

Components of the Income Aggregate: “Encuesta de Condiciones de Vida, Ecuador 1997/1998”¹

Prepared for the Rural Income Generating Activities (RIGA) Project²

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 Ecuador *Encuesta de Condiciones de Vida* (Survey of Living Conditions; ECV) was carried out in late 1997 and early 1998. The sample frame for the sample selection is made up of listings obtained from the 1990 Census of Population and Housing and from a subsequent update of the frame due to jurisdictional changes which took place September of 1993.

For the 1998 ECV a two-stage design was used for the self-representing cities and a three-stage design was used for the rest of the urban domains. For the rural part, a three-stage design was used. The primary sampling units are the domains (enumeration areas) and are chosen with equal probability. The ultimate sampling units (USU) are the housing units in all the domains. The number of housing units selected from every urban enumeration area for interview was 9 and it was 12 in the rural areas. The expansion factor is represented by variable FEXP which is included in each file.

5,801 of the selected households actually completed surveys in the raw data. There are 2,535 rural households and 3,266 urban households in the dataset. In the original datasets, AREA is the variable distinguishing urban from rural households. Urban is defined as any jurisdiction known in Spanish as *Cabeceras Cantonales* (CC) or *Cabeceras Parroquiales* (CP) with 5,000 or more inhabitants in 1997. Definition of rural includes the CC's and CP's with less than 5,000

¹ The information provided in this document relies substantially upon the Ecuador 1998 Basic Information Document (Manual de Encuestadora), provided with the 1997/1998 Ecuador ECV data..

² 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>.

inhabitants the periphery of all the CC's and of all the provincial capitals and the dispersed areas of all the CP's.³ In the calculation of the income aggregate area is renamed to URBAN in order to use the same variable name across different surveys.

The average household size in Ecuador was 4.79 persons.⁴ All money amounts are in the local currency, Sucres. In 1998, the official exchange rate was 5,446.57 Sucres = 1.0 USD.⁵ **The income aggregates are calculated at the household level and all aggregates are annualized.**

The various household-level modules of the ECV survey can be linked using the five variables that create the unique household identifier: CIUDAD, ZONA, SECTOR, VIVIENDA, and HOGAR. These variables are combined to create the unique identifier HH for consistency across countries within the study in the final aggregate file.

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**. **Unless otherwise noted, all variables included in the aggregate income variable are net of costs (except transfers which include only incoming transfers).**

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 all sections numbers starting with 9**** were coded as missing based on the codebook.
- 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 period of 14 days. In calculation of *Cropincome2*, the prices for the home consumption of own production are imputed from the production module and food module using the Deaton method.
- The reference period for the consumption of own produce (from the food expenditure section of the questionnaire, corresponding to *Cropincome2*) is based on a period of 14 days for rural clusters (which were visited eight times at two-day intervals) and of 33 days for urban clusters (which were visited eleven times at three-day intervals).
- For the Livestock, Other Income, Rentagric and Transfers sections, the reference period is the previous month or the previous 12 months.
- Other Income includes income from non-labor, non-farm sources (i.e. interests from financial investments) and includes farm and non-farm rent.

³ Definitions of rural and urban come from the Ecuador 1997/1998 Basic Information Document (Manual de Encuestadora)

⁴ Source: the ECV basic dataset – variable NPERS

⁵ Exchange rate used is the period average official exchange rate from the World Development Indicators.

