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GROWTH AND CONSUMPTION INEQUALITY IN PAKISTAN

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Abstract. In this study an attempt is made to evaluate consumption inequality in Pakistan. This study also deals with the relationship between growth and consumption inequality. The present study covers the period of fifteen years from 1990-91 to 2004-05 using micro data from Household Integrated Economic Surveys (HIES), Conducted by Federal Bureau of Statistics, Government of Pakistan. By developing an axiomatic framework, seven positive and normative inequality measures (Gini-coefficient, Theil Index, Mean Log Deviation, Atkinsion Index, Coefficient of Variation, Deciles Dispersion Ratio and Quintiles Dispersion Ratio) have been estimated. The results show that consumption inequality is not stable, showing wide variation during the years 1990-91 to 2004-05. Throughout the period 1990-91 to 2004-05, poorest 20 percent and the middle 60 percent lost their consumption share, whereas the richest 20 percent gained their consumption share significantly in urban and rural sectors along with overall Pakistan. The regression model encompasses the impact of growth on inequality. The experience in Pakistan's economy shows that consumption inequality has declined with growth whereas it has increased from 1988-89.

I. INTRODUCTION

Economic growth is considered to be the prime goal of an economic policy. As such growth performance of a country has become a major criterion for judging its economic performance. Per capita consumption is held to be the objectively measurable counterpart of economic growth. An increase in per head GDP is supposed to mean an increase in economic growth. However despite substantial increase in per capita consumption of most of the developing countries, problem has aggravated by a very rapid increase in

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inequality. Inequality is increasing rapidly between the wealthy and poor people. Some people have become big guns but most of the population is becoming poorer. Like other developing countries, Pakistan has also been facing great challenges to achieve a sustainable economic growth rate. There is instability of the economic system in Pakistan; most of the people have not been able to gain the minimum standard of living. The term 'inequality' means simply difference in income/consumption with no regard as to their desirability as a system of reward or undesirability as a scheme running contrary to some ideal of equality.

The relationship between growth and inequality is a moot point to the economists and policy makers of this country. Growth is considered the best course to reduce inequality. According to the Pakistan Economic Survey (1999-2000) there is an innate trade off between economic growth and inequality. Kuznets (1955) investigated that there was an inverted 'U' (arch) relationship between growth and inequality. He suggested that the inequality would increase with growth in the beginning, and then decrease at higher levels of growth.

The objectives of this study are to analyze the consumption inequality and to discuss relationship between growth and consumption inequality overall Pakistan including its rural and urban areas from the period of 1990-91 to 2004-05. For this purpose, micro data from "Household Integrated Economic Survey" for the year 1990-91, 1992-93, 1993-94, 1996-97, 1998-99, 2001-02 and 2004-05 has been used.

The study has been organized into five sections. Section 1 presents the introduction of the study. In section 2 different studies have been reviewed related to growth and inequality. Section 3 discusses data source and methods of analysis. Section 4 shows the results and discussion (trend of inequality) from 1990-91 to 2004-05 and in the last section 5 conclusions and recommendations have been drawn.

II. LITERATURE REVIEW

In Pakistan, most of the studies have focused on estimating Gini-coefficient, drawing the Lorenz Curve and sometimes estimating Pareto-Coefficient. Haq (1964), Khandkar (1973), Suleman (1973), Kruijk (1986), Haq (1998), and Ali and Tahir (1999) have presented estimates of Gini-coefficient for Pakistan.

Sen (1974) divided inequality into two broad classes described as objective, or purely statistical measures of dispersion, such as Variance, the Coefficient of Variation, the Lorenz Curve and the Gini-Coefficient. The

other class he described as normative of inequality. In the latter class, he emphasized on Atkinson and Atkinson Gini Indices which give results of high significance in any income distribution studies. Besides these broad classes, he also analyzed the detailed account of other simple measures on income distribution encompassing relative merits and demerits of each measure.

Alauddin (1975) computed the Gini-coefficient of real consumption for urban and rural areas. The author found that the rural inequality among households declined over the period 19963-64 to 1969-70. The trend of urban inequality was somewhat different. It increased in 1966-67 and then declined in 1969-70.

Kakwani (1980) developed the concept of the Lorenz Curve technique, which as extended and generalized to study the relationship between the distributions of different economic variables. He identified the problem intersection of Lorenz Curves under some situations thereby ambiguity in the result is surfaced. He also introduced a new Lorenz Curve with the name of Generalized Lorenz Curves; he called it as Concentration Curve.

