh	K-PK	Balochistan	Total
Murder	1	0	4	0	1
Dacoity/Theft	23	38	37	54	30
Kidnapping	2	7	0	0	2
Land Dispute	10	16	18	20	13
Water Dispute	2	0	7	0	1
*some households have reported more than one crime last year.					
Source: Citizen Report Card					

During the year prior to the survey (February 2012 to February 2013) the sample rural households have highlighted a high incidence of crimes and disputes throughout the country, especially in Balochistan. The most frequent crime is dacoity/theft. Almost one in three households in the nationwide sample has revealed that it has been a victim of this crime. While the rise in urban crime has been adequately projected by the media, the spread of crime also in the rural areas merits more attention.

Urban

The corresponding levels of crime reported by urban households are given in Table 15.

Table 14: Crime Incidence Reported by Type of Urban households (percent of households surveyed)

% Reporting Crime during last year	Punjab	Sindh	K-PK	Balochistan	Total
Murder	1	1	0	0	1
Dacoity/Theft	15	6	7	60	12
Kidnapping	1	0	0	0	1
Snatching/Street Theft	18	47	5	60	29
*some households have reported more than one crime last year.					
Source: Citizen Report Card					

The incidence of dacoity/theft in urban areas appears to be substantially lower than in the rural areas. The highest incidence of crime is in the case of snatching/ street theft. While the incidence of this crime in Sindh has been highlighted, it appears to be even higher in Balochistan. Overall, street theft has affected more than one in four persons.

The overall incidence of crime revealed by the sample of households is high. It underscores the sharp deterioration of the law and order situation in the country and the failure of police and other agencies to combat crime.

Changes in Standard of Living

At the end of the questionnaire, the households were asked whether they felt that their standard of living was better, same or worse as compared to five years ago. Here again, the results are revealing.

Rural

The results on change in standard of living are given in Table 16. The only province where some households, 10 percent, have reported an improvement is in Punjab. The reasons given for the improvement are higher crop price, higher crop output or larger remittances.

A significant proportion has indicated no change, ranging from 15 percent in Sindh to 33 percent in K-PK. But the striking finding is the large share of rural households who indicate a worsening in their standard of living compared to 5 years ago. The percentage varies from 67 percent in Punjab and Sindh to 100 percent in Balochistan. Overall, almost three-fourths of the rural households indicated that they are worse off compared to five years ago. This is contrary to the perception that rural households (especially the farming population) are better off because of better crop prices in recent years.

Table 15: Comparison of Present Standard of Living with 5 years ago by Rural Households (Percent)

	Punjab	Sindh	K-PK	Balochistan	Total
Improvement	10	0	0	0	1
Same	23	15	33	0	21
Worse	67	85	67	100	73
Total	100	100	100	100	100
Source: Citizen Report Card					

There is significant variation regionally in the responses. The principal reason given in Punjab and Sindh is high prices, whereas it is corruption in K-PK and the law and order situation in Balochistan (see table 17).

Table 16: Reasons* for Deterioration in Standard of Living (percentage of rural households indicating deterioration) (Percent)

	Punjab	Sindh	K-PK	Balochistan	Total
High Prices	86	85	61	27	74
Unemployment	26	6	28	0	18
Law and Order Situation	22	12	56	93	32
Corruption	38	47	67	87	49
Others (electricity shortages, etc.)	67	52	43	58	57
*Multiple reasons given by households					
Source: Citizen Report Card					

Urban

The responses on the standard of living by urban households are given in Table 18. The results are different from those for rural households.

The highest proportion of households declaring that their standard of living has fallen is from Punjab at 72 percent followed by Balochistan at 70 percent, Sindh at 65 percent and K-PK at 55 percent. Overall, the proportion of households in this category is, more or less, similar in the rural and urban areas.

The reasons given for deterioration in the standard of living over last five years are given in Table 19. The predominant reason throughout the country is the rise in prices, followed by corruption and the law and order situation.

