

# **Components of the Income Aggregate: “Living Standards Survey, Vietnam 1998”<sup>1</sup>**

*Prepared for the Rural Income Generating Activities (RIGA) Project<sup>2</sup>*

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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.*

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The Vietnam Living Standards Survey (VLSS) was carried out over a period of twelve months in 1997 and 1998. The household survey was conducted from December 1997 through December 1998.

The sample for this VLSS was selected using a three-stage stratified sampling procedure for which the Primary Sampling Unit (PSU) was the commune or ward, the Secondary Sampling Unit (SSU) was the village or precinct and the third, the household. PSUs were selected with probability proportional to census households. SSUs were selected with probability proportional to the population as reported by the commune authorities and households were then selected from each village/precinct. Most of the 1998 VLSS sample (4,704 households) were from the 1992 VLSS. For 1998, however, 1,290 additional households were surveyed. These households were selected using a sub-sample of the 1995 Multi-Purpose Household Survey (MPHS) of the General Statistical Office (GSO).

A total of 6,000 households from 156 PSUs were surveyed for the final sample,<sup>3</sup> however 5,998 households actually have complete surveys in the raw data. There are 4,269 rural households and 1,730 urban households in the dataset. In the original datasets, URBAN98 is the variable

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<sup>1</sup> The information provided in this document relies substantially upon the Basic Information Document, provided with the 1998 Vietnam survey data..

<sup>2</sup> 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/lsm>.

<sup>3</sup> Twenty households from each village block were randomly selected for the survey.; 16 of these were expected to complete the survey and 4 additional households were selected in case the need to replace a household arose.

distinguishing urban from rural households.<sup>4</sup> For the calculation of the income aggregate, URBAN98 is renamed to URBAN in order to use the same variable name across different surveys.

Although the 1992 VLSS was nationally representative and did not require weights, the 1,200 additional households surveyed for 1998 were not selected proportional to the population (over-sampling of certain areas was deliberately performed), therefore population weights are necessary to apply to any analyses using the income aggregate. The average household size in Vietnam was 4.6 persons.<sup>5</sup> All money amounts are in the local currency, Dong. In 1998, the official exchange rate was 13.270 Dong = 1.0 USD.<sup>6</sup> **The income aggregates are calculated at the household level and all aggregates are annualized.**

The various household-level modules of the VLSS survey can be linked using the two variables that create the unique household identifier: HOUSEHOL. This variable is renamed as 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 (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 a check for outliers takes place.
- In the Crop Production section, the reference period is the previous 12 months. 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 section of the questionnaire in which household consumption was recorded and updated periodically over a given time frame.
- In the Food Expenses and Home Production section, the survey distinguishes between Holiday (Tet) and Regular (Non-Holiday) expenditures and consumption.
- The reference period for the consumption of own produce (from the food expenditure section of the questionnaire, corresponding to *Cropincome2*) is the last 12 months. However, for holiday expenses and consumption, these were assumed for the calculation of the income aggregate, based on information provided in the Basic Information Document,<sup>7</sup> to only cover 2 weeks of the year. A corresponding adjustment was made to the regular (non-holiday) consumption to account for the holiday expenditures.
- For the Livestock, Other Income, Rentagric and Transfers sections, the reference period is the previous 12 months.

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<sup>4</sup> The definition of rural is not documented in the survey.

<sup>5</sup> Estimate based on results from the 1999 Population and Housing Census. Results available from the Ministry of Agriculture and Rural Development's website at: <http://www.agroviet.gov.vn/html/BandoKT-XHVietnam/Contents.asp>.

<sup>6</sup> Exchange rate source: World Development Indicators.

<sup>7</sup> See page 47 of the Basic Information Document for 1998 VLSS.

