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IPROS: FINAL REPORT

(SOCIAL PROGRESS INDICATORS PROJECT)

(Project No. 931-0236.05)

DATA

METHODS

PRINCIPLE INDICATORS

INSTITUTIONALIZATION

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INTRODUCTION

As a summary report, this paper is a bit lengthy. However, the IPROS project produced no final methodology document which could serve as a reference for this paper.

The methodological perspective of this report differs from that of Driector Leiva's. The Director sees IPROS as having developed a system of indicators:

1. Descriptive
2. Evaluative
3. Prioritizing

which lead directly to policy formation and implementation. After extensive review of documents, data sets and computer software, I conclude that:

1. this "system" was never actually developed, and
2. as conceived, is not a scientifically valid schema.[1]

On the other hand, this document does not emphasize a reorientation of the project back to its "social indicators" mandate. Too much history has transpired to make a return to the 1978 concept feasible in the last weeks of 1983. A list of "final" indicators is discussed in length, but these indicators have not been institutionalized either locally or regionally.

The intent of this paper is to describe briefly the worthy and useful products of the IPROS project:

1. the organization of the data base which gives the means to classify a braod range of household survey variables by a standard set of stratifying variables, and

2. a number of conceptual and methodological advances developed by the IPROS team for analyzing socio-economic data.

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1 a. having certain policy orientations (such as income subsidy) in mind prior to index construction limits the scope and objectivity of the excercise

b. the work attempted in forming "evaluative" and "prioritizing" indicators was not on <u>indicators</u> per se, but in developing diagnistic <u>tools</u>

c. the proposed schema is fraught with statistical violations in terms of inference, assumptions of causality and inappropriate use of data (confusion of arithmatic, ordinal and categorical data).

The strength of IPROS lies in its rich data base: a series of five multipurpose household surveys taken in the period 1978-80. The data is attractive as it contains a broad range of subject areas and permits detailed time series analyses in core fields of education and employment . Table A-1 indicates the survey sequence and subject emphasis.

The weakness of the project is that so many variables were generated from the surveys that access and evaluation seems to be difficult. The problem in reality is not so much one of quantity of variables (as secoral analysts generally want to perform detailed analysis) but one of organization.

Thus to understand better the products of IPROS is to recognize the relationship between its data sources and resulting "levels" of data files. Figure A-1 outlines this relationship between data sources, files and products. As may be surmised from this figure and Tables A-3-5, each level of refinement involves more specific variables which in turn allows successively for more specialized types of analysis.

The potential for the most flexible analysis of course lies in the original data sets. Table A-2 includes the layout of the physical record of the variables from Rounds 1 and 2. The records for Rounds 3-5 are similar, except that they contain no supplementary modules.

The initial challenge to the IPROS technicians was to organize the survey data in a meaningful way to measure "social progress". The approach taken was to develop a set of five variables (geographical region, age/sex structure, per capita income, occupation and industry -- of the household's primary worker) to cross tabulate with major (employment, education, housing, nutrition and health) and minor (labor force qualifications, demographic levels and seasona

migration) fields. This tabulation was undertaken to create independent data files called "subject monitors". Table A-3 lists the 71 variable available from these subject monitrs. The intent of these cross tabulations was to pinpoint target groups for intervention programs and policies.

In the last year of the project, several SPSS files and FORTRAN programs were developed to analyze several subject areas simultaneously. Table A-4 lists the contents of the current SPSS data files; Table A-5 the principle social indicators, as discussed in Section C. of this report.

