SOME POVERTY ISSUES IN PAKISTAN: AN EMPIRICAL ANALYSIS

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ABSTRACT: A pragmatic approach for income enhancement was adopted in 1960s with a notion "***take care of GNP and it will take care of poverty itself***" (Dr. Mahboob-ul-Haq) followed by its reversal in 1980s. Current policy is to combat poverty and revive economic growth. Emphasis of the *first policy package* was to boost farm output by investing **in** agriculture (a supplier of raw materials). The *second policy package* was to invest **for** it by shifting to value adding industries, notably textiles, to develop backward and forward linkages, increase income, employment and share in global trade. This was to continue for other commodities and tailoring output according to the economic principles to sustain increased welfare, which was not achieved.

1. INTRODUCTION

Poverty and its alleviation has been focal point in the economic development process. A pragmatic approach, under Dr. Mahboob-ul-Haq's notion: "*take care of gross national product (GNP) and it will take care of poverty itself*", was adopted in the Second and Third Five Year Plans (1960-65 and 1965-70), which was reversed in 1980s. Now a Poverty Reduction Strategy Paper (PRSP) is designed to accelerate economic growth and combat poverty [Government of Pakistan (2003)], which is a continuation of Interim-PRSP [Government of Pakistan (2001)].

Rural population declined from 82 per cent of the total in 1951 (Census of Pakistan 1951) to 67 per cent in 1998 (Census Report of Pakistan 1998) and poverty increased as shown by Gini Coefficient and other indicators. For instance, share of middle income group (60 per cent of population) reduced from 50 per cent of total income in 1960s to 44 per cent in 1990s (Economic Survey 2002-03) and benefited high income group (population's 20 per cent).

Agriculture's share in gross domestic product (GDP) at market prices (MP) declined to 23 per cent in 2003-04 from 52 per cent in 1950-51. Its employment share declined from 65 per cent in 1951 (Census of Pakistan 1951) to 42 per cent in 2004 (Labour Force Survey 2000-02), while those of construction, utilities, transport and commerce went up from 10 to 25 per cent. Dimensions of poverty issue have changed, but rural areas are the major pockets despite a boost in farm output, which requires an analysis in the national and global contexts [Hussain (2003)].

The technology comprising hybrid seeds, chemical fertilizers, plant protection, tubewells and tractors were introduced in 1960s. Temporal increase in first three was manifold and that in irrigation was more than twofold [Ellahi (2002)]. Average annual growth rate of Tractors was five per cent (Pakistan Censuses of Agricultural Machinery, 1984 and 1994).

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Technical break-through changed crop production, wages and employment. Other factors affecting income and employment were land reforms, works programmes, foreign labour market, agro-based industries, etc. Bio-chemical and irrigation inputs increased labour use, while tractors worked otherwise [Ellahi (2002)]. Land reforms, led to increased eviction of tenants, reduced employment and increased poverty. Hence, this study is to review core issues, policies adopted, its own focus, analysis, conclusions and policy recommendations.

2. THE CONCEPT AND MEASUREMENT OF POVERTY

Following Malthusian ideology, Iqbal (1903) discussed causes, outcomes and measures to check poverty. He regarded it as a root cause of crimes, such as theft, robbery, murder, prostitution [women's glaring role, in this era, is brilliantly painted by Baber (1999)], etc. due to expanding population, emerging wants, resource limitations and the law of diminishing returns. This concept has now changed due to socio-political, cultural, techno-economic relationships, globalization and many other factors. For instance, poverty is influenced by access to food, water, sanitation, education, health and other social facilities. Nature of crimes has changed, such as drug addiction, terrorism, cultural vulgarity, arrogance, fatal games, *ghundaism* socio-political patronage to crime and drugs, sectarian and extra judicial killings, ethnic violence, kidnapping for ransom, robberies, insecurity of life and property, and break-down of social and moral values.

Poverty measures include calorie-based income and Gini Coefficient. Poverty line is an income level providing 2250 calories per person, i.e. 2450 in rural and 2150 for urban areas (Economic Surveys) and latter measures income distribution with zero value for perfect equality and one for otherwise. International Fund for Agricultural Development (2000) and World Bank (2001) use US$ 1 and 2 per capita per day. Data on former two measures are set out in Table 1.

Table 1: The Poverty Indicators

	Per cent of population below poverty line			The Household Gini Coefficient		
	Total	Rural	Urban	Total	Rural	Urban
1963-64	40.24	38.94	44.53	0.386	-	-
1966-67	44.50	45.62	40.96	0.355	-	-
1968-69	-	-	-	0.336	-	-
1969-70	46.53	49.11	38.76	0.336	-	-
1970-71	-	-	-	0.330	-	-
1971-72	-	-	-	0.345	-	-
1979	30.68	32.51	25.94	0.373	0.32	0.40
1984-85	24.57	25.87	21.17	0.369	0.34	0.38
1985-86	-	-	-	0.355	0.33	0.35
1986-87	-	-	-	0.346	0.32	0.36
1987-88	17.32	18.32	14.99	0.348	0.31	0.37
1990-91	22.11	23.59	18.64	0.407	0.41	0.39
1992-93	22.40	23.35	15.50	0.410	0.37	0.42
1993-94	-	-	-	0.400	0.40	0.35
1996-97	31.00	32.00	27.00	0.400	0.41	0.38
1998-99	32.60	34.80	25.90	0.410	0.40	0.33
1999-00	33.50	-	-	-	-	-

Sources: i) Rashid and Kemal (1997), Qureshi and Arif (1999) and SPDC (2000) for population percentage below poverty line.ii) Economic Survey 2002-2003 and previous issues for household Gini Coefficient.