- Other Income includes income from nonlabor, nonfarm sources.
- Rentagric calculates net income from the rented and sharecropped agricultural land. The expenditures taken into account are the expenditures a household makes on for land it cultivates and owns (i.e. land for which the household must pay land rights to a public authority). Payments made for land that the household does not own are not owned is not considered in this estimate.
- For Transfer income the estimate calculated is of gross receipts. Households are not asked about transfer outflows therefore a net estimate cannot be calculated.
- In the Wage employment section, the reference period is the specified by the respondent in the questionnaire for the primary and secondary jobs of the past 7 days and the primary and secondary jobs held in the last 12 months. All household members 6 years and older were interviewed.
- The survey establishes its own industrial and occupational classifications, which, for the income aggregate are modified to follow the United Nations International Standard Industrial Classification (ISIC) and the International Standard Classification of Occupations (ISCO) 88 codes. Given these standards, the employment sectors include: (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.
- Earnings from wage employment include all in-cash and in-kind benefits in cash received from the employer and are net of contributions to social security and health insurance.
- The Self Employment (Selfemp) section accounted for income from nonfarm enterprises owned by the household. For expenditures, the reference period was chose by the respondent and for revenues, the reference period is the last 12 months. Income from nonfarm enterprises is disaggregated by industry (following the ISCO 88 Codes) in order to convey 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, 25 households 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 S1AQ10 > 6 & S1AQ03 != 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 (Stata "do" file)	Input Data Files	Output Data Files	Output Variables
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Sample	SCR00A.DTA HHEXP98N.DTA	Sample.dta	
prices	SCR09B1.DTA SCR09B2.DTA SCR09B3.DTA SCR09B4.DTA SCR09B5.DTA SCR09B6.DTA PRICE1.DTA SCR11B.DTA	<i>prices.dta</i>	pricedata1 pricedata2 pricedata3 pricedata4 pricedata5 pricedata6 pricedata7 pricedata8 pricedata9 pricedata10 pricedata11 pricedata12
Food	SCR11A.DTA SCR11B.DTA Prices.dta Sample.dta	Food_Tet.dta. Food.dta <i>Foodexp_crop.dta</i> <i>Foodexp_livestock.dta</i>	foodtetownimp foodownimp foodowncropimp foodownlivstimp
Agbyprod	SCR9E2.dta	<i>agbyprod.dta</i>	agbyprodimp
Aquainc	SCR09H2.DTA Sample.dta	<b>Aquacinc.dta</b>	<b>aquacultureimp</b>
Cropincome1	SCR09D02.DTA SCR09D03.DTA SCR09D05.DTA  SCR09D06.DTA SCR09D07.DTA SCR09D08.DTA SAMPLE.DTA	seedexp.dta chfexp.dta fertexp.dta  pestexp.dta servexp.dta labexp.dta	seedexpimp chfertexpimp ofertexpimp fertexpimp pestexpimp other1expimp servexpimp laborexpimp
Cropincome2	SCR09D09.DTA Seedexp.dta Chfexp.dta Fertexp.dta Pestexp.dta Servexp.dta Labexp.dta SAMPLE.DTA	otherexp.dta <i>Cropexp.dta</i>	other2expimp cropexpimp
Cropincome3	SCR09B1.DTA	<i>cropinrice.dta</i>	crop1imp owncons1imp

	SCR09B2.DTA	<i>cropincother.dta</i>	seed1imp fodder1imp labor1imp crop2imp owncons2imp seed2imp fodder2imp labor2imp
	SCR09B3.DTA	<i>cropincindst.dta</i>	crop3imp owncons3imp seed3imp labor3imp
	SCR09B4.DTA SAMPLE.DTA	<i>cropinperen.dta</i>	crop4imp owncons4imp labor4imp
Cropincome4	SCR09B5.DTA	<i>cropinfruit.dta</i>	crop5imp owncons5imp labor5imp
	SCR09B6.DTA	<i>cropinchores.dta</i>	crop6imp owncons6imp labor6imp
	SCR09C2.DTA	<i>cropinbyprd.dta</i>	cropbyprownimp cropbyprimimp
	<i>agbyprod.dta</i> <i>cropinfruit.dta</i> <i>cropinbyprd.dta</i> <i>cropinchores.dta</i> <i>cropinrice.dta</i> <i>cropincother.dta</i> <i>cropincindst.dta</i> <i>cropinperen.dta</i> <i>cropexp.dta</i> <i>Foodexp_crop.dta</i> <i>Food_Tetexp.dta</i> SAMPLE.DTA	<b>Cropincome.dta</b>	<b>cropincome1imp</b> <b>cropincome2imp</b>
Employment1	SCR04A.DTA SCR04B1.DTA SCR04B2.DTA SCR04B3.DTA SCR04C.DTA SAMPLE.DTA	Employstatus.dta <i>Employmainjob.dta</i>  <i>employsecnjob.dta</i>	amount12mainimp otheramt12mainimp  amount12imp otheramt12imp
Employment2	SCR04D1.DTA  SCR04E.DTA SAMPLE.DTA	<i>Employmainjobyr.dta</i>  <i>employsecnjobyr.dta</i>	amount12mainyrimp otheramt12mainyrimp amount12secnyrimp otheramt12secnyrimp