Table 17: Comparison of Standard of Living of Urban Households with Five Years Ago (Percent)

	Punjab	Sindh	K-PK	Balochistn	Total
Improvement	11	5	17	20	9
Same	17	30	28	10	22
Worse	72	65	55	70	69
Total	100	100	100	100	100
Source: Citizen Report Card					

Table 18: Reasons* for Deterioration in Standard of Living by Urban Households (Percent)

Reasons	Punjab	Sindh	K-PK	Balochistan	Total
Inflation	100	100	100	86	98
Unemployment	18	4	0	14	12
Law and Order Situation	22	33	10	43	26
Corruption	53	21	10	71	40
*Multiple reasons given by households					
Source: Citizen Report Card					

RESEARCH METHOD

In this study we intend to investigate the disparities in the standards of living of individuals in rural and urban areas. It will further look into the governance aspect of public services delivery and its impact on the living standards of people living in rural and urban areas. The analysis will be based on The Citizen Score Card--a participatory survey of random selected households on the basis of a sample which is nationally representative--which is conducted by Institute of Public Policy (IPP) in collaboration with Higher Education Commission (HEC). The survey provides an in-depth feedback, both quantitative and qualitative, on the access, efficiency and quality of public services as well as the ownership of assets.

Mckelvey & Zavoina (1975) demonstrate, regression models are problematic when the dependent variables are ordinal responses because the usual assumptions for regression are generally not met. The regression technique often fails to model the true, nonlinear relationship in the data. It is likely to underestimate the relative impact of certain explanatory variables on satisfaction. Since the coding of the ordinal level dependent variable is arbitrary, the estimated coefficients in the regression model will depend on the particular coding that is chosen (Mckelvey & Zavoina., 1975). For ordinal dependent variables, the appropriate model is the ordered logit or probit model, which takes the ceiling and floor effects into account and avoids the use of subjectively chosen scores assigned to the categories (Hanushek & Jackson., 1977). Although the outcome is discrete, multinomial logit or probit models are inappropriate because they fail to account for the ordinal nature of the outcomes (Greene, 1997). For mathematical simplicity, this study uses the ordered logit models.

We will utilize ordinal logit regression as a latent variable model. LS^* is the households' own valuation of their living standards they were asked whether they felt that their standard of living was better, same or worse as compared to five years ago. LS^* , therefore is underlying, unobservable (latent) continuous random variable. The categories are envisaged as continuous intervals on the continuous scale. The structural model for rural or urban households is

$$LS_i^* = X_i\beta + \mu_i$$

x is a covariate vector, β a vector of regression coefficients and μ_i the error term. LSR_i^* is divided into following thresholds against the observed groups of LSR_i .

$$LS_i = \begin{cases} 1 \Rightarrow DLS & \text{if } \tau_0 = -\infty \leq LS_i^* < \tau_1 \\ 2 \Rightarrow SLS & \text{if } \tau_1 \leq LS_i^* < \tau_2 \\ 3 \Rightarrow ILS & \text{if } \tau_2 \leq LS_i^* < +\infty = \tau_3 \end{cases}$$

There are three possible responses ($i=3$) of rural or urban households' to a question regarding their living standard : 1= Deteriorated living standard (DLS), 2 = same living standard (SLS), and 3 = Improved living standard (ILS). The probabilities of the dependent variable LS_i depend on the unknown thresholds and β estimates. The thresholds and β coefficients are estimated by maximizing the likelihood function $L(\beta, \tau_1, \tau_2)$. Thus, when LS_i^* crosses a threshold, the observed category of LS_i changes. The independent variables in this model are endowments of households and their access and usage of different public services including public schools, courts, police thana etc. The model will be run separately for rural and urban sample compare the performance and role of difference public service in determining the standards of living of the households.

We can determine the probability of each category of dependent variable LSR_i subject to a particular distribution of LSR_i^* . The probability of increase, decrease and same living standard can be determined as follows:

$$\begin{aligned} P(LS = 1) &= P(LS_i^* \leq \tau_1) = P(X_i\beta + \mu_i \leq \tau_1) \\ &= P(\mu_i \leq \tau_1 - X_i\beta) \\ &= \Phi(\tau_1 - X_i\beta) \\ P(LS = 2) &= P(\tau_1 < LS_i^* \leq \tau_2) = P(\tau_1 < X_i\beta + \mu_i \leq \tau_2) \\ &= P(\tau_1 - X_i\beta < \mu_i \leq \tau_2 - X_i\beta) \\ &= \Phi(\tau_2 - X_i\beta) - \Phi(\tau_1 - X_i\beta) \\ P(LS = 3) &= P(LS_i^* > \tau_2) = P(X_i\beta + \mu_i > \tau_2) \\ &= P(\mu_i > \tau_2 - X_i\beta) \\ &= 1 - \Phi(\tau_2 - X_i\beta) \end{aligned}$$

Where $\Phi(\cdot)$ is the cdf for μ_i . In ordinal probit model, $\Phi(\cdot)$ is normal with $\text{Var}(\mu_i) = 1$; in ordered logit model, $\Phi(\cdot)$ is logistic with $\text{Var}(\mu_i) = \frac{\pi^2}{3}$. Where the τ 's are unknown cut-points (category boundaries) in the distribution of LS^* , with $\tau_3 = -\infty$ and $\tau_3 = +\infty$.