Ercelawn (1988) studied to evaluate the inferences of change in rural inequality by household income and expenditures for 1971-72 and 1979. His period of study is based only on two HIES surveys containing a gap of 7 years. His results suggested that distribution of income deteriorated noticeably more so than did the distribution of expenditure. He concluded that the economic reforms of the Bhutto's regime were unsuccessful in improving income distribution.

Ahmed and Ludlow (1989) estimated problem of inequality by using Coefficient of Variation, Logarithmic Variance, Gini-Coefficient, Atkinson Indices and the Lorenz Curves for 1979 and 1984-85. The author used household consumption to measure inequality and found an expansion in rural inequality and decrease in urban inequality over the period.

Jafri and Khattak (1995) got an insight into the structure of inequality by analyzing inter-sectoral disparity on rural and urban basis. They compared inequality changes in urban and rural areas of Pakistan during 1979-1991 by using the Gini-coefficient. They suggested that inequalities decreased both in urban and rural areas during 1979-88 and it increased sharply in 1990-1991 in both the sectors.

Deininger and Squire (1998) investigated whether there was a link from fast growth to increasing inequality. They did not find any systematic evidence in favour of such a relationship. Rapid growth was associated with

growing inequality as often as it was associated with falling inequality or with no changes at all. Ravallion and Chen (1997) also did not find any systematic relationship between the rate of growth and inequality.

Piketty (1998) recommended that the effect of wealth inequality on intergenerational mobility can linger at last. He states as well that the central unit of interrogational betterment constant inequality of labour wages.

Goudie and Ladd (1999) described there are indications that there is perhaps a negative effect in the reverse direction, to lower growth from high inequality. Countries with extreme inequality of land and consumption, may then be less successful at decreasing poverty, because they change a given growth rate into slower poverty reduction. However, it is not easy to generalize the effect of a change in the pattern of distribution upon growth.

Ahmad (2001) calculated Gini-coefficients for different occupations in Pakistan by using HIES data 1992-93, income inequalities were compared between occupations. He concluded the highest level of inequality was observed among skilled workers and the lowest level of inequality was found among professionals. He also analyzed that the level of inequality among skilled workers was higher than overall inequality in Pakistan and level of inequality among professional is much lower than the national inequality.

Kakwani (2004) explained interrelationship between economic growth, inequality and poverty. Through the idea of pro-poor growth, the study examined to what extent the poor benefit from economic growth. The author developed an index of pro-poor growth known as Poverty Equivalent Growth Rate (PEGR) which takes account of both the magnitude of growth and benefits of growth, the poor receive. It is argued that to achieve a rapid reduction in poverty, the PEGR should be maximized rather than the growth rate alone.

Anwar (2004) examined the trend in inequality between 1998-99 and 2001-02 by using house expenditure as living standard indicator. The author suggested that expenditure inequality has increased in Pakistan during this period. While inequality rose in rural regions, it has decreased in city regions during the spell.

According to the *Pakistan Economic Survey* (2006-07), the value of Gini-coefficient increased marginally in Pakistan between 2001 and 2005 on the basis of consumption.

Certain studies have estimated inequality measures of different areas for overall Pakistan including its rural and urban regions. This inequality is presented in Tables 1 and 2.