IPROS: SOCIAL PROGRESS INDICATORS

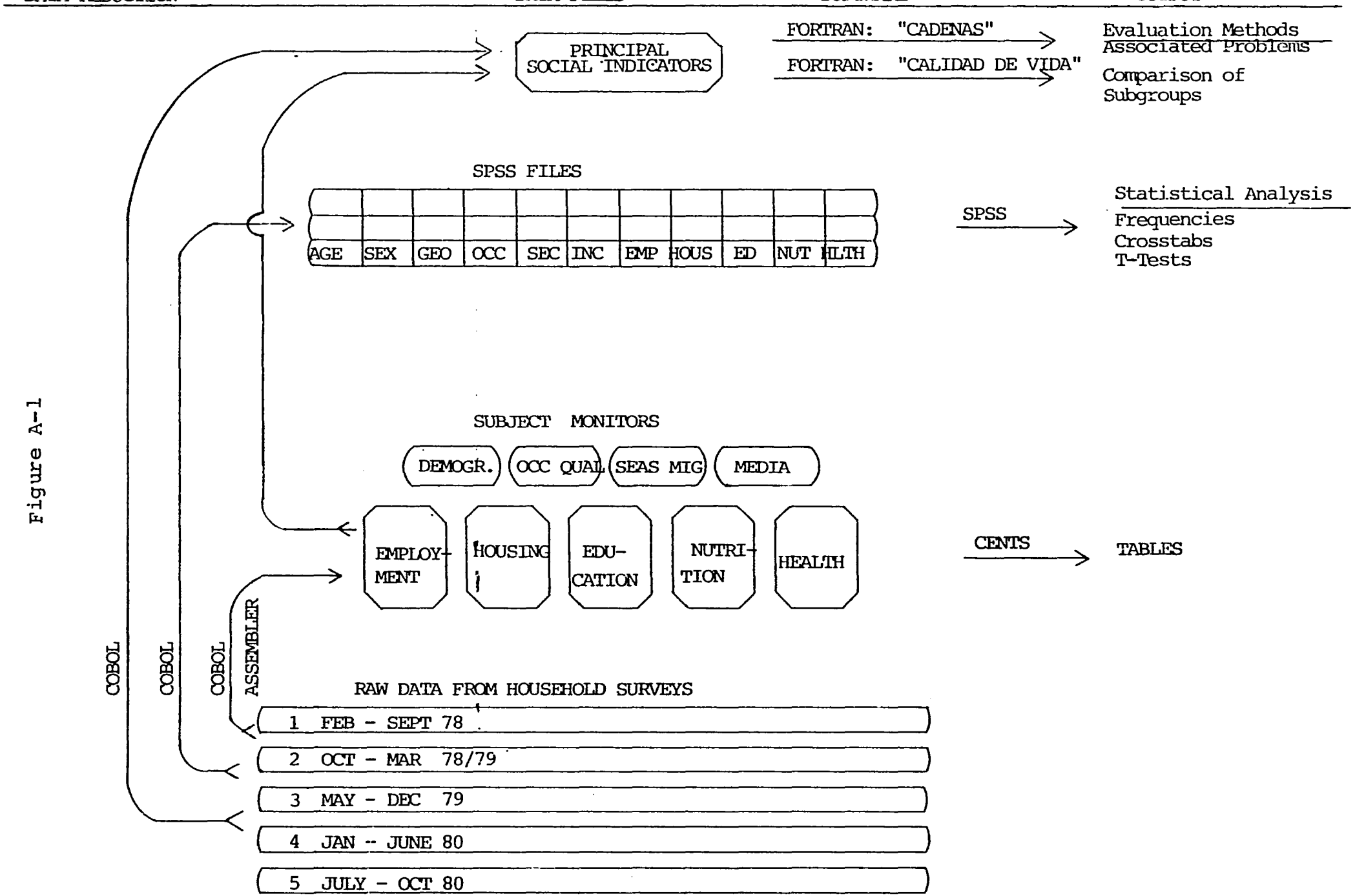

Figure A-1

TABLE A-1

IPROS DATA SOURCES

DATA	HOUSEHOLD SURVEY ROUNDS				
	1 FEB SEPT 78	2 OCT MARCH 78/79	3 MAY DEC 79	4 JAN JUNE 80	5 JULY OCT 80
Major Subjects					
Employment	*	*	*	*	*
Housing	*				
Education	*	*	*	*	*
Nutrition		*			
Health		*			
Minor Subjects					
Demography:					
Fertility/Mortality	*				
Labor Force Qualifications	*				
Seasonal Migration	*				
Media	*				
Stratifying Variables					
Demographic Characteristics:					
Age/Sex/Residence	*	*	*	*	*
Income	*	*	*	*	*
Occupation	*	*	*	*	*
Industry	*	*	*	*	*