Suppose that the probability that one reports a certain level of housing or neighborhood satisfaction is $P_i = P(LS=i/x)$. A common model that can be used to analyze ordinal responses is the proportional odds model (POM), which involves fitting a set of equations for cumulative distribution probabilities of the response categories, that is,

$$\frac{P(LS \leq j / \mathbf{x})}{P(LS > j / \mathbf{x})} = \exp(\tau_j - \beta^T X)$$

where $P(LS \leq j / \mathbf{x})$ denotes the conditional probability of having at most j level of standard of living given a vector of covariates $\mathbf{x}$, $P(LS > j / \mathbf{x})$ is the probability of being in standard of living above the level j , β^T is a column vector of coefficients and the unknown parameters τ satisfy $-\infty = \tau_1 < \tau_2 < \tau_3 = +\infty$.

In the above model, the regression coefficient β for the i th explanatory variable, X_i , is the log-odds ratio for the y by X_i association, everything else being the same. The model assumes that the relationship between $\mathbf{x}$ and the dichotomized LS does not depend on the category j , the point at which the dichotomization in the POM is made, which implies that β for the i th explanatory variable X_i does not depend on j . It is called the proportional odds model because of this assumption of identical odds ratios across the categories (McCullagh, 1980). The proportional odds assumption in the current case means that the three cumulative odds ratios calculated from the four-level ordinal measure of housing or neighborhood satisfaction are identical. The three odds ratios are between least satisfied and at least moderately satisfied, between at most moderately satisfied and more than moderately satisfied, between less than most satisfied and most satisfied. The assumption can be tested using the score test. Notice that if y takes only two values, the proportional odds model reduces to a model for a dichotomous dependent variable. Since the proportional odds model is nonlinear, it needs to be estimated by maximum likelihood method.

The proportional odds model avoids the problems related to regression techniques. In particular, the difference between corresponding cumulative logit is independent of the categories involved. But the common slope assumption in the POM is not always reasonable. If this assumption does not hold based on the score test, alternative models that allow the odds ratio to change with respect to response categories should be applied. One such model is the generalized logit model (GLM) which amounts to modeling the log ratio of probabilities for any other category and the base category. With four ordered levels of residential satisfaction in this study, the model is given by

$$\begin{aligned}\log\left(\frac{P_3}{P_1}\right) &= \alpha_1 + \beta_1 X \\ \log\left(\frac{P_2}{P_1}\right) &= \alpha_2 + \beta_2 X\end{aligned}$$

Where P_1, P_2, P_3 are the probabilities that one feels decreased living standard, same living standard, and increased living standard, respectively. In the above model, the decreased living standard serves as the base category. The interest here is to analyze what factors may make individuals more or less likely to report high levels standard living. If the increased standard of living were used as the base, the signs for the estimated parameters in general would reverse. The analysis strategy used in this study is to estimate the proportional odds models first. If the common slope assumption is rejected, generalized logit models will then be fitted using the same data and same set of independent variables.

The marginal affects, which shows the impact of one unit increase in $\mathbf{x}$, in terms of change in probability of being in particularly category can also be estimated through following equation.

$$\partial p_{ij} / \partial \mathbf{x}_{ri} = \{F'(\alpha_{j-1} - \mathbf{x}'_i \beta) - F'(\alpha_j - \mathbf{x}'_i \beta)\} \beta_r$$

We will estimate the models and marginal effects for both rural and urban areas separately. The types of assets and public services are different in rural and urban areas. We have selected a number of public services and other conventional variables like monthly expenditures in order to capture the change in standards of living (See Appendix Table 1 and 2 for detailed description of variables).

RESULTS & DISCUSSION

In this section we estimate the Logit regression for the rural and urban areas. In ordered to test whether data fulfill the parallel lines assumption as discussed in the previous section we first estimate the generalized ordered Logistic Model and analyze whether parallel lines assumption hold. If parallel lines assumption hold then we will estimated the ordered logit model otherwise we will interpret the generalized ordered logit model. Following table 20 shows the Test of parallel lines assumption.

