Components of Income Aggregate:
"Integrated Household Survey, Bulgaria 1995"

Prepared for the Rural Income Generating Activities (RIGA) Project[1]

of the Agricultural Development Economics Division,

Food and Agriculture Organization

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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.

This Bulgaria Integrated Household Survey (BIHS) was conducted in April and May 1995 using a stratified two-stage cluster design. The sample used the pre-census listing of the 1995 Population Census as frame and is nationally representative.

From a sub-sample of 4000 census clusters (out of a total of approximately 40,000 clusters, or statistical sectors, SS), 500 clusters were randomly selected. From these clusters, five households were chosen, creating a total sample of 2,500 households to interview. In total, a non-response rate 1.28% resulted in a total of 2468 households interviewed for the Bulgaria 1995 HIS. The average household size for that year was 3 persons.[2]

There are 824 rural households and 1664 urban households in the dataset. In the original datasets, LOC_TYPE is the variable distinguishing urban from rural households. A settlement with a population over 3000 inhabitants is usually regarded as urban[3]. Rural is not specifically defined but, by definition, it applies to all areas not encompassed by the definition of urban. In the calculation of the income aggregate, loc_type is renamed to URBAN in order to use the same variable name across different surveys.

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[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] Source: "Bulgaria Integrated Household Survey 1995: Survey Organization and Implementation".

[3] Source: source of the definition is an e-mail from Bulgaria's National Statistical Institute

All money amounts are in Lev (BGL). In 2001, the official exchange rate was 67.7 BGL = 1.0 USD.[4] **The income aggregates are calculated at the household level and all aggregates are annualized.**

The various household-level modules of this survey can be linked using unique household identifier variable HHNUMBER. This variable is renamed to HH in the final aggregate file in order to ensure 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 the output variables column of Table 1. The net variables and the data files included in the final total income aggregate (Income.dta) 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 to household level, etc) before an outlier check takes place.
- In the Crop Production section, the reference period is the 12 months (April 1994 - May 1995). Two total crop income variables are created. 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 Booklet completed by each household surveyed.
- In the Transfers section, the reference period is the previous 12 months for remittances. For public transfers, pensions and social benefits, the reference period is the duration of time over which the transfers were received. If the duration of receiving transfers is not specified in the questionnaire, the duration is estimated by calculating the difference between the starting month and ending month of receiving these transfers.
- For Transfer income, two estimates are calculated: gross and net. The household income aggregate, however, considers the gross value rather than net.
- Rentagric calculates gross income from the rental of agricultural land..
- For the Livestock, Other Income, Rentagric , the reference period is the previous 12 months.
- The classification of wage employment activities into industries and skilled/unskilled categories follow the United Nations International Standard Industrial Classification (ISIC) and the International Standard Classification of Occupations (ISCO 88) codes. Given the survey classification of each employed household member by industry, the employment sectors include: Agriculture and fishing, Manufacturing, Commerce, Finance insurance and real state, Services and Unknown. The survey did not include "Mining", "Construction", "Electricity and utilities" and "Transport, storage and communication" as categories in its classification system.
- Earnings from wage employment are net and include all in-cash and in-kind benefits received from the employer. The reference period is the duration of receiving the wage. If the duration

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[4] Exchange rate used is based on the average monthly exchange rate for 1995, as quoted by the Bulgarian National Bank.

of receiving wages is not specified in the questionnaire, the duration is assumed to be 12 months.

- The Self Employment section accounted for income from non-farm enterprises owned by the household. The reference period is the previous 30 days.
- Net annual income from nonfarm enterprises is disaggregated by industry (corresponding with the ISIC Codes) to convey information about the diversity of household activities.
- Only present household members who are not heads are kept 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 because in their position they can still serve as primary income sources. Thus, drop if ABS_MTHS >6 & RELASHIP=1.
- Participation and income share variables are also included in the final income aggregate.
- 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, 4 households are dropped from this survey.