- Rentagric calculates gross income from the rented and sharecropped agricultural land. Calculated agricultural rent is included in other income and sharecropping net income is included into total net crop income.
- In the Wage employment section, the reference period is the duration of employment as specified by the respondent in the questionnaire for the first and second full-time and part-time jobs held in the last 7 days. In case, the job was not held in the last 7 days, job held during the last 12 months is reported. All household members 10 years and older were interviewed.
- The classification of wage employment activities into industries and skilled/unskilled categories is based on United Nations International Standard Industrial Classification of all Economic Activities (ISIC) and the International Standard Occupation Classification (ISCO-88). 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 received from the employer.
- The Self Employment (Selfemp) section accounted for income from non-farm enterprises owned by the household. For expenditures, the reference period was the last 1 day, 1 week, 2 weeks, 1 month, 3 months, 6 months and 12 months. For revenues, the reference period is the last month. Both expenditures and income are annualized based on the amount of months the enterprise was in existence.
- Net annual income from nonfarm enterprises is disaggregated by industry (following the ISIC codes listed above) to convey information about 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, 68 households are dropped from this survey.
- The variables needed to exclude members who have been absent for more than 6 months (not including household heads) is not available in the data obtained (though the necessary questions do exist in the survey). As a result, all households are included by default.
- Participation and income share variables are also 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	E98VII0.DTA	Sample.dta	
Prices.dta	E98FB10.DTA E98PRECI.DTA	Prices.dta	pricedata1 pricedata2 pricedata3

	E98GA10.DTA E98GA20.DTA E98GA30.DTA Sample.dta		pricedata4 pricedata5 pricedata6 pricedata7 pricedata8 pricedata9 pricedata10 pricedata11 pricedata12
Food.do	Prices.dta E98GA10.DTA E98GA20.DTA E98GA30.DTA Sample.dta	cropown.dta livstown.dta	foodownimp
Rentagric1.do Rentagric2.do	E98FA10.DTA Sample.dta	agrrentinc1.dta agrrentinc2.dta agrrentinc3.dta agrrentinc4.dta Rentagric.dta agrrentexp1.dta agrrentexp2.dta agrrentexp3.dta agrrentexp4.dta Rentagricnet.dta	aggrentinc1imp aggrentinc2imp aggrentinc3imp aggrentinc4imp aggrentincimp aggrentexp1imp aggrentexp2imp aggrentexp3imp aggrentexp4imp farmrntimp
Cropincome1.do Cropincome2.do Cropincome3.do Cropincome4.do Cropincome5.do	E98FC10.DTA E98FC10.DTA E98FC10.DTA E98FB10.DTA E98FC10.DTA Food.dta Sample.dta	seedexp.dta fertexp.dta pestexp.dta packexp.dta templaborexp.dta partlaborexp.dta fulllaborexp.dta machrent.dta animalrent.dta techexp.dta <i>cropexp.dta</i> <i>cropinc.dta</i> <i>cropbypr.dta</i> Cropincome.dta	seedexpimp fertexpimp pestexpimp packexpimp templaborexpimp partlaborexpimp fulllaborexpimp machrentimp animalrentimp techexpimp cropexpimp cropsoldimp sharcropnetimp cropown1imp cropinputimp cropbyprsoldimp cropbyprgiftimp cropbyprstoredimp cropbyprownimp cropincome1imp cropincome2imp

Employment1.do Employment2.do Employment3.do Employment4.do	E98PE10.DTA Sample.dta	employ1.dta employ2.dta employ3.dta employ4.dta employ5.dta employ6.dta Employment.dta	wge (by industry, skilled) wgem wgeimp wgeimp1_1 wgeimp2_1 wgeimp3_1 wgeimp4_1 wgeimp5_1 wgeimp6_1 wgeimp7_1 wgeimp8_1 wgeimp9_1 wgeimp10_1 wgeimp1_2 wgeimp2_2 wgeimp3_2 wgeimp4_2 wgeimp5_2 wgeimp6_2 wgeimp7_2 wgeimp8_2 wgeimp9_2 wgeimp10_2 wgeimp1_3 wgeimp2_3 wgeimp3_3 wgeimp4_3 wgeimp5_3 wgeimp6_3 wgeimp7_3 wgeimp8_3 wgeimp9_3 wgeimp10_3
Livestock1.do Livestock2.do Livestock3.do Livestock4.do	E98FE10.dta Sample.dta	livstinc.dta livstbypr.dta livstpurchase.dta livstexp.dta Livestock.dta	livstsoldliveimp barterimp livstsolddeadimp ownconslimp livstbyprsoldlimp livstbyprrownlimp livstbyprbarterlimp purchaseimp livstexpimp livstincimp
Otherinc.do	E98GO10.DTA Sample.dta	otherinc1.dta otherinc2.dta nonfarmrnt.dta Otherinc.dta	otherinc1imp otherinc2imp nonfarmrntimp