Table 20: Test of Parallel Lines Assumption

Rural Household Model		
chi2(2) = 0.55	Prob > chi2 = 0.75	Wald test of parallel lines assumption for the final model: DBISP, PTHAN
Urban Household Model		
chi2(9) = 42.93	Prob > chi2 = 0.00	Wald test of parallel lines assumption for the final model:EARN,FPLAN,DSNATCH,DPBSCH,GLEV,DBISP,MCYCLE ,DPTRAN,CAR

An insignificant test statistic indicates that the final model does not violate the proportional odds/ parallel lines assumption (See Appendix Table: 3). So, the results of generalized ordered Logit and ordered Logit model for urban and rural areas, respectively, are given in the following tables 21 and 22. In case of urban areas, the effects of the variables that meet the parallel lines assumption are easily interpretable (we can interpret them the same way as in ordered logit model). For other variables, an examination of the pattern of coefficients reveals insights that would be obscured or distorted if a proportional odds model were estimated instead. This is evident from the log of monthly expenditure variable in the following table 21 which has different coefficient for the two categories LS=1 and LS=3, note that LS=3 is base category in the generalized ordered logit model.

The individuals with higher monthly expenditures are more likely to have higher monthly expenditures compared to five years before and the impact is higher in the higher category of standard of living. Surprisingly, In case of use of Thana the impact tend to be positive but insignificant in case of higher category of standard of living while it has negative and significant impact on the lower category of standard of living (note that we are saying higher level because of proportional odds or its relative to higher category). Similarly in case of courts, excise and taxation department, NADRA, Bribe and security situation that impact are different across that categories of standards of living, which is because these variables violate the parallel lines assumptions. This can be result as inequality in provision of public services or the differing impact or importance that individuals attach to the services in the lower and upper section of society in terms of standard of living. Consider for example the case of bribe the negative impact tend to increase in higher standard of living category, which may be because they are more exposed public departments like excise and taxation and try to make up for the delays and poor services by paying bribe.

For other variables on which the constraints for parallel lines were imposed, residential services, usage of Public schools, and public transport have negative and significant impact on the standards of living compared to five years before. While the ownership of assets like motorcycle and car have insignificant impact on standard of living.

Surprisingly, in case of rural areas the log of monthly consumption expenditures has insignificant impact on the perception about the individuals' living standards. This is because of the fact that we are ignoring the aspect of inequality in the rural areas. There may be a threshold below which people are poor and increase in expenditures may become not irrelevant with regard to standard of living below this threshold. Therefore, standard of living may be affected by productive assets and distributional characteristics rather than absolute increase in expenditures.

Table 21: Generalized Ordered-Logit Regression: Urban

LS=1			LS=2	
	Coef.	P-value	Coef.	P-value
EARN	0.056	0.275	0.056	0.275
logMEXP	0.206	0.104	0.863***	0.000
CAR	0.003	0.988	0.003	0.988
MCYCLE	-0.070	0.541	-0.070	0.541
PTHAN	-0.311***	0.000	0.070	0.532
COURT	-0.592***	0.001	2.733***	0.000
EXCIS	-0.205**	0.022	-0.734***	0.000
NADRA	0.158***	0.000	0.498***	0.000
FPLAN	-0.046	0.763	-0.046	0.763
dBRIB	-0.104	0.470	-1.711***	0.000
GLEV	-0.434***	0.000	-0.434***	0.000
DBISP	-0.399***	0.008	-0.399***	0.008
DPBSCH	-0.654***	0.000	-0.654***	0.000
DSNATCH	-0.407***	0.002	-0.407***	0.002
DPTRAN	-0.187	0.198	-0.187	0.198
DSECUR	0.858***	0.000	0.154	0.432
_cons	-2.150	0.106	-11.149	0.000
LR Chi2	639.02			
Prob > Chi	0.00			
***, ** and * show significance at 1%, 5% and 10%				