TABLE A-2

A. PHYSICAL RECORDS OF ROUND 1: February - Septmeber 1978

Individual Records

Columns	Variables	Columns	Variables
1	Record type	57 - 58	Hours worked
2	Individual No.	59	Days worked
3 - 6	Household No.	60	Reason didn't work
7	Region	61	Reason didn't work week
8	Rural/urban area	62	Self employed?
9 - 11	Primary sampling unit	63	Reasons for absence
11 - 13	Expansion factor	64	Income during unemployment
14 - 16	Secondary sampling unit	65 - 66	Hours usually worked
17 - 19	Listing	67	Want regular employment
20 - 21	Week	68	Looked for work?
22	Period	69	What done to find work
23 - 24	Total persons in household	70 - 71	Weeks looking for work
25 - 26	Total persons under 10 years	72	Looking for work previously
27 - 28	Total person under 10 years or more	73	Last job
29 - 30	No. of children of head of household	74	How supported
31	Type of family	75 - 77	Type of employment sought
32 - 35	Monthly family income	78	Reason left job
36 - 39	Monthly income pre capita	79 - 81	Principal occupation
40 - 41	Relationship code	82 - 84	Prinicpal industry
42	Family relation	85	Occupational category
43	Sex	86	Work permanent or temporary
44 - 45	Age (years)	87 - 88	What age started work
46	Marital Status	89	Type of payment
47	Literacy	90 - 93	Amount received
48 - 49	Grade and type of scooling	94 - 97	Benefits, payments in kind
50 - 51	Total years of school	98 - 99	Duration (months) ahead
52	Current school attendance	100	Intention to look for work
53	Type of school attending	101	Willing to accept employment
54	Hours attending	102	Why not looking for work
55	Activity in last week	103	When worked last time
56	Worked last week	104	Why left job

TABLE A-2 (Continued)

A. PHYSICAL RECORDS OF ROUND 1: February - Septmeber 1978

Individual Records

Columns	Variables
105 - 108	Income from other job
109 - 112	Income from other sources
113 - 116	Total individual income
117	Summary code of employment
118	Country of birth
119 - 120	Departamento of birth
121	Town, city etc. of birth
122	Country of residence 1971
123 - 124	Departamento - 1971
125	Town, city or rural area - 1971
126 - 127	Year of current residence
128 - 129	Months of current residence
130	Country last residence
131 - 132	Departamento last residence
133	Town, city or rural area - last
134	Reason moved
135	Region - birth
136	Region - 1971
137	Region - last residence
138 - 139	Departamento - birth
140 - 141	Departamento - 1971
142 - 143	Departamento - last residence
144 - 145	Career or training
146 - 147	Have received traning
148	Finished training
149 - 150	Duration training
151	Place training
152 - 154	Usual skill/task
155 - 156	What skill would learn
157 - 159	What skill area would specialize
160	How many hours could train
161 - 162	What time of day could train
163	How many hours could train
164 - 165	Month first marriage
166 - 167	Date first marriage
169 - 170	Duration marriage
171	First partner living
172 - 173	Children ever born
174 - 175	Children surviving
176	Children born in 1977
177 - 178	Month child A born in 1977
179 - 180	Month child B born in 1977
181	Is "A" living
182 - 185	Proportion children dead
186 - 187	Departamento
188	Migration summary - Birth place
189	Migration summary - 1971 Residence
190	Migration summary - last residence