TABLE 1

Gini-Coefficient Reported by Different Studies, 1963-64 to 1987-88

Authors	Unit of Measure-ments	Region	Gini-Coefficient										
			1963-64	1966-67	1968-69	1969-70	1970-71	1971-72	1979	1984-85	1985-86	1986-87	1987-88
Bergan (1967)	Household Income	Urban	0.43										
		Rural	0.36										
		Overall	0.38										
Khandkar (1973)	Household Income	Urban	0.37	0.38	0.36								
		Rural	0.35	0.32	0.29								
Azfar (1973)	Household Income	Urban		0.42									
		Rural		0.33									
		Overall		0.37									
Nasim (1973)	Household Consumption	Urban	0.33	0.37	0.36		0.35						
		Rural	0.30	0.30	0.26		0.26						
Alauddin (1975)	Household Real Income	Urban	0.37	0.39	0.38		0.36	0.38					
		Rural	0.35	0.33	0.29		0.29	0.31					
Mahmood (1984)	Household Income	Urban	0.38	0.38	0.37		0.36	0.36	0.41				
		Rural	0.35	0.32	0.30		0.30	0.30	0.31				
Kruijk and Leeuwen (1985)	Household Income	Urban					0.36		0.40				
		Rural					0.30		0.32				
		Overall					0.33		0.38				
Ahmad and Ludlow (1989)	Household Consumption	Urban							0.40	0.39			
		Rural							0.31	0.33			
Malik (1992)	Household Income	Urban						0.38	0.40				0.38
		Rural						0.31	0.32				0.34
Ahmad (2000)	Household Income	Urban	0.38				0.36		0.41				
		Rural	0.35				0.30		0.32				
		Overall	0.36				0.32		0.36				
Pakistan Economic Survey (2001-02)	Household Income	Urban							0.32	0.34	0.33	0.32	0.31
		Rural							0.40	0.38	0.35	0.36	0.37
		Overall	0.39	0.36	0.34	0.34	0.33	0.35	0.37	0.37	0.36	0.35	0.35
Anwar (2005)	Household Income	Urban	0.37	0.41	0.40	0.37	0.37	0.39	0.41	0.39	0.36	0.04	0.38
		Rural	0.35	0.34	0.30	0.31	0.31	0.36	0.35	0.35	0.34	0.33	0.32
		Overall	0.37	0.37	0.35	0.34	0.34	0.36	0.39	0.38	0.36	0.36	0.36

Source: As Cited Above

TABLE 2

Gini-Coefficient Reported by Different Studies, 1990-91 to 2004-05

Authors	Unit of Measurements	Region	Gini-Coefficient						
			1990-91	1992-93	1993-94	1996-97	1998-99	2001-02	2004-05
Ahmad (2000)	Household Income	Urban			0.38				
		Rural			0.38				
		Overall			0.40				
FBS (2001)	Household Expenditure	Urban		0.32	0.36				
		Rural		0.24	0.25				
		Overall		0.27	0.30				
Pakistan Economic Survey (2001-02)	Household Income	Urban	0.39	0.42	0.35	0.38	0.33		
		Rural	0.41	0.37	0.40	0.41	0.40		
		Overall	0.41	0.41	0.40	0.40	0.41		
World Bank (2003)	Household Expenditure	Urban		0.32	0.35				
		Rural		0.25	0.25				
		Overall		0.28	0.30				
Anwar (2004)	Household Expenditure	Urban			0.36	0.36			
		Rural			0.25	0.25			
		Overall			0.30	0.30			
Anwar (2005)	Household Income	Urban	0.38	0.40	0.37	0.37	0.45	0.46	
		Rural	0.42	0.38	0.37	0.35	0.38	0.38	
		Overall	0.41	0.39	0.38	0.36	0.42	0.41	
Haq and Zia (2006)	Expenditure	Overall						0.27	0.29
	Income	Overall						0.41	0.42
Pakistan Economic Survey (2006-07)	Household Expenditure	Urban						0.32	0.34
		Rural						0.24	0.25
		Overall						0.28	0.30

Source: As Cited Above

III. DATA SOURCE AND METHODS OF ANALYSIS

DATA SOURCE

The present study covers the period from 1990-1991 to 2004-2005 using micro data from Household Integrated Economic Surveys (HIES). These surveys have been conducted with some gaps in Pakistan since 1963-64. HIES not only gives information relating to social areas such as family planning, health, education, water supply and sanitation but it also presents significant data on household income and consumption at national and provincial level with its rural and urban regions. According to this survey, all

the expenditures by household individuals on goods and services are called household consumption. It also consists of final value of commodities and services received in different kinds, *e.g.* "in kind" or "own produced".

METHODS OF ANALYSIS

Consumption inequality may be measured in a number of different ways. These measures fall into two main classes. These are positive inequality measures and normative inequality measures. Some well-known positive measures are the range, Gini-Coefficient, Relative Mean Deviation, Standard Deviation of Logarithms, Relative Mean Difference among income classes, Kuznet Rations, Variance, the Coefficient of Variation, etc. Some normative measures are Dalton's Measures, Atkinson's Measures, Theil's Entropy Measure, etc. Since various measures may show significant difference in inequalities.

Gini-Coefficient

The best known and most widely used among all relative measures is the Gini-coefficient. It is described below together with some other indices based on the Lorenz diagram. The Gini-coefficient is defined as the ratio of the area between Lorenz Curve and the Line of Equality (diagonal), to the area of the triangle below this line. It may be interpreted in the following way.

$$\text{Gini-Coefficient} = \frac{\text{Area Between Lorenz Curve and Diagonal}}{\text{Total Area Under Diagonal}}$$

Figure 1 illustrates the Lorenz Curve where the shaded part shows a typical segment of the area below the Lorenz curve.