As seen above, per cent of population below poverty line increased from 40 per cent in 1963-64 to 47 per cent in 1969-70, reduced in 1970s/1980s and went up in 1990s. Income distribution improved in mid-1960s/1980s and otherwise in 1970s/1990s.

The modern economics recognizes that utility (anti-poverty) is maximized by consuming goods and services and availing leisure. This was initiated by Becker (1965) Lancaster (1966) and Muth (1966) and adopted by Banskota and Evenson (1978), Rosenzweig (1980 and 1984), Low (1986), Huffman (1980 and 1987), Sharma (1988), Ellahi (1992) and Ellahi and Mahboob (2002a and 2002b). As consumption of goods and services and leisure are influenced mainly by income and prices, change in their volume and composition is a measure of poverty.

3. POLICIES FOR POVERTY ALLEVIATION

To improve income and employment, Village, Agricultural and Industrial Development Programme (First Five-Year Plan 1955-60) included use of public funds, local labour and skills for socio-economic infrastructure. It was renamed as Rural Works Programme in the Second and Third Five Year Plans 1960-65 and 1965-70 and followed by the People Works and Integrated Rural Development Programmes in 1972. The outcomes were agro-based industries and non-farm activities, i.e. commercial activities and works absorbing skilled and un-skilled workers. The Fifth (1978-83) and Sixth (1983-88) Five Year Plans shifted emphasis to rural development through inputs, services and loans for small industries. The on-going PRSP is comprised of four pillars, i.e. (i) an accelerated economic growth and macroeconomic stability, (ii) improving governance, (iii) investing in human capital and (iv) targeting poor and vulnerable groups.

4. THE STUDY FOCUS AND ANALYTICAL FRAMEWORK

The level of farm output and its price are major determinants of farm income. Export prices, in US Dollar (US$), play a vital role to determine the domestic ones and general welfare. Pakistan's import-export turn-over of about US$ 27 billion has a substantial impact on domestic economy, which requires a study of the effects created by export prices for domestic ones and labour wages in the temporal context. In January 1982, one US$ was worth 9.91 Pak. Rupees (PRS), which climbed up to about PRS 67 in September, 2001 and export prices, in US$, showed a continuous decline since 1981-82. Thus, 1980-81 was taken as base and 2003-04 as terminal year. In view of time and space limitations, scope of this study is limited to GDP (MP), public debts, wages and major crops, i.e. wheat, rice, cotton and sugarcane, which account for about one third of agricultural output and a major share of Pakistan's export earnings. Sugarcane and wheat are well-spread, while cotton and rice are confined to their agro-climatic zones.

Empirical analysis includes over-time changes in different variables and their average annual growth rates using data on area, yield, production, exports, prices, in PRS and US$, and share of each crop in their total area. Rice exports include basmati and others, while those selected from cotton group are lint, yarn and thread, cloth and waste. Analysis also covers GDP, exports (all), public debts and labour wages. To analyze relationships of export earnings (all and those from selected commodities) and public debts with GDP and exports (all), year-wise ratios of former variables to the latter were worked out. Their monetary values and physical quantities, in the base and terminal years, were also compared to assess impacts of the policies adopted.

There are multiple support/domestic prices, except for wheat. For cotton, prices for common varieties (B-557, F-149, Niab-78 and CIM-109) were used and those for sugarcane, basmati and other rice related to Punjab. Most of the data were obtained from the Economic Survey, Foreign Trade Statistics and Monthly Statistical Bulletin. The missing data were estimated using available information and appropriate methods. Average annual growth rates were estimated from indices (1980-81 = 100) of selected variables by using equation:

$$P_n/P_1 = (1+r)^n, \quad (1)$$

Where,

P_1 = value of a variable in the base year (1),
P_n = value of a variable in the terminal year (n), and
r = average annual growth rate.

Taking a natural log of equation (1) and replacing 'n' by 't', time trend (years 1 to 24) gives:

$$\ln(P_t/P_1) = t\ln(1+r) + e_t, \quad (2)$$

where, e_t, is an error term with conventional properties.

5. EMPIRICAL ANALYSIS

5.1 Production and Prices

Average annual growth rates for area, yield, production, crop area shares and domestic prices, in PRS and US$, are presented in Table 2. These along with temporal indices, based on data given in Annexes-I and II, are depicted in Figure 1.

Table 2
Growth in Area, Yield, Production, Area Shares and Domestic Prices: 1980-81 to 2003-04

Per cent per annum

Crops	Area	Yield	Production	Area share in total	Price	
					PRS	US$
Wheat	0.88	1.48	2.37 (63%)	-0.16	7.45	-0.71
Rice	0.71	0.80	1.01 (53%)	-0.33	7.46	-0.70
Cotton	1.81	3.10	4.96 (62%)	0.76	5.90	-2.14
Sugarcane	1.02	0.85	1.21 (45%)	-0.02	5.49	-2.52

Notes: i) Figures in parentheses are shares of yield in growth rate of production.
ii) Growth in price of rice relates to basmati, while that for others is very close to it.