HOUSEHOLD RECORDS

Columns	Variables
1	Record type
2	Household digit
3 - 6	Household
7	Region
8	Rural/urban area
9 - 10	Primary sampling unit
11 - 13	Expansion factor
14 - 16	Secondary sampling unit
17 - 19	Listing number
20 - 21	Week
22	Period
23 - 24	Total persons in household
25 - 26	Total persons under 10 years
27 - 28	Total persons 10 years or more
29 - 30	No. children of head of household
31	Type of family
32 - 35	Total family income
36 - 39	Total per capita income
41	No. sleeping quarter
42 - 44	Person per room index
45	Ownership
46 - 49	Monthly payment
50	Roof
51	Walls
52	Floors
53	Lighting
54	Water
55	Bath
56	Sanitary service
57	Cooking fuel
58	Radio
59	Radio/player combination
60	Television
61	Refrigerator
62	Washing machine
63	Humidifier
64	Telephone
65	Blender
66	Fan
67	Dining room furniture
68	Living room furniture
69	Sewing machine
70	Domestic employees
71	No. deaths in family
72	First death
73 - 74	First months dead
75 - 76	First age-months
77 - 78	First age-years
79	First sex
80 - 81	First registered: departamento
82 - 83	First registered: municipio
84 - 85	First day registered
86 - 87	First month registered
88 - 89	First year registered
90	Second death: -
91 - 92	Second months dead
93 - 94	Second age - months
95 - 96	Second age - years
97	Second sex
98 - 99	Second registered: departamento
100 - 101	Second registered: municipio
102 - 103	Second day registered
104 - 105	Second month registered
106 - 107	Second year registered

HOUSEHOLD RECORDS CONTINUED

Columns	Variables
108	Third death: -
109 - 110	Third months dead
111 - 112	Third age - months
113 - 114	Third age - years
115	Third death sex
116 - 117	Third registered: Departamento
118 - 119	Third registered: municipio
120 - 121	Third registered: day
122 - 123	Third registeres: month
124 - 125	Third year registered
126	Fourth death: -
127 - 128	Fourth months dead
129 - 130	Fourth age - months
131 - 132	Fourth age - years
133	Fourth sex
134 - 135	Fourth registered: departamento
136 - 137	Fourth registered: municipio
138 - 139	Fourth registered: day
140 - 141	Fourth registered: month
142 - 143	Fourth registered: year
144	Fifth death -
145 - 146	Fifth: months dead
147 - 148	Fifth age - months
149 - 150	Fifth age - years
151	Fifth sex
152 - 153	Fifth registered: departamento
154 - 155	Fifth registered: municipio
156 - 157	Fifth registered: day
158 - 159	Fifth registered: month
160 - 161	Fifth death - registered: year
162	Sixth death -
163 - 164	Sixth months dead
165 - 166	Sixth age - months
167 - 168	Sixth age - years
169	Sixth sex

Columns	Variables
170 - 171	Sixth registered: departamento
172 - 173	Sixth registered: municipio
174 - 175	Sixth registered: day
176 - 177	Sixth registered: month
178 - 179	Sixth registered: year
186 - 187	Departamento

B. PHYSICAL RECORDS OF ROUND 2: October - March, 1978

Individual Records

Columns	Variables
1	Record type
2 - 6	Inidividual no.
7	Region
8	Area: rural/urban
9 - 10	Primary sampling unit
11 - 13	Expansion factor
14 - 16	Secondary sampling unit
17 - 19	Listing number
20 - 21	Week
22	Period
23 - 24	Total persons in household
25 - 26	Total persons in household under age 10
27 - 28	Total persons in household 10 years and over
29 - 30	No. children of head of household
31	Family type
32 - 35	Monthly family income
36 - 39	Per capita monthly income
40 - 41	Relationship no.
42	Relationship
43	Sex
44 - 45	Age
46	Marital status
47	Literacy
48 - 49	Grade and type schooling
50 - 51	Total years of school
52	Current school attendence
53	Type school attending
54	Hours attedning
55	Activity in last week
56	Worked last week
57 - 58	No. hours worked
59	Days worked
60	Reason didn't work
61	Reason didn't work 35 hours
62	Self employed?
63	Reason for absence
64	Income during unemployment
65 - 66	Hours usually worked
67	Days normally work
68	Looked for work?
69	What did to find work.
70 - 71	Weeks looking for work
72	Looked for work before
73	Last job
74	How supported
75 - 77	Type employment sought
78	Reason left job

