

# Components of the Income Aggregate: “Integrated Household Survey, Vietnam 1992 - 1993”<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 Measurement Survey (LSMS)<sup>3</sup> was conducted between September 1992 and October 1993.

The sample for this LSMS was selected using a three-stage stratified sampling procedure for which the Primary Sampling Unit (PSU) was the commune; the Secondary Sampling Unit (SSU) was the village or urban cluster and the third, the household. PSUs were selected with probability proportional to size. SSUs were selected with probability proportional to the population as reported by the commune authorities and 16 households were then selected from each village/cluster.

A total of 4,800 households from 150 communes were surveyed for the final sample,<sup>4</sup> however 3,840 households actually have complete surveys in the raw data. There are 4,269 rural households and 960 urban households in the dataset. In the original datasets, URBAN is the variable distinguishing urban from rural households.<sup>5</sup>

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<sup>1</sup> The information provided in this document relies substantially upon the Basic Information Document, provided with the 1992 Vietnam LSMS 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> In Vietnam, the 1992 LSMS is called the Vietnam Living Standards Survey (VLSS).

<sup>4</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.

<sup>5</sup> The definition of rural is not documented in the survey.

The 1992 VLSS is nationally representative and does not require weights. The average household size in Vietnam was 4.96 persons.<sup>6</sup> All money amounts are in the local currency, Dong. In 1992, the official exchange rate was 11.20 Dong = 1.0 USD.<sup>7</sup> **The income aggregates are calculated at the household level and all aggregates are annualized.**

The various household-level modules of the LSMS survey can be linked using the unique identifier variable HID. This variable is renamed as HH in the final aggregate income file for consistency across countries within the study. The commune (CUM) variable can be used to match the household dataset with the price and community dataset.

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.**

### 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.
- In the Crop Production section, the reference period is the previous 12 months (the last cropping season). 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 disaggregated 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>8</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 Aquaculture, Livestock, Other Income, Rentagric and Transfers sections, the reference period is the previous 12 months.
- Other Income includes income from nonlabor, nonfarm and aquaculture sources.
- Rentagric calculates net income from the rented and sharecropped agricultural land.
- 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.

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<sup>6</sup> Estimated based on the information provided in the dataset.

<sup>7</sup> Exchange rate source: World Development Indicators.

<sup>8</sup> Basic Information Document for 1992 VLSS.

- 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.
- The classification of non-farm enterprise activities into industries categories follows the same classification system as the employment section. Given these standards, the non-farm enterprise 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.
- 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, 123 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 MON >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**

do file	input dta files	output dta files	output variables
Sample.do	HHEXPEND.dta	Sample.dta	
prices.do	SECT09B1.DTA SECT09B2.DTA SECT09B3.DTA SECT09B4.DTA SECT09B5.DTA	prices.dta	pricedata1 pricedata2 pricedata3 pricedata4 pricedata5

	SECT09F1.DTA SECT11B.DTA PRICE1.dta		pricedata6 pricedata7 pricedata8 pricedata9 pricedata10 pricedata11 pricedata12 pricedata13 pricedata14 pricedata15
Food.do	SECT11A.DTA SECT11B.DTA Prices.dta Sample.dta	Food_Tet.dta  Food.dta	foodtetown(imp) foodtetpurch(imp) foodown(imp) foodpurch(imp)
Aquainc.do	SCR09H.DTA Sample.dta	<b>Aquainc.dta</b>	aquaculture(imp)
Cropincome1.do	SECT09D1.DTA SECT09D2.DTA SECT09D3.DTA  SECT09D4.DTA SECT09D5.DTA SECT09D7.DTA	seedexp chfexp.dta orfexp.dta fertexp.dta pestexp.dta transpexp.dta sharecropexp.dta sharecropinc.dta	seedexp(imp) chfertexp(imp) ofertexp(imp) fertexp(imp) pestexp(imp) transpexp(imp) sharecropexp(imp) sharecropinc(imp)
Cropincome2.do	SECT09.dta	otherfarmexp.dta cropexp.dta	otherfarmexp(imp) cropexp(imp)
Cropincome3.do	SECT09B1.DTA	cropinrice.dta	crop1(imp) owncons1(imp) seed1(imp) fodder1(imp) labor1(imp) lost1(imp)
	SECT09B2.DTA	cropincother.dta	crop2(imp) owncons2(imp) seed2(imp) fodder2(imp) labor2(imp)
	SECT09B3.DTA	cropincindst.dta	crop3(imp) owncons3(imp) seed3(imp) labor3(imp)
Cropincome4.do	SECT09B4.DTA	cropincperen.dta	crop4(imp) owncons4(imp) labor4(imp)
	SECT09B5.DTA	cropincfruit.dta	crop5(imp) owncons5(imp) labor5(imp)