Production of wheat and cotton increased, mainly due to yield, at about 2.4 and 5 per cent per annum, respectively. Rice and sugarcane, requiring irrigation and other inputs intensively, exhibited about one per cent annual growth in production. An overall technical break-through, predominantly for wheat and cotton, is noted from Figure 1 (left side). Cotton competes directly with rice and indirectly with wheat due to its harvesting extended beyond sowing season for wheat. Thus, it availed increased share in area prominently at the expense of rice instead of wheat. However, crop substitution, motivated by techno-economic factors, occurred in cotton belt only. Sugarcane is a balancing cash crop and experienced a little change in its area share.

Domestic prices, in PRS, increased by about 5.5 to 7.5 per cent per annum, but declined by about 0.7 per cent (wheat and rice) and 2.5 per cent (cotton and sugarcane) per annum in US$. Had these remained unregulated and let free to adjust as per market forces, situation would have been worse. Further, technical break-through and crop substitution absorbed pricing shocks.

5.2 GDP, Exports and Public Debts

Actual and comparative (viz-a-viz GDP and all exports) growth rates for export earnings and public debts, using data (in US$) given in Annex-III, are provided in Table 3 and depicted in first two rows of Figure 2. Temporal indices of GDP and exports (all) viz-a-viz selected exports and debts are also depicted in rows 3 & 4 and 6 & 7 of Figure 2, respectively.

Table 3
Overall Growth Rates and Volumes of Different Variables in the Base and Terminal Years

Per cent

Items	Growth rates (Actual)	As per cent of GDP			As per cent of Exports (All)		
		Growth rates	Comparative volumes		Growth rates	Comparative volumes	
			1980-81[a]	2003-04[a]		1980-81[a]	2003-04[a]
GDP	4.62	0	NA[c]	NA	NA	NA	NA
Exports							
i) All	5.83	1.15	10.52 (1)[b]	13.86(1.32)[b]	0	NA	NA
ii) Rice	-1.53	-5.88	2.01 (1)	0.47 (0.23)	-6.95	19.13 (1)	3.40 (0.18)
iii) Cotton	5.10	0.45	3.51 (1)	3.91 (1.11)	-0.69	33.34 (1)	28.23 (0.85)
Public Debts							
i) Internal	8.61	3.85	22.46 (1)	55.57 (2.47)	2.63	213.39 (1)	397.62 (1.86)
ii) External	6.34	1.64	40.40 (1)	59.65 (1.48)	0.48	383.81 (1)	430.43 (1.12)

Note: a) Actual in the year 1980-81 and for 2003-04 worked out using the growth rates.

b) Figures in parentheses are standardized to make intra-variable comparison of terminal year (2003-04) by considering base year (1980-81) as unity.

c) NA stands for not applicable.

Average annual growth in cotton group was about 5 per cent and a decline of 1.5 per cent for rice. Thus, economic significance of a commodity's potential for value addition and product diversification is established for policy formulation. Growth of GDP and export earnings (all), in actual terms, was about 4.6 and 5.8 per cent per annum, respectively. However, internal and external debts grew more rapidly than GDP and exports, which implies that borrowing was not encouraging for economic development.

To examine economic significance of growth rates discussed above, selected exports and debts as per cent of GDP and all exports are also given in Table 3 and left side of rows 4&7 in Figure 2 for an inter-variable comparison. Standardized form (given in parentheses) of the same, in terminal and base years, are shown in Table 3 and depicted in right side of said rows of Figure 2 to examine intra-variable performance in temporal context. Indeed debts dominated the scene and internal debt increased more rapidly than the external one. As compared with 1980-81, exports (all) and those of cotton as per cent of GDP showed a considerable increase in 2003-04, but reduced drastically for rice. As per exports (all), cotton showed a marginal decline, but that of rice became more prominent, which signifies value addition character of the former.

5.3.1 Analysis of Export Commodities

Data on export quantities, prices and earnings, in US$, are provided in Annexes IV and V and used to estimate average annual growth rates, which are set out in Table 4. Information for an overall comparison of export quantum and foreign exchange earnings from rice and selected cotton commodities in 2003-04 as compared with 1980-81 is also provided in Table 4. These results and year-wise indices of export quantities and prices are depicted in Figure 3.

Table 4

Overall Growth Rates, Quantum and Export Earnings in the Base and Terminal Years

Commodities	Quantities			Prices	Earnings		
	Growth rate (%)	'000' MT/M.Sq.Meters		Growth rate (%)	Growth rate (%)	US$ Million	
		1980-81[a]	2003-04[a]			1980-81[a]	2003-04[a]
Rice							
i) Basmati	0.86	409(1)[b]	502(1.19)	-2.17	-1.33	293 (1)	212(0.74)
ii) Others	1.29	835(1)	1135(1.36)	-3.17	-1.92	273 (1)	171(0.65)
Cotton							
i) Lint	-7.80	325 (1)	46(0.17)	-2.06	-9.70	525 (1)	45(0.10)
ii) Yarn & thread	9.53	98(1)	875(8.58)	0.01	9.55	217 (1)	1936(8.70)
iii) Cloth	6.13	501(1)	2088(3.93)	2.37	8.64	241 (1)	1763(6.72)
iv) Waste	21.50	3(1)	289(96.3)	-2.02	19.05	2 (1)	126(63.0)

Note: a) Actual in the year 1980-81 and for 2003-04 Worked out using the growth rates.

b) Figures in parentheses are to make intra-commodity comparison of terminal year (2003-04) viz-a-viz standardized (unit) base year (1980-81).