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

do file	input dta files	output dta files	output variables	notes
Sample.do	Strata.dta	Sample.dta		
prices.do	FILE11V1.DTA FILE25V1.DTA FILE29V1.DTA FILE30V1.DTA Sample.dta	prices.dta	pricedata1 pricedata2 pricedata3 pricedata4 pricedata5 pricedata6 pricedata7 pricedata8 pricedata9 pricedata10 pricedata11 pricedata12 pricedata13 pricedata14 pricedata15	
Food.do	FILE11V1.DTA Prices.dta Sample.dta	Food.dta	foodcons(imp) foodpurch(imp) foodfree(imp) cropown(imp) livstown(imp)	

Agother.do	FILE31V0.DTA Sample.dta	agother.dta	farmlaborexp(imp) farmsrvexp(imp) farmothrinc(imp)
Cropincome1.do	FILE25V1.dta FILE26V0.dta Sample.dta	cropinc.dta cropexp.dta	cropsold(imp) cropinput(imp) cropown1(imp) cropexp(imp)
Cropincome2.do	food.dta cropinc.dta cropexp.dta agother.dta Sample.dta	**Cropincome.dta**	**cropincome1** **cropincome2**
Employment.do	FILE18V0.dta FILE19V0.dta Sample.dta	employ1.dta employ2.dta **Employment.dta**	wgeimp wgeimp wge1_1(imp) wge1_2(imp) wge3_1(imp) wge3_2(imp) wge6_1(imp) wge6_2(imp) wge8_1(imp) wge8_2(imp) wge9_1(imp) wge9_2(imp) wge10_1(imp) wge10_2(imp)
Livestock.do	FILE29V1. DTA FILE30V0.DTA FILE31V0.dta Food.dta Sample.dta	livstinc.dta livstbyprdinc.dta livstexp.dta **Livestock.dta**	livstsold(imp) livstpurch(imp) livstborn(imp) livstbypr(imp) livstinpt(imp) **livstinc(imp)**
Otherinc.do	FILE46V0.dta	**Otherinc.dta**	otherinc(imp)
Rentagric.do	FILE49V1.DTA Sample.dta	**Rentinc.dta** **Rentagric.dta**	nonfarmrntinc(imp) farmrntinc(imp) **farmrnt(imp)**
Selfemp.do	FILE21V0.DTA Sample.dta	**Selfemp.dta**	self3(imp) self5(imp) self6(imp) self7(imp)

			self9(imp)
			self10(imp)

Transfers1.do	FILE34V1.DTA	privtransinc.dta	privtransinc(imp)
	FILE36V1.DTA	privtransexp.dta	privtransexp(imp)
	Sample.dta	transfpriv.dta	privtrans(imp)

Transfers2.do	FILE38V0.DTA	pensionsprivate.dta	pension(imp)
			childallow(imp)
	FILE39V0.DTA	pensionsstate.dta	pension(imp)
			childallow(imp)
	FILE40V0.DTA	pensionssurvivor.dta	pensions(imp)
	FILE41V0.DTA	pensionsdisability.dta	pensions(imp)
	Sample.dta	transfpens.dta	pensions(imp)

Transfers3.do	FILE42V0.DTA	unempbenef.dta	childallow(imp)
			pension(imp)
	FILE43V0.DTA	materbenef.dta	soccast(imp)
			stipend(imp)
			childallow(imp)
			childallowa(imp)
	FILE44V0.DTA	inkindbenef.dta	trasnp712(imp)
			inkind(imp)
	FILE45V0.DTA	housbenef.dta	housebf912(imp)
	Sample.dta	transfsocial.dta	socialtransfers(imp)
	unempbenef.dta		
	materbenef.dta		
	inkindbenef.dta		

Transfers4.do	transfpriv.dta	**Transfers.dta**	transferstot(imp)	
	transfpens.dta		transfersgross(imp)	
	transfsocial.dta		pubtransfer(imp)	
	Sample.dta		privtransfer(imp)	
Aggregateincome	Cropincome.dta	Income.dta	agr_wge	Participation and
	Employment.dta		nonagr_wge	Income Share
	Livestock.dta		crop1	variables are
	Otherincome.dta		crop2	also included in
	Selfemp.dta		livestock	the final income
	Transfers.dta		other	aggregate.
	Sample.dta		selfemp	
			totincome1	
			totincome2	