Employment3	<i>employmainjob.dta</i> <i>employsecnjob.dta</i> <i>employmainjobyr.dta</i> <i>employsecnjobyr.dta</i> SAMPLE.DTA	<b>Employment.dta</b>	<b>wge, wgem, wgimp (by industry and skill level)</b>
Livestock1	SCR09J.DTA SAMPLE.DTA	<i>livstexp.dta</i>	livstinptimp
Livestock2	SCR09F2.DTA SCR09G2.DTA SAMPLE.DTA <i>livstexp.dta</i> <i>livstinc.dta</i> <i>livstbyprod.dta</i> <i>Foodexp_livestock.dta</i>	<i>livstinc.dta</i> <i>livstbyprod.dta</i> <b>Livestock.dta</b>	livstsoldimp livstbyprsoldimp <b>livstockimp</b>
Otherincome	SCR06B1.dta SCR13B.DTA SAMPLE.DTA <i>othinc1.dta</i> <i>othinc2.dta</i>	<i>othinc1.dta</i> <i>othinc2.dta</i> <b>Otherincome.dta</b>	nonfarmrnt1imp nonfarmrnt2imp <b>nonfarmrntimp</b>
Rentagric1	SCR09B1.DTA SCR09A12.DTA  SCR09A22.DTA SAMPLE.DTA	<i>riceprice.dta</i> <i>agrland1.dta</i>  <i>agrland2.dta</i>	price s9a1q111yrvalimp s9a1q112yrimp s9a1q113yrimp s9a2q111yrvalimp s9a2q112yrimp s9a2q113yrimp
Rentagric2	SCR09L.dta SCR09A42.DTA SAMPLE.DTA  <i>agrland1.dta</i> <i>agrland2.dta</i> <i>agrland4.dta</i> <i>othfarmrnt.dta</i>	<i>othfarmrnt.dta</i> <i>agrland4.dta</i>  <b>Rentagric.dta</b>	s9lq11imp s9a4q131valimp s9a4q132imp s9a4q133imp farmrntimp

Selfemp	SCR100.DTA SCR10A.DTA SCR10B.DTA SCR10C.DTA SAMPLE.DTA <i>selfemplexp.dta</i> <i>selfemplinc.dta</i>	<i>selfemplexp.dta</i> <i>selfemplinc.dta</i>  <b>Selfemp.dta</b>	expimp hhrevimp selfempincimp  <b>selfimp1</b> <b>selfimp2</b> <b>selfimp3</b> <b>selfimp4</b> <b>selfimp5</b> <b>selfimp6</b> <b>selfimp7</b> <b>selfimp8</b> <b>selfimp9</b> <b>selfimp10</b>
Transfers1	SCR13B.DTA SAMPLE.DTA	<i>pubtransfers.dta</i>	pubtransimp pensionsimp socialtransimp
Transfers2	SCR12D2.DTA SCR13A.DTA SAMPLE.DTA <i>pubtransfers.dta</i> <i>transfersout.dta</i> <i>transfersinc.dta</i>	<i>transfersout.dta</i> <i>transfersinc.dta</i>  <b>Transfers.dta</b>	s12dq08imp s13aq08imp  pubtransimp privtransincimp privtransfersimp transferstotimp <b>transfersgrossimp</b>
Aggregateincome	Sample.dta Aquainc.dta Cropincome.dta Employment.dta Livestock.dta Otherincome.dta Rentagric.dta Selfemp.dta Transfers.dta	Income.dta	agr_wge nonagr_wge crop1 livestock selfemp transfers other