Table 22: Ordered Logit Regression: Rural

	Coef.	S.E	P-value
LogMEXP	0.127	0.174	0.466
DSTAT	0.468***	0.140	0.001
DTWEL	-0.988***	0.227	0.000
DTRAC	0.982***	0.224	0.000
RHC	0.097***	0.015	0.000
DBISP	0.156	0.121	0.197
DBRIB	-0.311**	0.131	0.017
NADRA	-0.107***	0.035	0.002
COURT	0.108	0.095	0.255
PTHAN	-0.212***	0.052	0.000
PBSCH	-0.477***	0.128	0.000
DROAD	-0.460***	0.124	0.000
DCHANAL	-0.115	0.125	0.358
/cut1	1.860	1.708	
/cut2	3.233	1.711	
LR chi2(14)	153.20		
Prob > chi2	0.00		
Pseudo R2	0.0592		

The Following figures 1 and 2 indicate that in case of low monthly consumption expenditures the productive assets like tractor matter more and the probability of increase in living standard is much higher than in case of no ownership of such asset. While, the difference in probability of increase in standard of living narrows down as well as overall probability of increase in living standard decreases as monthly expenditures increase. Similarly, in case use of public schools the difference in higher in case where there is low monthly expenditures and as monthly expenditures increases the satisfaction from public schools decreases have negative impact on the perception about the standard of living.

People tend to have higher standard of living with the productive assets like tractor and land. While public services like rural health units and courts have positive impact on the standards of living of individuals who have used these services, however, in courts' do not have significant impact. While, public services like police thana, public schools and BISP program along with roads and canals have negative impact on the standards of living of people.

The marginal affects for rural areas shows that one unit increase in log of monthly expenditures increases the probability of higher standard of living, but it is insignificant as shown before in results of our regression. However, the status of ownership of farm and tractor increases the probability of higher standard of living. Out of all the public services only rural health unit increases the probability of higher standards of living (see table 23 and 24).