For basmati and other rice, declining prices outweighed quantum increases and led to reduced earnings. Production of yarn, thread and cloth was promoted during the Sixth Five Year Plan 1983-88 for value addition, income, employment and increased export earnings. Therefore, lint exports and earnings declined by about 8 and 10 per cent per annum, respectively. Yarn and thread, a raw material for overseas textile industry, enjoyed more than 9 per cent increase in exports and earnings due to stable prices. Cloth's quantity, price and earnings increased by more than 6, 2 and 8 per cent per annum, respectively. A sharp increase in cloth exports in the latest seven years faced a drastic price decline (Figure 3). Export of textile waste, a by-product of value addition process, recorded the highest growth rate of about 22 per cent per annum, but at a *microscopic* and declining price (Figure 3). Overall, its quantum and earnings went up by 96 and 63 times, respectively, which seems to be out of proportion as compared with refined products.

5.3.2 A Shift Over from Primary to Manufactured Commodities

Rice and cotton (lint) are treated as primary, while the rest are treated as manufactured commodities. Average annual growth in their quantities, prices and earnings are given in Table 5 and temporal indices, etc. are depicted in Figure 4. Quantities and prices of primary commodities recorded an increase of 0.61 per cent and a decline of about 4 per cent per annum, respectively. On the other hand, export of manufactured commodities registered an annual growth of more than 7 per cent in quantum and 2 per cent in price. This change was also noted in the respective earnings and export shares. In temporal context, investment made **in** agriculture [Ellahi (2002)] brought a technical break-through to enable investing **for** value addition. Potential of these policies seems having been reaped adequately and additional commodities needs to be covered.

Table 5

Growth in Primary and Manufactured Exports: 1980-81 to 2003-04

Percent per annum

Variables	Primary Commodities[a]	Manufactured Commodities[b]
i) Quantity	0.61	7.09
ii) Price	-3.79	2.01
iii) Earnings	-3.21	9.25
iv) Export shares	-8.54	3.23

5.4 Implications for Labour Wages

Seasonal nature of work for conventional crops, where unskilled labour is employed, has a few peaks, many troughs and implications for wages and employment, which is not true for urban jobs. Thus, analysis of rural wages may not precisely help to understand the extent of rural poverty as compared with the urban one. Over-time average annual growth in rural and urban wages (Annex-II) is given in Table 6, which along with wage indices are depicted in Figure 5.

Table 6

Growth in Wages for Unskilled Labour: 1980-81 to 2003-04

Per cent per annum

Type of Labour	*Wages*	
	PRS	US$
Rural Labour	8.48	0.24
Urban Labour	7.96	-0.24

Nominal wages in both rural and urban areas increased at about 8 per cent per annum, but in US$ it was close to zero. A salient observation is that over-time wage increase compared well with that in the regulated domestic prices, but real wage remained almost stagnant.

5.5 A Summary of Findings for Policy Analysis

An overall picture of the scenario described above is provided in right side of Figure 6. It shows that a heavy reliance on traditional commodities pushes prices down even below the equilibrium level. Quantity poured into the market exceeds supply curve (Q_s), which represents marginal cost as well. Thus, production and exports should be adjusted accordingly. Left side of Figure 6 relates to non-traditional commodities priced above the equilibrium level determined by an interaction between demand (Q_d) and supply (Q_s) forces. Producers may expand output up to intersection of supply curve at the going price which ultimately settles at the equilibrium. If available avenues are not explored, it leads to a deficit!

6. CONCLUSIONS AND POLICY RECOMMENDATIONS

Analysis showed that poverty, in general and rural poverty in particular, aggravated in spite of growth-oriented policies for primary and manufactured commodities. It is concluded that poverty is not only influenced by local conditions but also affected by economic atmosphere across international borders. Another feature of these policies is a heavy reliance on traditional commodities beyond economic limits. Thus, declining real prices/wages *enriched* poverty.

However, if quantum of commodities in production mix is adjusted according to the economic principles, real factor incomes may go up and reduce poverty. In the light of changing economic atmosphere it may safely be suggested that adjustment process may not be limited to crop sub-sector only but should also focus on others. It may involve shifting to non-traditional commodities, such as fruits, vegetables, beef, mutton, dairy, livestock, poultry, fisheries, etc. The *modus operandi* for this change may involve resource reallocation for optimal production of commodities through an expert consultative mechanism. This may help to smooth up seasonal nature of rural employment, raise real wages, check labour exodus and increase general welfare. In essence, policy focus needs to be redirected to make the existing set-up stable, sustainable and develop new strategies both to invest **in and for** agriculture in the interest of value addition.