**Table 2**

<b>Vietnam 1998</b>		<b>4,236 Rural HH Observations</b>		<b>Rural, Weighted, Dongs</b>				<b>Rural, Weighted, USD</b>	
<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>Returns to Participation- All HHs</i>
<b>agr_wge</b>	Wage Employment- Agriculture	925	20.11%	3,153	634	5.95%	3.97%	238	48
<b>nonagr_wge</b>	Wage Employment- Nonfarm	1,332	31.86%	3,981	1,268	9.22%	7.95%	300	96
<b>crop1</b>	Crop Production	3,901	92.72%	4,568	4,236	42.39%	26.54%	344	319
<b>livestock</b>	Livestock Production	3,775	90.76%	1,731	1,571	13.97%	9.84%	130	118
<b>selfemp</b>	Non-ag Self Employment	1,600	38.34%	19,843	7,609	21.00%	47.67%	1,495	573
<b>transfer</b>	Total Transfers	1,484	36.38%	1,670	608	7.14%	3.81%	126	46
<b>other</b>	Other Income Sources	758	19.34%	179	35	0.33%	0.22%	13	3
<b>totincome1</b>	Total Household Income	4,239	99.96%	15,966	15,960	100.00%	100.00%	1,203	1,203

<b>Percent Rural (Weighted)</b>	<b>75.89%</b>
<b>Dong/USD (November 1999)</b>	<b>13.270</b>

Notes:

1. Source data: 1998 Living Standards Survey (VLSS).
2. Exchange rate source: World Development Indicators
3. The variable "crop1" is distinguished from "crop2" in the way home consumption of own production of crops (owncons) is calculated. In crop1, owncons = crop harvested minus crop sold. For crop2, owncons is based on the consumption Holiday Expenses and Regular (Food) Expenses sections of the 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 Transfers, which are gross receipts)

**Table 3**

<i>Vietnam 1998</i>	4,236 Rural HH Observations	Rural, Weighted, Dongs						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>Returns to Participation- All HHs</i>
<b>agr_wge</b>	Wage Employment- Agriculture	925	20.11%	3,153	634	5.92%	4.04%	238	48
<b>nonagr_wge</b>	Wage Employment- Nonfarm	1,332	31.86%	3,981	1,268	9.22%	8.08%	300	96
<b>crop2</b>	Crop Production	4,133	97.75%	4,069	3,977	41.49%	25.33%	307	300
<b>livestock</b>	Livestock Production	3,775	90.76%	1,731	1,571	14.81%	10.00%	130	118
<b>selfemp</b>	Non-ag Self Employment	1,600	38.34%	19,843	7,609	21.25%	48.46%	1,495	573
<b>transfer</b>	Total Transfers	1,484	36.38%	1,670	608	6.97%	3.87%	126	46
<b>other</b>	Other Income Sources	758	19.34%	179	35	0.32%	0.22%	13	3
<b>totincome2</b>	Total Household Income	4,241	100.00%	15,702	15,702	100.00%	100.00%	1,183	1,183

<b>Percent Rural (Weighted)</b>	<b>75.89%</b>
<b>Dong/USD (November 1999)</b>	<b>13.270</b>

Notes:

1. Source data: 1998 Living Standards Survey (VLSS).
2. Exchange rate source: World Development Indicators
3. The variable "crop1" is distinguished from "crop2" in the way home consumption of own production of crops (owncons) is calculated. In crop1, owncons = crop harvested minus crop sold. For crop2, owncons is based on the consumption Holiday Expenses and Regular (Food) Expenses sections of the 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 Transfers, which are gross receipts)