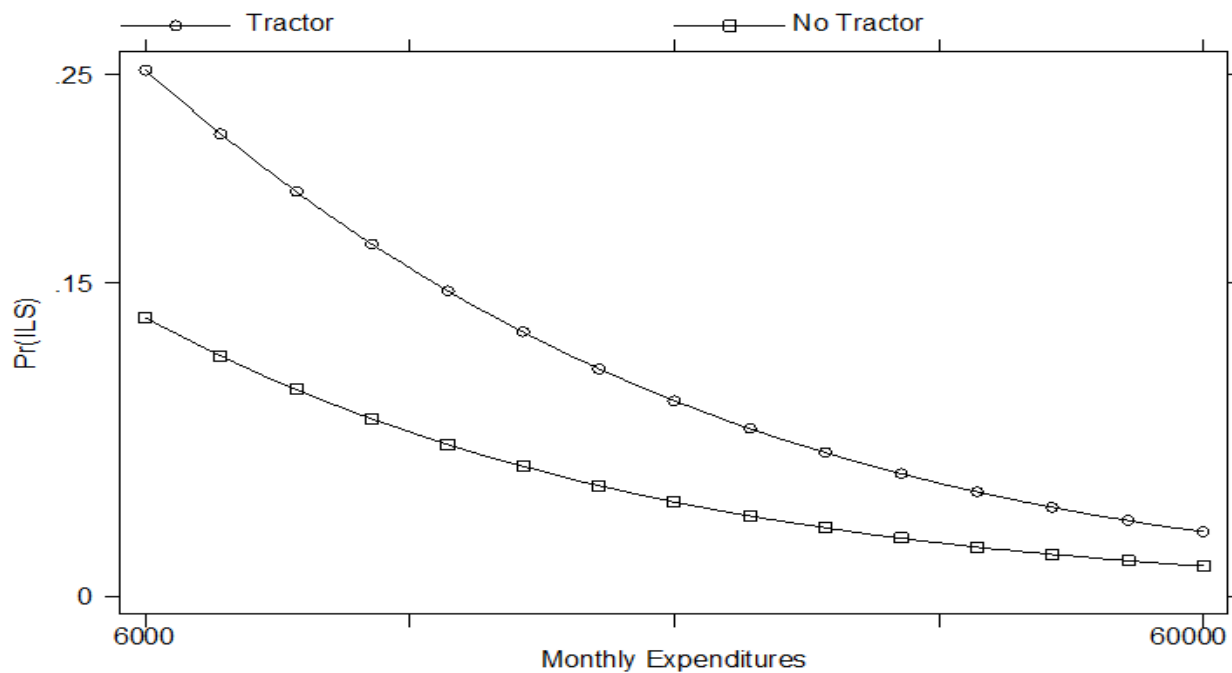


Figure 1: Monthly consumption expenditures and productive assets

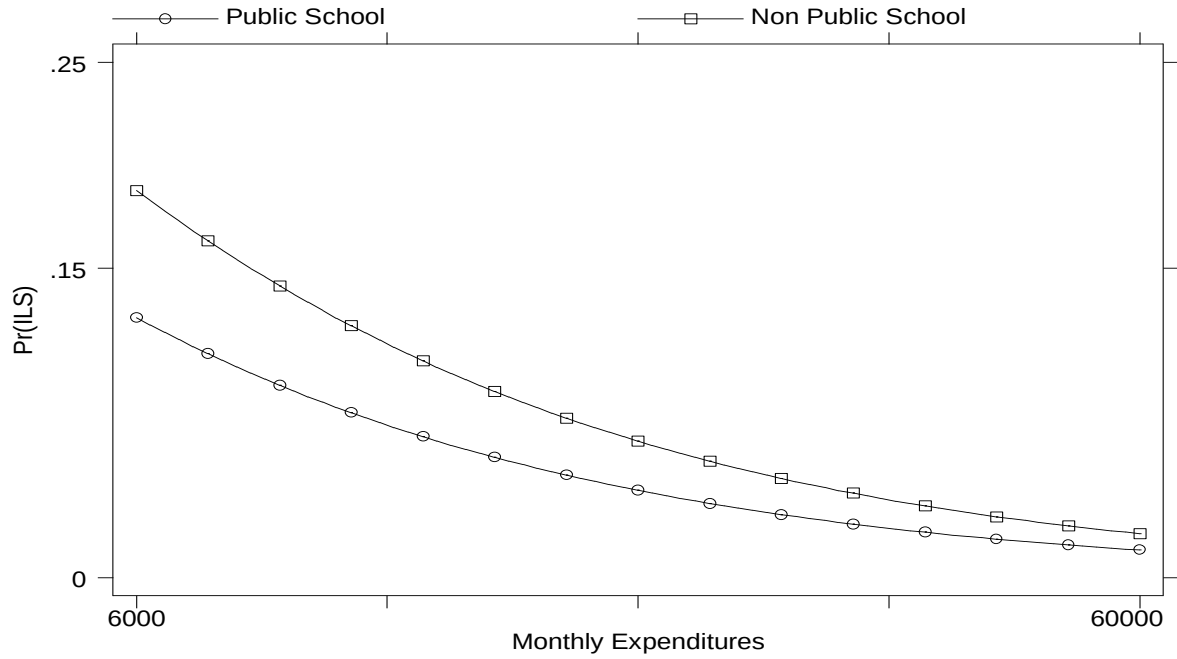


Figure 2: Monthly consumption expenditures and productive assets

Table 23: Marginal Effects: Rural

	Decrease Standard living	in of P-value	Same Standard of living	P-value	Increase in Standard of living	P-value
LogMEXP	-0.026	0.4670	0.015	0.4670	0.011	0.4670
DSTAT	-0.096	0.0010	0.057	0.0010	0.040	0.0010
DTWEL	0.204	0.0000	-0.119	0.0000	-0.084	0.0000
DTRAC	-0.202	0.0000	0.119	0.0000	0.084	0.0000
RHC	-0.020	0.0000	0.012	0.0000	0.008	0.0000
DBISP	-0.032	0.1980	0.019	0.1980	0.013	0.1970
DBRIB	0.064	0.0180	-0.038	0.0180	-0.026	0.0170
NADRA	0.022	0.0030	-0.013	0.0030	-0.009	0.0020
COURT	-0.022	0.2560	0.013	0.2560	0.009	0.2550
PTHAN	0.044	0.0000	-0.026	0.0000	-0.018	0.0000
PBSCH	0.098	0.0000	-0.058	0.0000	-0.041	0.0000
DROAD	0.095	0.0000	-0.056	0.0000	-0.039	0.0000
DCHANAL	0.024	0.3590	-0.014	0.3580	-0.010	0.3580

