

Components of the Income Aggregate: “Pakistan Integrated Household Survey (PIHS) 1991”

Prepared for the Rural Income Generating Activities (RIGA) Project¹

of the Agricultural Development Economics Division,

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This document provides the survey-specific details associated with the income aggregate construction. For more information about the RIGA project, please refer to <http://www.fao.org/es/esa/riga>. For additional detail regarding the overall RIGA income aggregate construction approach, please refer to Carletto, et al (2007), “Rural Income Generating Activities Study: Methodological note on the construction of income aggregates,” found on the RIGA website.

The Pakistan Integrated Household Survey (PIHS) 1991 is the first round of a series of income and expenditure household surveys carried out across Pakistan.

The sample for this PIHS was drawn using a three-stage stratified sampling procedure, in which the first stratification created three principal domains (self-representing cities; urban areas; rural areas). These were then divided by administrative units (20 divisions) which were then broken into districts. Twenty-four households were selected from each of the 300 Primary Sampling Units (PSUs), 16 of which were interviewed and the remainder of which were to serve as replacement households. A total of 4,800 households were selected for the survey and 4,794 were actually interviewed.

There are 2,383 rural households and 2,411 urban households in the dataset. In the original datasets, REGION is the variable distinguishing urban from rural households. Rural areas are defined as villages and communities with a 1981 Census population of less than 5,000.² In the calculation of the income aggregate, REGION is renamed to URBAN in order to use the same variable name across different surveys.

Since the sample is not self-weighting, household weights were calculated based upon the probability of selection (the variable applied is WEIGHT). The average household size in

¹ The RIGA Project is a collaboration between FAO, the World Bank and American University in Washington, D.C. Original data can be obtained from the World Bank’s Living Standards Measurement Study by visiting the LSMS website at: <http://www.worldbank.org/lsms>.

² PIHS 1991 Basic Information Document.

Pakistan is 7.24 persons.³ All money amounts are in the local currency, Rupees. In 1991, the official exchange rate was 23.80 Rs = 1.0 USD.⁴ **The income aggregates are calculated at the household level and all aggregates are annualized.**

The household-level modules of the PIHS survey can be linked using the two variables, CLUST and NH. These variables are linked to create the unique household identifier, HH, for consistency across countries within the study.

Regarding income from different sources, revenues and costs were disaggregated when such information was available. The disaggregated sources for each income component are summarized in output variables column of Table 1. The net variables and the data files included in the final total income aggregate are in **bold**. **All variables included in the aggregate income variable are net of costs, unless otherwise noted.**

Comments

- In all sections, the raw data undergoes a transformation (it is annualized, aggregated, taken from person – household level, etc) before a check for outliers takes place.
- Agrent calculates gross income from the rental of agricultural land and net income from sharecropping. Sharecropping is aggregated with total crop income whereas the land rent income is aggregated with “other” income.
- In the Crop Production section (pertaining to the do files: agbyprod, aglabor, agrent, agother; cropexp and cropincome), the reference period is the previous crop season, of which there are two (Rabi and Karif) for seasonal crops, and the previous 12 months for annual crops (orchard; sugarcane). Two total crop income variables are created: *cropincome1* and *cropincome2*. *Cropincome1* includes estimates of own crop consumption based on the agricultural production module of the household questionnaire. *Cropincome2* includes estimates of own crop consumption based on the food expenditure module of the survey.
- For the Livestock, Other Income, and Transfers sections, the reference period is the previous 12 months.
- Other Income includes income from nonlabor sources and from the rental of household land.
- For Transfer income, gross rather than net income is estimated.
- In the Wage employment section, the reference period is the previous 12 months and is subdivided into seasonal/casual wage labor and permanent wage labor.
- The classification of wage employment activities into industries following the International Standard Industry Codes (ISIC), Rev. 3.1 by which the sectors of employment can be divided into ten categories: (1) Agriculture, Livestock, Hunting and Fishing, (2) Mining, (3) Manufacturing, (4) Electricity and Utilities, (5) Construction, (6) Commerce, (7) Transportation, Storage and Communications, (8) Finance, Insurance and Real Estate, (9) Services and (10) Other Industries. These industries are disaggregated into skilled/unskilled/unknown skill level employment following the United Nations International Standard Classification of Occupations (ISCO) 88 codes.
- Earnings from wage employment are net and include all in-cash and in-kind benefits in cash received from the employer.

³ Estimated from PIHS raw data.

⁴ Exchange rate used comes from the World Bank World Development Indicators database.