Annex-I

Area, Yield and Production of Major Crops: 1980-81 to 2003-04

Year	Wheat			Rice			Cotton			Sugarcane		
	Area	Yield	Produc-tion	Area	Yield	Produc-tion	Area	Yield	Produc-tion	Area	Yield	Product-tion
1980-81	6.98	1.64	11.48	1.93	1.62	3.12	2.11	1.99	4.20	0.83	39.22	32.36
1981-82	7.22	1.57	11.30	1.98	1.73	3.43	2.21	1.99	4.40	0.95	38.50	36.58
1982-83	7.40	1.68	12.41	1.98	1.74	3.45	2.26	2.14	4.84	0.91	35.70	32.53
1983-84	7.34	1.48	10.88	2.00	1.67	3.34	2.22	1.31	2.91	0.90	38.10	34.29
1984-85	7.26	1.61	11.70	2.00	1.66	3.32	2.24	2.65	5.93	0.90	35.70	32.14
1985-86	7.40	1.88	13.92	1.86	1.57	2.92	2.36	3.03	7.16	0.78	35.70	27.86
1986-87	7.71	1.56	12.02	2.07	1.69	3.49	2.51	3.09	7.76	0.76	39.40	29.93
1987-88	7.31	1.73	12.68	1.96	1.65	3.24	2.57	3.36	8.63	0.84	39.30	33.03
1988-89	7.73	1.87	14.42	2.04	1.57	3.20	2.62	3.20	8.39	0.88	42.00	36.98
1989-90	7.85	1.82	14.32	2.11	1.53	3.22	2.60	3.29	8.56	0.85	41.80	35.49
1990-91	7.91	1.84	14.57	2.11	1.54	3.26	2.66	3.62	9.63	0.88	40.70	35.99
1991-92	7.88	1.99	15.68	2.10	1.55	3.24	2.84	4.52	12.82	0.90	43.40	38.87
1992-93	8.30	1.95	16.16	1.97	1.58	3.12	2.84	3.19	9.05	0.89	43.00	38.06
1993-94	8.03	1.89	15.21	2.19	1.83	4.00	2.81	2.87	8.04	0.96	46.10	44.43
1994-95	8.17	2.08	17.00	2.12	1.62	3.45	2.65	3.28	8.70	1.01	46.70	47.17
1995-96	8.38	2.02	16.91	2.16	1.84	3.97	3.00	3.53	10.6	0.96	47.00	45.23
1996-97	8.11	2.05	16.65	2.25	1.91	4.31	3.15	2.98	9.37	0.97	43.50	42.00
1997-98	8.36	2.24	18.69	2.32	1.87	4.33	2.96	3.09	9.18	1.06	50.30	53.10
1998-99	8.23	2.17	17.86	2.42	1.93	4.67	2.92	3.01	8.79	1.16	47.80	55.19
1999-00	8.46	2.49	21.08	2.52	2.05	5.16	2.98	3.77	11.24	1.01	45.90	46.33
2000-01	8.18	2.33	19.02	2.38	2.02	4.80	2.93	3.66	10.73	0.96	45.40	43.61
2001-02	8.06	2.26	18.23	2.11	1.84	3.88	3.12	3.41	10.61	1.00	48.00	48.04
2002-03	8.03	2.39	19.18	2.23	2.01	4.48	2.79	3.66	10.23	1.10	47.32	52.06
2003-04	8.18	2.42	19.77	2.46	1.97	4.85	2.99	3.36	10.06	1.07	49.74	53.42

Source: Economic Survey, various issues.

Note: Area, yield and production are in million hectares, tonnes per hectare, and million tonnes, respectively.

Annex-II
Crop-Wise Support Prices and Wages for Unskilled Labour: 1980-81 to 2003-04

Prices per tonne and wages per day

	Wheat		Rice (clean)				Cotton (lint)		Sugarcane		Rural wages		Urban wages	
			Basmati		Others									
	PRS	US$	PRS	US$	PRS	US$	PRS	US$	PRS	US$	PRS	US$	PRS	US$
1980-81	1450	146	3425	346	1575	159	11895	1200	241	24	16	1.57	24	2.38
1981-82	1450	136	3750	352	1825	171	11825	1109	241	23	17	1.76	28	2.60
1982-83	1600	126	3850	303	2000	157	11825	930	241	19	19	1.48	28	2.19
1983-84	1600	119	4000	297	2075	154	12400	920	241	18	20	1.48	30	2.19
1984-85	1750	116	4000	264	2075	137	12500	825	241	16	22	1.45	30	1.99
1985-86	2000	124	4375	271	2175	135	12500	774	294	18	24	1.49	35	2.16
1986-87	2000	116	5100	297	2175	127	12500	728	295	17	26	1.51	36	2.11
1987-88	2075	118	6250	355	2250	128	12600	716	295	17	27	1.53	38	2.18
1988-89	2125	111	6450	336	2500	130	12675	660	315	16	29	1.51	41	2.15
1989-90	2400	112	6900	322	2825	132	13475	628	345	16	32	1.49	46	2.15
1990-91	2800	125	7075	316	3175	142	16125	719	381	17	36	1.61	49	2.21
1991-92	3100	125	7700	310	3500	141	17875	720	419	17	42	1.69	58	2.33
1992-93	3250	125	8500	327	3750	144	19250	742	438	17	42	1.62	62	2.39
1993-94	4000	133	9000	298	3925	130	20025	664	450	15	53	1.76	71	2.35
1994-95	4000	130	9725	315	4250	138	24650	799	513	17	56	1.82	76	2.47
1995-96	4325	129	10500	313	4575	136	24650	734	538	16	63	1.88	88	2.62
1996-97	6000	154	11550	296	5250	135	30825	791	600	15	72	1.85	100	2.57
1997-98	6000	139	14050	325	6250	145	30825	714	875	20	78	1.81	109	2.52
1998-99	6000	128	14950	320	7125	152	50850	1087	875	19	75	1.60	105	2.23
1999-00	7500	145	15850	306	7525	145	44675	863	875	17	90	1.74	125	2.42
2000-01	7500	128	17450	299	8350	143	44675	764	900	15	89	1.52	124	2.12
2001-02	7500	121	17450	282	8350	135	48075	777	1050	17	91	1.47	126	2.04
2002-03	7500	128	17450	298	8350	143	49308	843	1050	18	94	1.60	130	2.21
2003-04	8750	152	18130	315	8757	152	52390	910	1050	18	94	1.60	132	2.25