The area below the Lorenz curve:

$$= \sum_{i=0}^{n-1} (F_{i+1} - F_i)\Phi_i + \frac{1}{2}(F_{i+1} - F_i)(\Phi_{i+1} - \Phi_i)$$

$$= \sum_{i=0}^{n-1} (F_{i+1} - F_i)(\Phi_i + \frac{1}{2}\Phi_{i+1} - \frac{1}{2}\Phi_i)$$

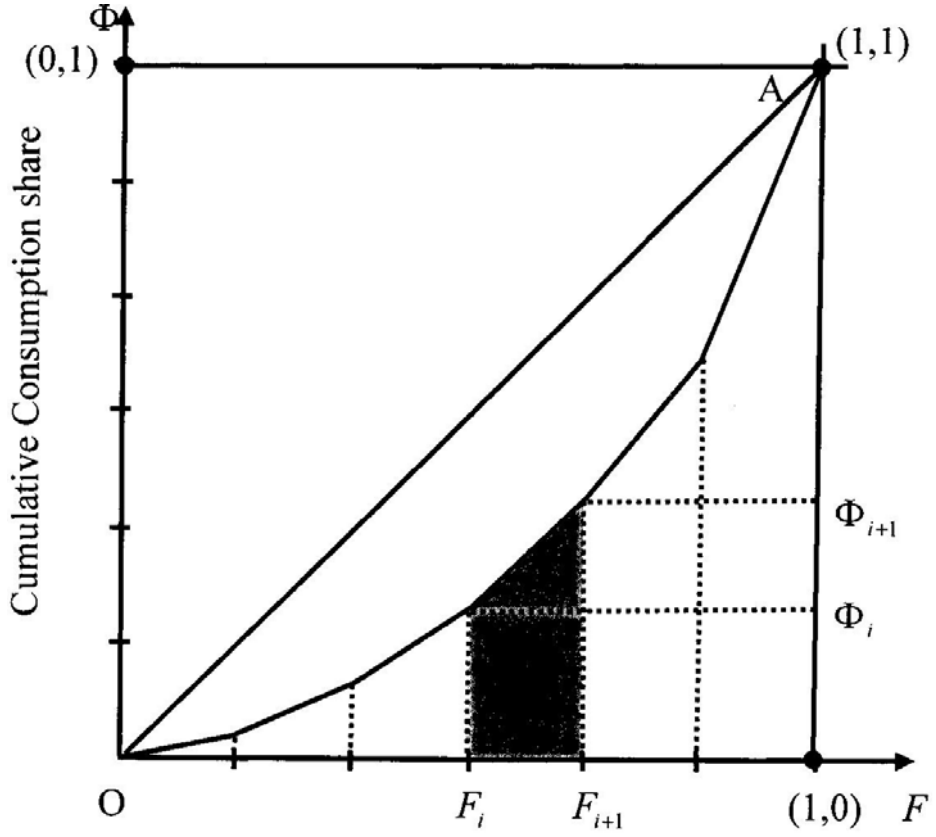
$$= \frac{1}{2}\sum_{i=0}^{n-1} (F_{i+1} - F_i)(\Phi_{i+1} + \Phi_i)$$

The area between Lorenz Curve and the Line of Equality (diagonal):

$$= \frac{1}{2} - \frac{1}{2}\sum_{i=0}^{n-1} (F_{i+1} - F_i)(\Phi_{i+1} + \Phi_i)$$

FIGURE 1

The Lorenz Curve



Therefore, the Gini-coefficient:

$$= \frac{1}{\frac{1}{2}}\left[\frac{1}{2} - \frac{1}{2}\sum_{i=0}^{n-1}(F_{i+1} - F_i)(\Phi_{i+1} + \Phi_i)\right]$$

$$= 1 - \sum_{i=0}^{n-1}(F_{i+1} - F_i)(\Phi_{i+1} + \Phi_i)$$

Where

F_i = Cumulative Population Share

Φ_i = Cumulative Consumption Share

The Gini-coefficient varies between the limits of 0 and 1. It can be specified as:

Gini-Coefficient Range $= 0 \leq G \leq 1$

Generalized Entropy Measures

In Generalized Entropy Measures Theil Indexes and the Mean Log Deviation Measures are included. The formula of this measure is as follows:

$$GE(\alpha) = \frac{1}{\alpha(\alpha - 1)}\left[\frac{1}{N}\sum_{i=1}^{N}\left(\frac{y_i}{\bar{y}}\right)^{\alpha} - 1\right]$$

Where

N = Total Population

$\bar{y}$ = Mean Consumption

α = The weight given to distances between incomes/consumptions

The range of *GE* measure is between 0 and α.