Table 24: Marginal Effects: Urban*

	Decrease in Standard of living	P-value	Same Standard of living	P-value	Increase in Standard of living	P-value
EARN	-0.0102	0.2750	0.0073	0.2760	0.0029	0.2750
logMEXP	-0.0376	0.1040	-0.0066	0.7250	0.0442	0.0000
CAR	-0.0005	0.9880	0.0003	0.9880	0.0001	0.9880
MCYCLE	0.0127	0.5410	-0.0092	0.5410	-0.0036	0.5420
PTHAN	0.0567	0.0000	-0.0603	0.0000	0.0036	0.5370
COURT	0.1081	0.0010	-0.2479	0.0000	0.1398	0.0000
EXCIS	0.0374	0.0210	0.0002	0.9900	-0.0376	0.0000
NADRA	-0.0289	0.0000	0.0034	0.6140	0.0255	0.0000
FPLAN	0.0083	0.7630	-0.0060	0.7630	-0.0023	0.7630
dBRIB	0.0191	0.4700	0.0684	0.0060	-0.0875	0.0000
GLEV	0.0793	0.0000	-0.0571	0.0000	-0.0222	0.0000
DBISP	0.0729	0.0080	-0.0525	0.0090	-0.0204	0.0090
DPBSCH	0.1195	0.0000	-0.0861	0.0000	-0.0335	0.0000
DSNATCH	0.0743	0.0020	-0.0535	0.0020	-0.0208	0.0030
DPTRAN	0.0341	0.1990	-0.0246	0.1990	-0.0096	0.2020
DSECUR	-0.1567	0.0000	0.1488	0.0000	0.0079	0.4320

CONCLUSION

Our results indicate governance in provision of public services is a major issue in lifting the standards of living in both rural and urban areas. As the public services are consider mainly for the marginalized section of society. There are relatively low levels of satisfaction with the Police and Irrigation Department. There are high incidence of bribes is in dealings of public services department and its highest with the police thana. This also evident from our ordered logit model in rural and generalized ordered logit model in urban areas. Furthermore, the incidence of bribe falls heavily on the individuals in the higher standard of living category.

Along with the dissatisfaction with the provision of public services, the principal reasons for the deterioration in standards of living are law and order situation and corruption. Rural health units have positive while BISP and Courts have insignificant impact on standards of living; while the services like public schools, thana and use of roads have negative impact on the standards of living of individuals.

In case of urban areas, the usage of police thana, excise and taxation department, family planning and public schools have negative impact on the perception about standards of living. Along with the deteriorating public services the worsening standard of living over the last five years, is also attributable to security situation and corruption. The issue of inequality in

provision public services or the impacts of governance issues on standards of living are different categories of individuals based on change in their standard of living compared to 5 years back.

In case of rural areas higher expenditures do not indicate higher standards of living, what matters more are productive assets. The ownership of land and tractor in rural areas has positive and significant impact on the standards of living of individuals. Contrary to rural areas, in urban areas higher expenditures indicate higher standards of living, while, the ownership of cars, motorcycle have insignificant impact on the standards of living of individuals. A clearer picture of the relationship would be to consider the inequality within rural and urban areas—which is also shortcoming of this study as it does not consider the inequality within rural and urban areas.

However, in case of productive assets in rural areas, for higher living standard productive assets matter more for the individuals with lower monthly expenditure as compared to individuals with higher monthly expenditures. While, positive impact of productive assets as well as the difference between the have and have-nots decreases as monthly expenditures increases.

Similarly, the probability of higher living standard is lower individuals using public schools compared to those who are not using public schools. As the level of monthly consumption expenditures increase the probability of higher living standards decreases and become as low as zero, furthermore, the difference between the users and non-users also narrows down and become insignificant with increase in monthly consumption expenditures.

In the case of public schools and productive assets our results are in line with Helliwell & Huang (2008), the reduced impact of governance on wealthy individuals is because they can make up for the poor provision of these services. Therefore, the deterioration in governance matters most for the poor section of society in terms of standards of living.