Source: i) Economic Survey, various issues, for support prices and urban wages.

ii) Monthly Statistical Bulletin for rural wages from 1983-84 to 1996-97. For rest of the years, rural wages was estimated using information on urban wages.

Notes: a) Support prices for commodities were fixed in PRS and converted into US$ by using exchange parity between these currencies.

b) Support prices for rice (clean) were not announced from 1997-98 and afterwards. It was also the case for cotton (lint). Therefore, support prices for the indicated years were estimated on the basis of same for rice (paddy) and cotton (phutti) considering their relationship with the counterparts in the preceding years.

c) Support prices for wheat, rice (clean) and cotton (lint), wherever in decimals, are rounded to whole figures.

d) Urban wages are an average of daily wages prevailing in the cities, namely Lahore, Karachi, Peshawar, Quetta, Rawalpindi and Islamabad given in the Economic Survey.

e) Daily wages, given in PRS, were converted into US Dollars by using exchange parity of the respective currencies.

Annex-III

Nominal GDP (MP), Exports and Public Debts: 1980-81 to 2003-04

All values are in billions

Year	GDP (MP)		Exports (All)		Exports (R&C)		Internal debts		External debts	
	PRS	US$	PRS	US$	PRS	US$	PRS	US$	PRS	US$
1980-81	278.20	28.07	29.28	2.95	15.35	1.55	62.48	6.31	112.38	11.34
1981-82	321.79	32.47	26.27	2.65	12.18	1.23	79.09	7.98	116.15	11.72
1982-83	363.88	28.63	34.44	2.71	14.55	1.14	101.73	8.00	157.59	12.40
1983-84	421.25	31.25	37.34	2.77	15.56	1.15	122.68	9.10	173.96	12.91
1984-85	482.11	31.82	37.98	2.51	16.53	1.09	149.92	9.90	212.90	14.05
1985-86	547.13	33.90	49.59	3.07	23.56	1.46	203.12	12.58	263.89	16.35
1986-87	608.15	35.40	63.36	3.69	27.61	1.61	248.48	14.46	311.58	18.14
1987-88	685.87	38.97	78.45	4.46	35.46	2.01	290.10	16.48	351.70	19.98
1988-89	769.75	40.07	90.18	4.69	44.89	2.34	333.21	17.35	414.21	21.56
1989-90	855.94	39.90	106.47	4.96	45.27	2.11	381.31	17.78	493.54	23.01
1990-91	1020.60	45.52	138.28	6.17	59.61	2.66	448.16	19.99	553.84	24.70
1991-92	1211.39	48.77	171.73	6.91	74.40	3.00	531.50	21.40	666.26	26.82
1992-93	1341.63	51.68	177.03	6.82	68.24	2.63	615.32	23.70	732.64	28.22
1993-94	1573.10	52.16	205.50	6.81	74.57	2.47	711.06	23.58	884.77	29.34
1994-95	1882.07	61.01	251.17	8.14	98.53	3.19	807.69	26.18	984.82	31.92
1995-96	2141.84	63.80	294.74	8.78	131.99	3.93	920.27	27.41	1305.87	38.90
1996-97	2457.38	63.03	325.31	8.34	125.99	3.23	1056.09	27.09	1579.10	40.50
1997-98	2677.66	61.98	373.16	8.64	135.92	3.15	1199.67	27.77	1844.64	42.70
1998-99	2938.38	62.80	390.34	8.34	131.82	2.82	1452.94	31.05	1759.30	37.60
1999-00	3147.17	60.79	443.68	8.57	145.90	2.82	1642.39	31.72	1963.01	37.92
2000-01	3423.08	58.57	539.37	9.22	164.66	2.82	1799.22	30.79	2170.40	37.14
2001-02	3628.73	58.66	560.95	9.07	157.05	2.54	1652.11	26.71	2259.87	36.53
2002-03	4821.30	82.42	652.29	11.15	171.40	2.92	1853.70	31.69	2075.23	35.47
2003-04	5458.06	94.86	709.04	12.32	201.18	3.50	1921.40	33.39	2062.58	35.85

Source: Economic Survey, various issues.

Notes: a) The GDP data are based on methodology adopted in 1988-89.
b)The available data were converted from PRS to US Dollars by using exchange parity between the respective currencies.
c) R&C stand for rice and cotton.