Theil's T. Index

Theil's Index which may be written as:

$$GE(1) = \frac{1}{N}\sum_{i=1}^{N}\frac{y_i}{\bar{y}}\ln\left(\frac{y_i}{\bar{y}}\right)$$

where $GE(1)$ is Theil's T. Index

Mean Log Deviation Measure

Mean Log Deviation Measure is also known as Theil's L. It is written as:

$$GE(0) = \frac{1}{N}\sum_{i=1}^{N}\ln\left(\frac{\bar{y}}{y_i}\right)$$

where $GE(0)$ is Mean Log Deviation Measure

Atkinson's Inequality Measures

Atkinson has suggested another class of inequality measures which are used in different times. A waiting parameter is also included in this class. It is written as:

$$A_{\varepsilon} = 1 - \left[\frac{1}{N}\sum_{i=1}^{N}\left(\frac{y_i}{\bar{y}}\right)^{1-\varepsilon}\right]^{\frac{1}{1-\varepsilon}}, \quad \varepsilon \neq 1$$

$$A_{\varepsilon} = 1 - \frac{\prod_{i-1}^{N} y_i^{\frac{1}{N}}}{\bar{y}}, \quad \varepsilon = 1$$

Coefficient of Variation

This provides a measure of dispersion relative to the mean. Karl Pearson introduced this measure of variation, known as the Coefficient Variation (CV), which expresses the Standard Deviation as a percentage of the Arithmetic Mean. Symbolically, it is defined as:

$$CV = \frac{S}{\overline{X}}$$

Where

CV = Coefficient of Variation,

S = Standard Deviation,

$\overline{X}$ = Arithmetic Mean

Deciles Dispersion Ratio

Deciles Dispersion Ratio is used widely to measure the consumption inequality, which represents the ratio of the average consumption of the richest 10 percent of the population divided by the average consumption of the poorest 10 percent.

Quintiles Dispersion Ratio

The simplest way to measure inequality is by dividing the population into fifths (quintiles) form the poorest to the richest, and reporting the levels or proportions of income that accrue to each level.

Impact of Growth on Consumption Inequality

The impact of growth on inequality will be checked by operating the regression by OLS method given below:

$$\ln Gini = b_0 + b_1 \ln(APCC) + b_2 T + \varepsilon_t$$

Where $Gini$ = Consumption inequality index, $APCC$ = Average per capita consumption, T = Time trend, ln = Natural log, b_0 = Fixed effect, b_1 = Growth elasticity of inequality, b_2 = Trend rate of inequality due to time, ε_t = Random errors in inequality measure.

A simple linear regression (Interpolation technique) model has been applied to fill the data gaps between successive observations.

LIST OF CONSUMPTION ITEMS

Authors have considered the following consumption items, as given in HIES and following. These classifications of consumption categories have been used to analyze trends in consumption inequality.

(*i*) All Food Expenditure (baked products, fried product, condiments, dry fruits, edible oils, fats, fresh fruits, meet, milk, sugar, poultry, pulses, split, ready made food products, soft drinks, spices, tea, coffee, tobacco products, chewing products, total cereals, vegetables etc.)

(*ii*) Complete Fuel and Lighting (charcoal, coal, dung-cakes, electricity, fire wood, gas, kerosene oil etc.)

(*iii*) Total Textile, Apparel and Footwear (apparel, clothing material, footwear, garments)

(*iv*) Total Housing Expenditure (conservancy, house rent, house rent owner occupied, house repair, insurance, rent free accommodation, taxes)

(*v*) Miscellaneous Expenditure (education expenditure, litigation expenses, medical, recreation, transport and traveling)

PER CAPITA CONSUMPTION

Table 3 shows the per annum per capita consumption from 1990-91 to 2004-05.