- The Self Employment (Selfemp) section accounts for income from nonfarm enterprises owned by the household. The reference period is the last 12 months. Income from nonfarm enterprises is disaggregated by industry (following the ISIC coding described above) in order to convey information regarding the diversity of household activities.
- For all sections, whenever information was available regarding the share of a business, enterprise, or any other income activity owned by the household, the income earned from that activity was weighted by the share owned by the household.
- A final outlier check is imposed at the end of the Aggregateincome.do file in which households with income shares from any given activity greater than or less than 3 (300%) are dropped from the final income aggregate. Using this criteria, 82households are dropped from this survey.
- Only information on present household members is considered in the final income aggregate. Present is defined as a having been absent from the households for 6 or fewer months in the previous 12 months for non-head household members. Household heads are included regardless of their location status since they can still serve as primary income sources. Thus, “drop if MOSABS > 6 & REL != 1”.
- Participation and income share variables for all income components are included in the final income aggregate.

The programs that calculate each household’s income aggregate component are summarized in Table 1. Tables 2 and 3 summarize the results from the created income aggregate.

Table 1

Program Name (.do)	Input Data Files	Output Data Files	Output Variables
Sample	ROSTER	Sample	
Prices	F12B1 F12B2 F09B1 F09B4 F09B7 F09F2 F09H3 Sample	Prices	pricedata1 pricedata2 pricedata3 pricedata4 pricedata5 pricedata6 pricedata7 pricedata8 pricedata9 pricedata10 pricedata11 pricedata12 pricedata13 pricedata14 pricedata15 pricedata16 pricedata17 pricedata18 pricedata19 pricedata20

			pricedata21
Food	F12B1 F12B2 Prices Sample	Foodown	Cropownimp Livstowimp
Agbyprod	F09B3 F09B6 F09H1 F09H2 F09H3 Prices Sample	Cropbyprodr Cropbyprodk Cropbyprod1 Livstbyprod	Cropbyprodrimp Cropbyprodkimp cropbyprod1imp Livstbyprodimp
Aglabor	F09G1 F09G2 F09G3 Prices Sample Aglabor1 Aglabor2	Aglabor1 Aglabor2 Aglabor	laborcasexpimp laborpermexpimp laborexpimp
Agother	F09E1 F09E2 Sample	Cropserv	cropsrvincimp cropsrvexpimp
Agrent	F09A2 Sample	Agrent	Sharecropimp Farmrntincimp
Cropexp	F09DA F09DB F09DD F09DE F09DF F09DH F09DI	Cropexp1 Cropexp2 Cropexp3 Cropexp4	Cropexp1imp cropexp2imp croptrans1imp Cropexp3imp Cropexp4imp
Cropincome	F12B1 F12B2 F12B4 F12B5 F12B7 F12B8	Crop1 Crop2 Crop3	Cropsoldrimp Cropinputrimp Cropexp1rimp Cropsoldkimp Cropinputkimp Cropexp1kimp Cropsoldtimp Cropconstimp Cropexp1timp

	F12B9 Foodown Crop1 Crop2 Crop3 Crop4 Aglabor Cropserv Cropbyprodk Cropbyprodr Cropbyprod1 Agrent Cropexp1 Cropexp2 Cropexp3 Cropexp4 Sample	Crop4 Cropincome	Cropsoldsimp Cropincome1imp Cropincome2imp
Employment	F09B1 F09B4 F05A1 F05A2 F05B1 F05B2 F05B3 F05B4 F05B5 Sample	cropprice Employ1 Employ2 Employ3 Employment	Price wgeimp wgeimp1_1 wgeimp1_2 wgeimp1_3 wgeimp2_1 wgeimp2_2 wgeimp2_3 wgeimp3_1 wgeimp3_2 wgeimp3_3 wgeimp4_1 wgeimp4_2 wgeimp4_3 wgeimp5_1 wgeimp5_2 wgeimp5_3 wgeimp6_1 wgeimp6_2 wgeimp6_3 wgeimp7_1 wgeimp7_2 wgeimp7_3 wgeimp8_1 wgeimp8_2 wgeimp8_3 wgeimp9_1 wgeimp9_2 wgeimp9_3 wgeimp10_1 wgeimp10_2 wgeimp10_3
Livestock	F09F1 F09F2 F09F3 Livst1 Livst2 Livstbyprod Foodown Sample	Livst1.dta Livst2.dta Livestock	livstinc1imp livstexp1imp livstexp2imp livstincimp