REFERENCES

- Alvarez-Diaz, A., Gonzalez, L., & Radcliff, B. (2010). The politics of happiness: on the political determinants of quality of life in the American states. *Journal of Politics*, 72, 894–905.
- Dethier, J. (1999). Governance and economic performance: a survey. ZEF Discussion Paper on Development Policy.
- Dollar, D., & Kraay, A. (2002). Growth is Good for Poor. *Journal of Economic Growth*, 195–225.
- Greene, W. (1997). *Econometric analysis* (3rd edition). Upper Saddle River, New Jersey: Prentice Hall.
- Hanushek, E., & Jackson, J. (1977). *Statistical methods for social scientists*. New York: Academic Press.
- Helliwell, J. F., & Huang, H. F. (2008). How's your government? International evidence linking good government and well-being. *British Journal of Political Science*, 38, 595–619.
- Inglehart, R., & Klingemann, H. (2000). Genes, culture, democracy, and happiness. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being*. Cambridge, London: MIT Press, pp. 165–183.
- McCullagh, P. (1980). Regression models for ordinal data. *Journal of Royal Statistical Society B* 42(2), 109–142.
- Mckelvey, R., & Zavoina, W. (1975). A statistical model for the analysis of ordinal level dependent variables. *Journal of Mathematical Sociology* 4, 103–120.
- Orviska, M., Caplanova, A., & Hudson, J. (2014). The Impact of Democracy on Well-being. *Social Indicators Research*, 115:493–508.
- Sen, A. K. (1977a). Social Choice Theory: A Re-examination. *Econometrica*, January 45:1, 53–89.
- Sen, A. K. (1984). The Living Standard. *Oxford Economic Papers*, 36, 74–90.
- Sen, A. K. (1985a). *Commodities and Capabilities*. Amsterdam:North-Holland.

Sen, A. K. (1987a). The Standard of Living Lectures. Cambridge : Cambridge University Press.

UNDP. (1990). Human Development Report 1990. New York : Oxford University Press.

World Bank. (1990). World Bank Development Report 1990. Oxford University Press: New York.

World Bank. (2000). World Development Report 2000/2001: Attacking Poverty. Washington, DC.

APPENDICES

Table 1: Description of Variables: Urban

Variable		Mean	Std. Dev.	Min	Max
LSR	Decreased in Standard of Living: =1, Same =2, Increased=3	1.41	0.66	1	3
EARN	Number of Earners (employed) Persons in Family	1.86	0.96	1	7
logMEXP	Log of Monthly Expenditures	10.49	0.73	8.70	12.07
CAR	Ownership of car=1, Otherwise=0	0.83	0.38	0	1
MCYCLE	Ownership of Motorcycle=1, Otherwise=0	0.55	0.50	0	1
PTHAN	Number of Visits to Police Thana	0.76	1.25	0	6
COURT	Number of Visits to Session Courts	0.14	0.54	0	5
EXCIS	Number of Visits to Excise and Taxation Department	0.39	0.70	0	6
NADRA	Number of Visits to NADRA	2.10	1.62	0	10
FPLAN	Number of Visits to Family Planning Centre	0.16	0.40	0	3
dBIB	Bribe to Public Officials= 1, Otherwise =0	0.41	0.49	0	1
GLEV	Level of Satisfaction with Basic Residential Services	2.04	0.75	0	3
DBISP	Participation in BISP=1, Otherwise =0	0.26	0.44	0	1
DPBSCH	Using Public Schools =1, Otherwise = 0	0.32	0.47	0	1
DSNATCH	Incidence of Snatching=1, Otherwise = 0	0.29	0.46	0	1
DPTRAN	Use of Public Transport=1, Otherwise = 0	0.57	0.50	0	1
DSECUR	Adequate Security in your Neighborhood =1, Otherwise =0	0.35	0.48	0	1

Table 2: Description of Variables: Rural

Variable		Mean	Std. Dev.	Min	Max
LSR	Standard of Living: Decreased =1, Same =2, Increased=3	1.46	0.70	1	3
logMEXP	Log of Monthly Consumption Expenditures	9.91	0.48	8.70	11.00
DSTAT	Owner of Farm=1, Tenant =0	0.53	0.50	0	1
DTWEL	Availability of the tube well =1, Otherwise = 0	0.17	0.38	0	1
DTRAC	Ownership of Tractor =1, Otherwise =0	0.13	0.33	0	1
RHC	Number of Visits to Rural Health Units	7.05	4.30	1	16
DBISP	Participation in BISP=1, Otherwise = 0	0.55	0.50	0	1
DBRIB	Bribe to Public Officials= 1, Otherwise =0	0.54	0.50	0	1
NADRA	Number of Visits to NADRA	2.77	1.79	0	12
COURT	Number of Visits to Courts	0.24	0.67	0	3
PTHAN	Number of Visits to Police Thana	0.92	2.03	0	15
PBSCH	Using Public Schools=1, Otherwise=0	0.65	0.48	0	1
DROAD	Road Connecting to Village=1, Otherwise=0	0.50	0.50	0	1
DCHANAL	Access to Canal Water=1, Otherwise =0	0.39	0.49	0	1

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