TABLE 3

Per Annum, Per Capita Consumption

Year		1990-91	1992-93	1993-94	1996-97	1998-99	2001-02	2004-05
Average Per Capita Consumption	Overall	5220	6588	7440	10140	11376	12864	16080
	Urban	6336	8208	9420	12756	15708	17976	21372
	Rural	4704	5952	7212	8988	9576	10836	13080

Source: Authors' estimation on HIESs

IV. RESULTS AND DISCUSSION

The estimated values of consumption inequality in Pakistan are shown in Table 4. The data reveals that all measures of inequality decreased from 1990-91 to 1996-97 and then increased continuously up to 2004-05. The Gini-Coefficient, Theil Index, Mean log Deviation, Atkinson Index, Coefficient of Variation and Docile Dispersion Ration increased by 12.41 percent, 20.00 percent, 16.36 percent, 21.43 percent, 10.28 percent respectively during 1992-93 to 2004-05.

TABLE 4

Estimates of Consumption Inequalities in Overall Pakistan

	Year	1990-91	1992-93	1993-94	1996-97	1998-99	2001-02	2004-05
Gini-Coefficient		0.282	0.266	0.265	0.259	0.267	0.278	0.299
Generalized Entropy Measures	Theil's Index	0.131	0.120	0.114	0.108	0.118	0.120	0.144
	Mean log Deviation	0.121	0.110	0.112	0.111	0.120	0.125	0.128
Atkinson Index		0.061	0.056	0.055	0.054	0.058	0.059	0.068
Coefficient of Variation		0.560	0.535	0.497	0.475	0.498	0.501	0.590
Deciles Dispersion Ratio		15.113	11.173	11.033	8.182	9.150	11.595	14.634

Table 5 shows the estimates of consumption inequality in urban Pakistan. The data shows that consumption inequality has variation from 1990-91 to 2004-05. All measures of consumption inequality decreased from 1990-91 to 1996-97 except Gini-coefficient which increased by 0.66% in 1992-93 and then all measures increased continuously up to 2004-05. The Gini-coefficient, Theil Index, Mean log Deviation, Atkinson Index, Coefficient of Variation and Docile Dispersion Ration increased by 5.26 percent, 7.19 percent, 8.11 percent, 20.55 percent, 2.04 percent, and 10.06 percent respectively from 1992-93 to 2004-05.

The consumption inequality in urban Pakistan has small variation during the period from 1990-91 to 2004-05. Theil Index, Atkinson Index and Coefficient of Variation decreased from 1990-91 to 1998-99 and then increased up to 2004-05. After 1990-91 Gini-coefficient increased continuously except 1998-99. While Decile Dispersion Ratio fell till 1996-97 and after this it increased (*see* Table 6). The Gini-coefficient, Theil Index, Mean log Deviation, Atkinson Index, Coefficient of Variation and Docile

Dispersion Ration increased by 12.00 percent, 21.69 percent, 23.28 percent, 20.51 percent, 9.98 percent, and 39.29 percent respectively from 1992-93 to 2004-05.

TABLE 5

Estimates of Consumption Inequalities in Urban Pakistan

	Year	1990-91	1992-93	1993-94	1996-97	1998-99	2001-02	2004-05
Gini-Coefficient		0.302	0.304	0.272	0.264	0.260	0.308	0.320
Generalized Entropy Measures	Theil's Index	0.154	0.153	0.122	0.118	0.124	0.159	0.164
	Mean log Deviation	0.143	0.148	0.127	0.125	0.140	0.152	0.160
Atkinson Index		0.074	0.073	0.061	0.059	0.064	0.078	0.088
Coefficient of Variation		0.607	0.589	0.500	0.486	0.486	0.609	0.610
Deciles Dispersion Ratio		13.676	11.854	9.309	8.030	9.270	11.818	13.047

TABLE 6

Estimates of Consumption Inequalities in Rural Pakistan

	Year	1990-91	1992-93	1993-94	1996-97	1998-99	2001-02	2004-05
Gini-Coefficient		0.254	0.225	0.232	0.233	0.227	0.238	0.252
Generalized Entropy Measures	Theil's Index	0.102	0.087	0.086	0.086	0.083	0.096	0.101
	Mean log Deviation	0.096	0.077	0.084	0.088	0.083	0.092	0.095
Atkinson Index		0.048	0.046	0.044	0.043	0.041	0.045	0.047
Coefficient of Variation		0.485	0.435	0.429	0.421	0.420	0.451	0.478
Deciles Dispersion Ratio		14.031	10.219	9.459	6.929	8.880	8.882	11.448

This section also presents consistent estimates of consumption share during the period from 1990-91 to 2004-05 for Pakistan as well as the rural and urban regions. Tables 7 to 9 present the trend summary of the ratio of the richest 20 percent to the poorest 20 percent.