Otherinc	F06C F17 Sample	Self3 Otherinc	Othselfincimp otherincimp
Selfemp	F10A1 F10A2 F10B F10A1 F10A2 F10D Sample Self1 Self2 Self3	Self1 Self2 Selfemp	hhexpimp hhrevimp selfimp1 selfimp2 selfimp3 selfimp4 selfimp5 selfimp6 selfimp7 selfimp8 selfimp9 selfimp10
Transfers	F16B1 F16B2 F17 F05C Trans1 Trans2 Trans3 Cropexp2 Sample	Trans1 Trans2 Trans3 Transfers	privtrans1imp socialassist1imp privtrans2imp socialassist2imp pensionsimp privtrans pubtrans socialtrans transfersgrossimp
AggregateIncome	Sample Agrent Cropincome Employment Livestock Otherincome Selfemp Transfers	Income	agr_wge nonagr_wge crop1 crop2 livestock selfemp transfer other totincome1

			totincome2
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Table 2

<i>Pakistan 1991</i>		2,315 Rural HH Observations		Rural, Weighted, Rupees				Rural, Weighted, USD	
<i>Variable</i>		<i># Participants</i>	<i>Participation Rate</i>	<i>Returns to Participation- Participant HHs</i>	<i>Returns to Participation- All HHs</i>	<i>Share of Total Income- All HHs (Mean of Shares)</i>	<i>Share of Total Income- All HHs (Share of Means)</i>	<i>Returns to Participation- Participant HHs</i>	<i>All HHs</i>
agr_wge	Wage Employment- Agriculture	535	25.03%	4,587	1,148	5.65%	2.12%	193	48
nonagr_wge	Wage Employment- Nonfarm	1,066	46.74%	17,815	8,327	28.34%	15.40%	749	350
crop1	Crop Production	1,057	44.44%	64,076	28,473	17.44%	52.66%	2,692	1,196
livestock	Livestock Production	1,791	76.34%	9,022	6,888	22.26%	12.74%	379	289
selfemp	Non-ag Self Employment	661	31.56%	25,918	8,179	20.59%	15.13%	1,089	344
transfer	Total Transfers	706	31.29%	2,548	797	4.09%	1.47%	107	33
other	Other Income Sources	61	3.30%	7,809	258	1.62%	0.48%	328	11
totincome1	Total Household Income	2,301	99.72%	54,222	54,070	100.00%	100.00%	2,278	2,272

Percent Rural (Weighted)	69.72%
Rupees/USD 1991	23.80

Notes:

1. Source data: 1991 Integrated Household Survey
2. Exchange rate used comes from the World Bank World Development Indicators database.
3. The variable "crop1" is distinguished from "crop2" in the way home consumption of own production of crops (owncons) is calculated. In crop1, owncons is the amount reported in the crop section of the questionnaire. For crop2, owncons is calculated from the "Consumption of Own Produce" section of the household questionnaire. Total household income "totincome1" and "totincome2" are therefore calculated with the corresponding crop income variable.
4. All values reported are annual and net of costs (with the exception of income from transfers and land rent, which are gross receipts).

Table 3

Pakistan 1991		2,315 Rural HH Observations		Rural, Weighted, Rupees			Rural, Weighted, USD		
<i>Variable</i>		<i># Participants</i>	<i>Participation Rate</i>	<i>Returns to Participation- Participant HHs</i>	<i>Returns to Participation- All HHs</i>	<i>Share of Total Income- All HHs (Mean of Shares)</i>	<i>Share of Total Income- All HHs (Share of Means)</i>	<i>Returns to Participation- Participant HHs</i>	<i>All HHs</i>
agr_wge	Wage Employment- Agriculture	535	25.03%	4,587	1,148	5.51%	1.99%	193	48
nonagr_wge	Wage Employment- Nonfarm	1,066	46.74%	17,815	8,327	26.56%	14.41%	749	350
crop2	Crop Production	1,418	60.28%	53,393	32,187	31.49%	55.70%	2,243	1,352
livestock	Livestock Production	1,791	76.34%	9,022	6,888	14.37%	11.92%	379	289
selfemp	Non-ag Self Employment	661	31.56%	25,918	8,179	18.60%	14.15%	1,089	344
transfer	Total Transfers	706	31.29%	2,548	797	2.80%	1.38%	107	33
other	Other Income Sources	61	3.30%	7,809	258	0.68%	0.45%	328	11
totincome2	Total Household Income	2,303	99.82%	57,889	57,783	100.00%	100.00%	2,432	2,428

Percent Rural (Weighted)	69.72%
Rupees/USD 1991	23.80

Notes:

1. Source data: 1991 Integrated Household Survey
2. Exchange rate used comes from the World Bank World Development Indicators database.
3. The variable "crop1" is distinguished from "crop2" in the way home consumption of own production of crops (owncons) is calculated. In crop1, owncons is the amount reported in the crop section of the questionnaire. For crop2, owncons is calculated from the "Consumption of Own Produce" section of the household questionnaire. Total household income "totincome1" and "totincome2" are therefore calculated with the corresponding crop income variable.
4. All values reported are annual and net of costs (with the exception of income from transfers and land rent, which are gross receipts).