HOUSEHOLD RECORDS

1	Record type
2 - 6	Household number
7	Region
8	Rural/urban area
9 - 10	Primary sampling unit
11 - 13	Expansion factor
14 - 16	Secondary sampling unit
17 - 19	Listing number
20 - 21	Week
22	Period
23 - 24	Total persons in household
25 - 26	Total persons in household under age 10

HOUSEHOLD RECORDS OF ROUND 2 CONTINUED

Columns	Variables
27 - 28	Total persons in household age 10 and over
29 - 30	No. children of head of household
31	Type family
32 - 35	Monthly family income
36 - 39	Per capita monthly income
40	Sprayed house
41	Date last sprayed
42	Who sprayed
43	Why not sprayed
44	How dispose of trash
45	How frequently dispose of trash
46 - 47	Distance trash disposed
48 - 49	Lbs. beef purchased
50 - 51	Lbs. pork purchased
52 - 53	Lbs. chicken purchased
54 - 55	Lbs. seafood purchased
56 - 57	Lbs. other meat purchased
58 - 60	No. eggs purchased
61 - 62	Bottles milk purchased
63	Lbs. powdered milk purchased
64 - 65	Lbs. beans purchased
66 - 68	No. tortillas purchased
69	Lbs. fat purchased
70	Lbs oil purchased
71 - 72	Lbs. rice purchased
73 - 74	Lbs. sugar purchased
75 - 76	No. sweets purchased
77 - 78	No. persons worked in harvest
79 - 81	Principal occupation
82 - 84	Principal industry
85	Occupational category
86	Work: temporary or permanent
87 - 88	What age egan to work?
89	Type of payment

Columns	Variables
90 - 93	Salary
94 - 97	Benefits, payment in kind etc.
98 - 99	Months worked
100	Intend to look for new work
101	Would accept new job now
102	Why not looking for work
103	Last time worked
104	Why left job
105 - 108	Income from other jobs
109 - 112	Total other incomes
113 - 116	Total individual income
117	Summary code
118 - 119	Harvest employment: departamento
120 - 121	Harvest employment: municipio
122 - 123	Harvest employement: canton
124	Where slept?
125	Which crop
126	Month participated
127 - 128	Duration of work
129 - 132	Income from harvest
133 - 134	Which family member received payment
135	Sick in last 6 months
136 - 137	Symptoms
138 - 139	Last date illness
140	Where got treatment
141	Why no treatment
142	Distance traveled for treatment
143	Times hospitalized
144 - 145	Date last hospitalization

HOUSEHOLD RECORDS FOR ROUND 2 CONTINUED

Columns	Variables	Columns	Variables
146	Which hospital		
147 - 148	Reason for hospitalization		
149 - 150	How many days		
151	Satisfied		
152	Why not satisfied		
153	Have physical defect		
154 - 155	Type of defect		
156	Cause of defect		
157	Treatment for defect		
158	DPT Vaccine		
159	Polio Vaccine		
160	Measles Vaccine		
161	BCG Vaccine		
162 - 163	Dental problems		
164	Visited dentist?		
165	Why not visited dentist		
166	Received dental treatment in schools		
167	Drink alcohol		
168	How often		
169 - 178	What age began		
171	Hospitalized for alcoholism?		
172	Community treatment for alcoholism		
173 - 185	- (Blank)		
186 - 187	Departamento		
188 - 190	- (Blank)		

TABLE 43

VARIABLES IN IPROS SUBJECT MATTER MONITORS

A. Major Subjects

Employment

1. Total Population
2. Population under 10 years
3. Population 10 years and over
4. Economically active population
5. Total employed
   - Fully employed
   - Under employed
     - In terms of hours worker
     - In terms of minimum wage
     - Both wages and hours
     - Not desiring more hours
6. Total unemployed
   - Formerly employed
   - Looking for work for 1st time
7. Total economically inactive
   - Would like to work
   - Would not like to work