In Pakistan, the poorest 20 percent gained significantly in their consumption share while the middle 60 percent and the richest 20 percent

lost their share from 1990-91 to 1992-93. Moreover, from 1996-97 to 2004-05 the consumption share of the poorest 20 percent and the richest 20% increased, the share of middle 60 percent decreased continuously as shown in table 7. The percentage share of consumption of the poorest 20 percent and middle 60 percent decreased from 10.23 percent to 9.92 percent and 51.77 percent to 44.99 percent from 1990-91 to 2004-05, while the share of the richest 20 percent increased from 38.00 percent to 42.09 percent from 1990-91 to 2004-05.

TABLE 7

Consumption Share in Overall Pakistan

Year	Poorest 20%	Middle 60%	Richest 20%	Ratio of Poorest to Richest
1990-91	10.23	51.77	38.00	3.715
1992-93	10.77	51.65	37.58	3.489
1993-94	10.01	52.08	37.91	3.787
1996-97	9.35	54.90	35.75	3.824
1998-99	9.60	52.58	37.82	3.940
2001-02	9.90	52.42	37.68	3.806
2004-05	9.92	47.99	42.09	4.243

TABLE 8

Consumption Share in Urban Pakistan

Year	Poorest 20%	Middle 60%	Richest 20%	Ratio of Poorest to Richest
1990-91	9.51	50.61	39.88	4.193
1992-93	8.62	50.22	41.16	4.775
1993-94	8.93	51.15	39.92	4.470
1996-97	8.93	54.56	36.51	4.088
1998-99	8.01	55.64	36.35	4.538
2001-02	7.03	57.22	35.75	5.085
2004-05	6.81	51.59	41.24	6.056

To get an insight into the structure of consumption share is to analyze inter-sectoral disparity on rural and urban basis. As indicated in Table 8 the poorest 20 percent of urban areas consumed only 9.51 percent of the total consumption during 1990-91 while share of the richest 20 percent was 39.88 percent during the same year. The share of the poorest of 20 percent in urban areas had declined to 6.81 percent in 2004-05, while the share middle 60 percent and the richest 20 percent in urban areas had increased to 51.59 percent and 41.24 percent respectively in 2004-05. The poorest and the richest 20 percent lost their consumption share while the middle 60 percent gained significantly in their consumption share from 1996-97 to 2001-02.

TABLE 9

Consumption Share in Rural Pakistan

Year	Poorest 20%	Middle 60%	Richest 20%	Ratio of Poorest to Richest
1990-91	11.23	52.77	36.00	3.206
1992-93	11.92	53.01	35.07	2.942
1993-94	11.11	54.70	34.19	3.077
1996-97	10.19	56.02	33.79	3.316
1998-99	10.89	54.78	34.33	3.152
2001-02	10.32	54.07	35.61	3.451
2004-05	10.54	49.55	39.91	3.787

As opposed to rural areas, the share of the poorest 20 percent and middle 60% in rural areas decreased from 11.23 percent, 52.77 percent in 1990-91 to 10.54 percent, 49.55 percent respectively in 2004-05. On the other hand, the share of the richest 20 percent in rural areas increased from 36.00 percent in 1990-91 to 39.91 percent in 2004-05 as shown in Table 9.

The fundamental reasons of consumption inequality of the people are the difference in the mental abilities; power and health of people also become responsible for inequality in wages, salaries and wealth of people.

People particularly those who are having skill, knowledge and money get benefits of good business, command over other services and business as well. In this way, they gain the fruits of development by becoming rich; while the labour class is dwelling in these towns lacking money, skill and

education, and remain poor when they are facing inadequate water sanitation, health, water supply, education and poor lodging facilities.

The political instability is also responsible for unfair consumption inequality. For maintaining and winning the political sympathies of rivals, heavy loans were given to the members of parliament, making them big guns. Again, most of these loans were not returned. The feudal and businessmen always got themselves exempted from taxes whether legally or illegally. The political administrative set-up of the county is also promoting inequality in the country. Market imperfection along with monopolistic tendencies, low agricultural and industrial outputs, illiteracy, rising population, low level of skill, corruption, inflation and uneven infrastructural facilities are the factors responsible for increasing the inequality between the rich and the poor. Especially after 1998 in Pakistan, industries and agriculture sectors were mechanized. There were ruthless trends of use of computer and automatic machines. This situation has decreased the demand for labour. The decreased demand for labour along with surplus supply of labour has resulted in weakening the position of working class and labour. It means that the brokers, wholesalers, producers, businessmen and middlemen not only earn high profits but they have been also becoming richer by exploiting the surplus of unemployed by giving them lower wages. In this situation the gap of inequality has further increased. Problems of inflation, taxations and rising costs persuaded the producers and businessmen to divert their resources in the commerce instead of industrial investment. The businessmen have been giving preference in investing shopping plazas, lands and grains. Consequently, they have got abnormal profits. The inflation also provided the chances of hoarding, black-marketing and speculation. Those who possessed the strategic resources or necessary food earned much even through creating artificial shortages. In this way, the speculators, business-men and industrialists earned much at the cost of decrease in income of the poor. So, the consumption inequality has been continuously increasing after 1998.