Table 2

Bulgaria 1995	823 Rural HH Observations	Rural, Leva						Rural, USD	
Variable		# Participants	Participation Rate	Returns to Participation- Participant HHs	Returns to Participation- All HHs	Share of Total Income- All HHs (Mean of Shares)	Share of Total Income- All HHs (Share of Means)	Returns to Participation- Participant HHs	Returns to Participation- All HHs
agr_wge	Wage Employment- Agriculture	145	17.62%	69,260	12,202	9.09%	12.50%	1,031	182
nonagr_wge	Wage Employment- Nonfarm	184	22.36%	92,822	20,753	13.12%	21.26%	1,382	309
crop1	Crop Production	375	45.57%	4,130	1,882	2.62%	1.93%	61	28
livestock	Livestock Production	671	81.53%	27,006	22,018	23.51%	22.55%	402	328
selfemp	Non-ag Self Employment	23	2.79%	271,535	7,588	1.27%	7.77%	4,043	113
transfer	Total Transfers	655	79.59%	38,821	30,896	47.98%	31.65%	578	460
other	Other Income Sources	168	20.41%	11,197	2,286	2.40%	2.34%	167	34
totincome1	Total Household Income	801	97.33%	100,306	97,625	100.00%	100.00%	1,493	1,453

Percent Rural	33.40%
Leva/USD July 26, 2002	67.17

Notes:

1. Source data: 1995 Bulgaria Integrated Household Survey (BIHS).

2. Exchange rate source: Bulgaria National Bank. Average exchange rate for 1995. http://www.bnb.bg/bnb/home.nsf/fsWebIndex?OpenFrameset

3. Bulgaria's IHS is a nationally representative survey, therefore weights were not applied in the computation of these summary statistics.

4. The variable "crop1" is distinguished from "crop2" in the way home consumption of own production of crops (owncons) is calculated. In crop1, owncons is calculated from the question in the agricultural production section of the household questionnaire that asks about household consumption of agricultural production. For crop2, owncons is calculated from the food expenditure section of the household questionnaire. Total household income "totincome1" and "totincome2" are therefore calculated with the corresponding crop income variable.

5. 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

Bulgaria 1995	823 Rural HH Observations	Rural, Leva						Rural, USD	
Variable		# Participants	Participation Rate	Returns to Participation- Participant HHs	Returns to Participation- All HHs	Share of Total Income- All HHs (Mean of Shares)	Share of Total Income- All HHs (Share of Means)	Returns to Participation- Participant HHs	Returns to Participation- All HHs
agr_wge	Wage Employment- Agriculture	145	17.62%	69,260	12,202	7.87%	10.68%	1,031	182
nonagr_wge	Wage Employment- Nonfarm	184	22.36%	92,822	20,753	11.57%	18.17%	1,382	309
crop2	Crop Production	735	89.31%	20,702	18,489	19.78%	16.19%	308	275
livestock	Livestock Production	671	81.53%	27,006	22,018	18.97%	19.27%	402	328
selfemp	Non-ag Self Employment	23	2.79%	271,535	7,588	1.27%	6.64%	4,043	113
transfer	Total Transfers	655	79.59%	38,821	30,896	38.54%	27.05%	578	460
other	Other Income Sources	168	20.41%	11,197	2,286	2.01%	2.00%	167	34
totincome2	Total Household Income	810	98.42%	116,065	114,232	100.00%	100.00%	1,728	1,701

Percent Rural	33.40%
Leva/USD	
July 26, 2002	67.17

Notes:

1. Source data: 1995 Bulgaria Integrated Household Survey (BIHS).

2. Exchange rate source: Bulgaria National Bank. Average exchange rate for 1995. http://www.bnb.bg/bnb/home.nsf/fsWebIndex?OpenFrameset

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