Annex-IV

Export Quantities and Prices of Rice: 1980-81 to 2003-04

Year	Basmati		Others		Rice (All)	
	Quantity '000' Tonnes	Price US$/Tonne	Quantity '000' Tonnes	Price US$/Tonne	Quantity '000' Tonnes	Price US$/Tonne
1980-81	409.43	714.82	834.57	326.61	1244.00	454.38
1981-82	261.78	762.43	689.22	314.79	951.00	438.01
1982-83	228.61	640.07	676.39	212.07	905.00	320.19
1983-84	407.62	598.08	857.38	207.81	1265.00	333.56
1984-85	174.12	623.71	544.88	205.29	719.00	306.62
1985-86	260.71	668.56	1055.29	159.33	1316.00	260.21
1986-87	187.75	714.10	1082.25	152.51	1270.00	235.53
1987-88	221.40	722.86	988.60	206.17	1210.00	300.71
1988-89	216.73	714.60	637.27	244.40	854.00	363.72
1989-90	208.00	686.96	536.00	180.83	744.00	322.33
1990-91	466.56	473.39	738.44	174.94	1205.00	290.49
1991-92	557.96	413.55	954.04	194.46	1512.00	275.31
1992-93	462.16	430.41	569.84	206.18	1032.00	306.60
1993-94	305.61	413.01	678.39	171.66	984.00	246.62
1994-95	452.23	406.65	1399.77	193.42	1852.00	245.49
1995-96	716.51	417.53	884.50	239.05	1601.00	318.93
1996-97	457.19	452.77	1309.81	203.29	1767.00	267.84
1997-98	552.35	463.68	1538.65	203.07	2091.00	271.91
1998-99	588.84	517.00	1200.16	224.03	1789.00	320.46
1999-00	569.81	509.87	1346.19	185.15	1916.00	281.72
2000-01	502.00	473.12	1792.00	162.04	2294.00	230.11
2001-02	549.94	465.39	1134.06	166.45	1684.00	264.07
2002-03	700.77	498.27	1071.23	174.92	1772.00	302.79
2003-04	842.05	515.73	960.91	208.84	1803.00	352.17

Source: Economic Survey and Foreign Trade Statistics, various issues.

Note: Export prices, reported in PRS, were converted into US Dollars by using exchange parity of the respective currencies. Export quantities and prices for 2003-04 were estimated from provisional data for July 2003 to May 2004.

Annex-V

Export Quantities and Prices of Lint and Cotton Products: 1980-81 to 2003-04

Year	Lint		Yarn and Thread		Cloth		Waste	
	Quantity '000' Tonnes	Price US$/Tonne	Quantity Mill. Kgs	Price US$/Kg	Quantity Mill. Sq.M	Price US$/Sq.M	Quantity Mill. Kgs	Price US$/Kg
1980-81	325	1615.5	98.4	2.21	500.9	0.48	2.7	0.71
1981-82	231	1193.1	98.1	2.06	584.4	0.47	1.6	0.70
1982-83	255	1202.4	137.7	1.89	605.3	0.47	8.9	0.72
1983-84	98	1341.4	103.6	2.18	664.4	0.54	18.5	0.78
1984-85	263	1096.3	127.2	2.10	687.7	0.45	12.3	0.74
1985-86	639	803.9	159.1	1.78	727.3	0.43	9.5	0.55
1986-87	641	697.0	260.6	1.96	693.5	0.50	10.3	0.57
1987-88	502	1217.7	211.9	2.57	848.6	0.57	16.5	0.56
1988-89	840	1117.5	292.7	2.08	845.3	0.55	22.2	0.56
1989-90	295	1509.2	378.2	2.22	1018.0	0.55	43.8	0.64
1990-91	282	1511.0	502.0	2.29	1056.5	0.64	79.1	0.71
1991-92	455	1145.3	506.8	2.32	1196.1	0.69	93.8	0.64
1992-93	263	1025.4	556.4	2.03	1127.6	0.77	88.2	0.56
1993-94	75	1053.5	579.7	2.18	1046.8	0.79	114.1	0.55
1994-95	31	2011.8	522.6	2.93	1160.6	0.93	95.6	0.66
1995-96	311	1668.6	536.2	2.90	1323.1	0.97	82.1	0.70
1996-97	21	1513.2	508.6	2.79	1257.4	1.01	79.9	0.52
1997-98	89	1426.1	462.2	2.51	1271.3	0.98	84.9	0.49
1998-99	2	1239.6	421.8	2.41	1355.2	0.88	67.5	0.45
1999-00	83	875.3	513.3	2.09	1574.9	0.70	90.2	0.40
2000-01	135	1023.2	545.3	1.98	1735.8	0.60	95.2	0.41
2001-02	35	693.8	540.1	1.71	1909.3	0.59	95.3	0.37
2002-03	56	871.8	522.8	1.78	2033.5	0.66	93.5	0.39
2003-04	37	1273.6	502.3	2.24	2405.9	0.71	101.0	0.45

Source: Economic Survey and Foreign Trade Statistics, various issues.

Note: Export prices, reported in PRS, were converted into US Dollars by using exchange parity of the respective currencies. Export quantities and prices for 2003-04 were estimated from provisional data for July 2003 to March 2004.

REFERENCES

Becker, G.S. (1965), 'A Theory of Allocation of Time', The Economic Journal, 75(299), 497-517.

Babcr, A. (1999), *'Parliament Scy* ***Baazar-e-Husan*** *Tak'* (From Parliament to Red Light Area, published by the Ilm-o-Irfan publishers, Lahore.

Banskota, K. and Kvenson, R.I). (1978), 'Fertility, Schooling and Home Technology in Rural Philippines Households', The Philippine Economic Journal, 17(1 and 2), 32-61.