The impact of growth on inequality is estimated by the following equation:

$$\ln Gini = b_0 + b_1 \ln(APCC) + b_2 T + \varepsilon_t$$

The results of growth on inequality on consumption basis have been given in Table 10 where coefficients are based on OLS. The growth elasticity of inequality is negative for the entire sample. This formulation gives the growth elasticity of inequality –0.5403, –0.9125 and –0.3808 respectively in

overall Pakistan, its rural and urban areas from the year of 1990-91 to 2004-05.

TABLE 10

Results of Consumption inequality on Growth

		Overall	Urban	Rural
$\hat{b}_0$	Coefficient	7.9047**	11.3381**	6.3938**
	t-Statistic	13.0248	12.0746	6.6231
	Prob.	0.0000	0.0000	0.0000
$\hat{b}_1$	Coefficient	–0.5403**	–0.9125**	–0.3808**
	t-Statistic	–7.6342	–8.5249	–3.3585
	Prob.	0.0000	0.0000	0.0057
$\hat{b}_2$	Coefficient	0.0471**	0.0827**	0.0278**
	t-Statistic	8.4708	8.8811	3.5478
	Prob.	0.0000	0.0000	0.0040
R-squared		0.8976	0.8733	0.5215
Adjusted R-squared		0.8805	0.8521	0.4417
Durbin-Watson stat		1.7334	2.1623	2.0932
Mean dependent var		3.3120	3.3665	3.1673
S.D. dependent var		0.0355	0.0562	0.0323
Akaike info criterion		–5.7858	–4.6557	–4.4310
Schwarz criterion		–5.6442	–4.5141	–4.2893
Log likelihood		46.3936	37.9179	36.2322
F-statistic		52.5729	41.3385	6.5381
Prob (F-statistic)		0.0000	0.0000	0.0120
Observations		15	15	15

Notes: (*i*) The estimation is based on OLS method.

(*ii*) Parameters and F test are significant at 1% level of significance are marked with double asterisks (**) and F test is significant at 5% level of significance is marked with single asterisk (*).

V. CONCLUSIONS AND RECOMMENDATIONS

On the basis of analysis, major conclusions regarding inequality in Pakistan are summarized. By developing an axiomatic framework, positive and normative inequality measures have been estimated. The results revealed that inequality has not been stable showing variation during the year from 1990-91 to 2004-05.

Inequalities in consumption almost seem to have declined from 1990-91 to 1996-97 but this decline is not continuous over the entire period, especially inequalities have increased from 1998-99 to 2004-05 in overall Pakistan, its rural and urban sectors. Inequality in urban sector has decreased from 1992-93 to 1998-99 and after this inequality continuously increased till 2004-05. The Gini-coefficient in overall Pakistan shows that inequality has increased by 5.70 and 12.41 percent respectively from 1990-91 to 2004-05. The Gini-coefficient in rural sectors shows that inequality has decreased by 8.27 percent from 1992-93 to 1996-97 and from 1996-97 to 2004-05 it has increased by 8.15 percent. The regression analysis of growth and inequality has shown that the growth elasticity of inequality is negative for the entire sample. The estimates also indicate that a consumption inequality in urban Pakistan is higher than in rural Pakistan. The higher urban inequality may be attributed to the fact that urban work force is more diversified in term of skill and education.

The government can decrease consumption inequality if there is enough economic growth. If the institutional environment and policy are correct, growth can be concrete.

The labour intensive technologies should be promoted in the country. The small scale industry should be set up in the villages. The farmers in the villages should be educated and they should be persuaded to raise their incomes. The industries, producing import replacements, must be encouraged. Consequently, on the one side, the employment will rise and on the other side, the goods, services and incomes will be generated. The developmental expenditures in the country should be increased. The unproductive expenditures should be kept low. The market imperfection should be removed. In these ways the gulf of inequalities can be reduced.

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