Cropincome5.do	SECT09B6.DTA	cropincforest.dta  cropinc.dta	treesold6(imp) labor6(imp) owncons6(imp) cropcooperative6(imp) cropinc(imp) cropinput(imp) cropown(imp) laborex(imp) otherexp(imp)
Cropincome6.do	SECT09C.DTA  SECT09E1.DTA  cropinc.dta cropexp.dta cropbypr1.dta cropincbyprd2.dta otherinckleasing.dta sharecropexp.dta Food.dta agrland2.dta agrland3.dta Sample.dta	cropbypr1.dta  cropincbyprd2.dta  <b>Cropincome.dta</b>	cropbyrown1(imp) cropbyprsold(imp) cropbyprsold2(imp) cropbyprexp2(imp) <b>cropincome1</b> <b>cropincome2</b>
Employment1.do	SECT04A.dta SECT04B.dta	employstatus.dta employmainjob.dta	amount12main(imp) otheram12main(imp)
Employment2.do	SECT04C.dta  SECT04E.dta	employsecnjob.dta  employmainjobyr.dta	amountsec12(imp) otheramtsec12(imp) amount12mainyr(imp) otheramt12mainyr(imp)
Employment3.do	SECT04G.dta  Sample.dta employmainjob.dta employsecnjob.dta employmainjobyr.dta employsecnjobyr.dta	employsecnjobyr.dta  <b>Employment.dta</b>	amount12secnyr(imp) otheramount12secnyr(imp) wge, wgem, <b>wgeimp</b> (by industry, skilled)
Livestock1.do Livestock2.do	SECT09J.dta SECT09F1.dta  SECT09G.dta Sample.dta Food.dta Food_Tet.dta livstinc.dta	livstexp.dta livstinc.dta  livstbyprod.dta <b>Livestock.dta</b>	livstexp(imp) livstsold(imp) livstpurch(imp) livstlost(imp) livstborn(imp) livstcons(imp) livstbyprsold(imp) <b>livstinc(imp)</b>

		livstexp.dta	
Otherincome.do	SECT09L.dta SECT13B.dta Sample.dta	otherincleasing.dta <b>Otherinc.dta</b>	eqowncn(imp) <b>nonfarmrnt(imp)</b> <b>otherinc(imp)</b>
Rentagric1.do	SECT09B1.dta SECT09A0.dta	riceprice.dta agrland1.dta agrland2.dta  agrland3.dta	price agrlandexp1(imp) agrlandrentinc1(imp) shrcropinc1(imp) agrlandrentexp1(imp) sharcropexp1(imp)
Rentagric2.do	SECT09A0.dta SECT09A2.DTA SECT09A3.DTA Sample.dta	agrland4.dta     <b>Rentagric.dta</b>	agrlandexp3(imp) agrlandexp4(imp) agrlandexp5(imp) agrlandinc3(imp) agrlandinc4(imp) agrlandinc5(imp) farmrntinc(imp) <b>farmrnt(imp)</b>
Selfemp.do	SECT10B.dta SECT10.dta Sample.dta	selfemplexp.dta selfempinc.dta <b>Selfemp.dta</b>	hhexp(imp) hhrev(imp) <b>selfimp1 selfimp2</b> <b>selfimp3 selfimp4</b> <b>selfimp5 selfimp6</b> <b>selfimp7 selfimp8</b> <b>selfimp9 selfimp10</b>
Transfers.do	SECT12D.DTA SECT13A.DTA  SECT13B.dta  Sample.dta	privtransfout.dta privtransfin.dta privtransf.dta pubtransfers.dta   <b>Transfers.dta</b>	asstval(imp) remival(imp) privtransfers(imp) pubtrans(imp) pensions(imp) socialtrans(imp) transferstot(imp) <b>transfersgross(imp)</b>
AggregateIncome	Aquainc.dta Cropincome.dta Employment.dta Livestock.dta Otherinc.dta Rentagric.dta Selfemp.dta Transfers.dta	Income.dta	agr_wge nonagr_wge crop1 crop2 livestock selfemp transfers other

**Table 2**

<b>Vietnam 1992</b>		<b>3732 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	566	15.19%	1,396	212	5.48%	3.72%	125	19
<b>nonagr_wge</b>	Wage Employment- Nonfarm	818	21.95%	1,486	326	6.66%	5.72%	133	29
<b>crop1</b>	Crop Production	3,430	92.06%	1,763	1,623	48.32%	28.44%	157	145
<b>livestock</b>	Livestock Production	3,277	87.95%	588	517	7.98%	9.06%	52	46
<b>selfemp</b>	Non-ag Self Employment	1,522	40.85%	6,730	2,749	24.02%	48.19%	601	245
<b>transfer</b>	Total Transfers	1,322	35.48%	720	255	7.10%	4.48%	64	23
<b>other</b>	Other Income Sources	172	4.62%	498	23	0.44%	0.40%	45	2
<b>totincome1</b>	Total Household Income	3,724	99.95%	5,709	5,705	100.00%	100.00%	510	509

<b>Percent Rural (Weighted)</b>	<b>79.79%</b>
<b>Dong/USD (November 1999)</b>	<b>11.200</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**

<b>Vietnam 1992</b>		<b>3732 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	566	15.19%	1,396	212	5.32%	3.89%	125	19
<b>nonagr_wge</b>	Wage Employment- Nonfarm	818	21.95%	1,486	326	12.37%	5.98%	133	29
<b>crop2</b>	Crop Production	3,542	95.06%	1,444	1,373	50.92%	25.17%	129	123
<b>livestock</b>	Livestock Production	3,277	87.95%	588	517	3.73%	9.47%	52	46
<b>selfemp</b>	Non-ag Self Employment	1,522	40.85%	6,730	2,749	19.27%	50.39%	601	245
<b>transfer</b>	Total Transfers	1,322	35.48%	720	255	7.92%	4.68%	64	23
<b>other</b>	Other Income Sources	172	4.62%	498	23	0.47%	0.42%	45	2
<b>totincome2</b>	Total Household Income	3,724	99.95%	5,459	5,456	0.04%	100.00%	487	487

<b>Percent Rural (Weighted)</b>	<b>79.79%</b>
<b>Dong/USD (November 1999)</b>	<b>11.200</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)