Ellahi, M. (1992), 'Allocation of Labour Supply Between Farm and Non-Farm Jobs in the Rural Economy of Pakistan's Punjab', Ph.D. thesis, University of New England, Australia.

Ellahi, M. (2002), 'Employment Generation and Labour Allocation in the Rural Punjab: A Temporal Policy Review', Economic Journal, Vol. XXXV(I & 2), 27-39.

Ellahi, M.and I I. Mahboob (2002a), 'A Model with Limited Dependent Variables: The Case of Labour Allocation by Farm Households', Sarhad Journal of Agriculture, Vol. 18, No. 4, 467-473.

Ellahi, M.and I I. Mahboob (2002 b), 'Labour Allocation by Landless Households in the Rural Punjab', Sarhad Journal of Agriculture, Vol.18, No. 1,107-191.

Government of Pakistan, Agricultural Statistics of Pakistan, Ministry of Food, Agriculture and Livestock, Food and Agriculture Division (Planning Unit), Islamabad (various issues).

Accelerated Economic Growth and Reducing Poverty: The Road head, Poverty Reduction Strategy Paper, **Ministry of Finance,** Islamabad. (2003)

Agriculture Census 2000, Procedure & Data Tables Punjab, Province Report Vol. II Part 2, Agricultural **Organization,** Statistics Division, Lahore.

Census of Pakistan 1951, 'fables **of Economics** Characteristics West Pakistan, Vols. 1 and 7, Ministry of Interior, Karachi. (1955)

Census Report of Pakistan 1998 Population **Organization,** Statistics Division, Islamabad. (2001)

Economic Survey, Economic Advisor's Wing, **Economic** Affairs and Finance ..... Division, Islamabad (various issues).

The Filth Five Year Plan 1978-83. Sectoral Programmes (Part II), Planning ---------- Commission, Islamabad (1978)

The First Five Year Plan (1955-60), Planning Commission, Karachi. (1957)

Foreign Trade Statistics: Exports and Re-Exports, Federal Bureau of Statistics, Statistics Division, Islamabad (various issues) (2004).

Labor Force Survey, Federal Bureau of Statistics, Statistics Division, Islamabad (various issues).

Monthly Statistical Bulletin, Federal Bureau of Statistics, Statistics Division, ---------- Islamabad (various issues).

Pakistan Census of Agriculture Machinery 1994, All Pakistan Report, Statistics Division, Lahore. (1995)

(2001), Interim-Pakistan Poverty Reduction Strategy Paper, **Finance** Division and Planning Commission, Islamabad.

The Second Five Year Plan 1960-65, Planning Commission, Karachi (I960)

The Sixth Five Year Plan 1983-88, Planning Commission, Islamabad (1984)

The Third Five Year Plan 1965-70, Planning Commission, Islamabad (1965)

Hiroshima, S. (2001), 'Rural Poverty and the Landed Elite: South Asian Experience Re-visited', Meiji-Gakuin University, Yokohama, Japan.

Huffman, W.E. (1980), 'Farm and Off-Farm Work Decisions: The Role of Human Capital', The Review of Economics and Statistics, 62(1), 14-23.

Huffman, W.E. (1987), Production, Consumption and Labour Supply Decisions of Farm Households: A Review of Evidence for North America, a paper presented at 10th Annual US-USSR Economic Symposium, August 29 to September 9, 1987, Soviet Union.

Hussain, I. (2003), 'Alleviating Rural Poverty', I he Daily Dawn, Economics and Business, January 6 to 12,2003.

International Fund for Agricultural Development (2000), The State of World Rural Poverty, New York University Press.

Iqbal, S.M. (1903), '///;/-///-/(///.v(/(/'(The Knowledge of Economy), published by the Aina-e-Adab, Chowk Minar, Anarkali, Lahore.

Lancaster, K.J. (1966), 'Change and Innovation in the **Technology** of Consumption, The American Economic Review, 56(2), 14-23

Low, A. (1986), Agricultural Development in Southern Africa: Farm Households and Food Crisis, James Curry Ltd., London.

Muth, R.F. (1966), 'Household Production and Consumer Demand Functions', Econometrica. 34(3), 699-708.

Qurcshi, S.K. and G.M. Arif, (1999), Profile of Poverty in Pakistan, 1998-99, P1DE, IBD.

Rashid, A. and A.R. Kcmal (1997), 'Macroeconomic Policies and Their Impact on Poverty Alleviation in Pakistan', Pakistan Development Review, Vol. 36, Spring.

Roscnzweig, M.R. (1984), 'Determinants of Wage Rates and Labour Supply Behaviour in the Rural Sector of a Developing Country' in Contractual Arrangements, Employment and Wages in Rural Labour Markets in Asia', edited by Binswangcr, H.P. and Roscn7,weig, MR., Yale University Press, New Haven and London.

RosenzAveig, M.R. (1980), 'Neoclassical Theory and the Optimising Peasant: An Econometric analysis of Market Family Labour Supply in a Developing Country', Quarterly Journal of Economics, 90(1). 31-55.

Sharma, K.C. (1988), 'A Study of Farm Household Economy of Semi-Arid Tropical Farms in India', Ph.D. thesis submitted to the University of New England, Armidale, Australia.

Social Policy and Development Centre (2000),' Annual Review.

The World Development Report 2000/2001, World Bank (2001).