Selfemp1.do Selfemp2.do Selfemp3.do	E95NE10.dta	selfempinc.dta selfempexp.dta Selfemp.dta	hhrevimp hhrexpimp selfimp1 selfimp2 selfimp3 selfimp4 selfimp5 selfimp6 selfimp7 selfimp8 selfimp9 selfimp10
Transfers1.do Transfers2.do	E98PE10.DTA E98GO10.DTA Sample.dta	transpriv.dta socbenef1.dta socbenefpension.dta Transfers.dta	transprivimp socbenef1imp socbenefpensionimp privtransfer pubtransfer transferstotimp
AggregateIncome.do	Cropincome.dta Employment.dta Livestock.dta Otherincome.dta Selfemp.dta Transfers.dta Sample.dta	Income.dta	agr_wge nonagr_wge crop1 crop2 livestock other selfemp transfer totincome1 totincome2

Table 2

<i>Ecuador 1998</i>		2,495 Rural HH Observations		Rural, Weighted, Sucres			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>
agr_wge	Wage Employment- Agriculture	882	34.80%	5,973,047	2,078,510	8.23%	7.53%	1,097	382
nonagr_wge	Wage Employment- Nonfarm	844	33.67%	8,000,638	2,693,533	18.76%	9.76%	1,469	495
crop1	Crop Production	1,554	63.47%	2,058,653	1,306,586	35.77%	4.73%	378	240
livestock	Livestock Production	1,938	77.68%	1,283,850	997,295	22.96%	3.61%	236	183
selfemp	Non-ag Self Employment	929	37.92%	7,933,410	3,008,041	4.17%	10.90%	1,457	552
transfer	Total Transfers	667	27.77%	905,844	251,535	4.78%	0.91%	166	46
other	Other Income Sources	366	15.37%	112,000,000	17,300,000	5.33%	62.68%	20,563	3,176
totincome1	Total Household Income	2491	99.47%	27,700,000	27,600,000	100.00%	100.00%	5,086	5,067

Percent Rural (Weighted)	39.44%
Sucres/USD	5,446.57

1. Source data: 1998 Encuesta de Condiciones de Vida (ECV).
2. Exchange rate used is the period average official exchange rate from the 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 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

<i>Ecuador 1998</i>		2,495 Rural HH Observations		Rural, Weighted, Suces			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>
agr_wge	Wage Employment- Agriculture	882	34.80%	5,973,047	2,078,510	20.27%	7.27%	1,097	382
nonagr_wge	Wage Employment- Nonfarm	844	33.67%	8,000,638	2,693,533	18.16%	9.42%	1,469	495
crop2	Crop Production	1,687	68.33%	3,424,537	2,339,975	22.11%	8.18%	629	430
livestock	Livestock Production	1,938	77.68%	1,283,850	997,295	11.28%	3.49%	236	183
selfemp	Non-ag Self Employment	929	37.92%	7,933,410	3,008,041	18.29%	10.52%	1,457	552
transfer	Total Transfers	667	27.77%	905,844	251,535	4.69%	0.88%	166	46
other	Other Income Sources	366	15.37%	112,000,000	17,300,000	5.19%	60.49%	20,563	3,176
totincome2	Total Household Income	2491	99.47%	28,800,000	28,600,000	100.00%	100.00%	5,288	5,251

Percent Rural (Weighted)	39.44%
Suces/USD	5,446.57

1. Source data: 1998 Encuesta de Condiciones de Vida (ECV).
2. Exchange rate used is the period average official exchange rate from the 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 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.
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