Housing

1. Housing density : houses
   Density Level
   - 100% or less
   - 101% - 150%
   - 151% - 200%
   - 201 % and over
2. Housing density : persons
   Density level
   - 100% or less
   - 101% - 150%
   - 151% - 200%
   - 201% and over
3. Housing conditions : houses
   - Total houses
   - Permanent materials, private services
   - Permanent materials, communal services
   - Permanent materials, no services
   - Impermanent materials, some services
   - Impermanent materials, no services
4. Housing conditions : persons
   - Total persons
   - Permanent materials, private services
   - Permanent materials, communal services
   - Permanent materials, no services
   - Impermanent materials, some services
   - Impermanent materials, no serivces
5. Type of home
   - Ranchos on own property
   - Private house
   - Apartment
   - Rented rooms
   - Improvised housing
   - Ranchos on proprietors land
   - Other types of housing
6. Number of sleeping quarters-houses
   - 1
   - 2
   - More than 2
7. Wall materials - houses
   - Concrete based
   - Clay based
   - Impermanent material
8. Roofing material - houses
   - Permanent material
   - Corrugated metal
   - Palm or thatch
9. Lighting - houses
   - Electricity
   - Kerosene
   - None
10. Water and sanitary services - houses
    - Piped water and private toilet
    - Piped water and communal toilet
    - Spring or well; private septic tank or latrine
    - Spring or well; communal septic tank or latrine
11. Type of home - persons
    (Same as 5)
12. Number of sleeping quarters -persons
    (Same as 6)
13. Wall materials - persons
    (Same as 7)
14. Roofing materials - persons
    (Same as 8)
15. Lighting - persons
    (Sane as 9)
16. Water and sanitary services - persons
    (Same as 10)

Education

1. Literacy
   - Literate
   - Illiterate
2. Years of school attended
   - None
   - Preschool
   - Elementary - I Cycle
   - Elementary - II Cycle
   - Elementary - III Cycle
   - Secondary
   - "Bachillerates"
   - Non-university, post secondary
   - University
   - Other

3. School enrollment
   - Not enrolled
   - Total enrolled
   - Public schools
     - Day
     - Afternoon
     - Evening
   - Private schools
     - Day
     - Afternoon
     - Evening

Nutrition

1. Caloric intake
   - Less than 65% recommended
   - 65 - 74% recommended
   - 75 - 84% recommended
   - 85 - 99% recommended
   - 100% and over
2. Protein intake
   - Less than 65% recommended
   - 65 - 74% recommended
   - 75 - 84% recommended
   - 85 - 99% recommended
   - 100% and over
3. NDPCAL scale
   - Less than 5.0
   - 5.0 to 5.4
   - 5.5 to 5.9
   - 6.0 to 6.3
   - More than 6.3
4. Product consumption
   - Beef
   - Pork
   - Chicken
   - Fish
   - Other meats
   - Eggs
   - Fresh milk
   - Powdered milk
   - Beans
   - Corn
   - Fat
   - Oil
   - Rice
   - Sugar
   - Bread
5. Product deficit according to consumption pattern

Health

1. Total population
2. Total ill populaition
3. Illnesses
   - Infectious and parasitic
   - Respiratory
   - Other illnesses
4. Medical attention
   - Total population with attention
   - In clinics
   - By paramedical personnel
   - Without medical attention
5. Hospitalization
   - Total hospitalized
   - Accidents, poisoning and violence
   - Infectious and parasitic diseases
   - Complications of pregnancy and delivery
6. Handicapped population
7. Vaccinations
   - Total population under age 5
   - DTP
   - Polio
   - Measles
   - BCG
8. Alcoholism
   - Total male population 15 years +
   - Total alcoholic
   - Total treated

B. Minor Subjects

Demography

1. Female population 15 - 49 years
   - 15 - 19
   - 20 - 24
   - 25 - 29
   - 30 - 34
   - 35 - 39
   - 40 - 44
   - 45 - 49
2. Children ever born, by age of mother
   - 15 - 19
   - 20 - 24
   - 25 - 29
   - 30 - 34
   - 35 - 39
   - 40 - 44
   - 45 - 49
3. Children born in 1977 by age of mother
   - 15 - 19
   - 20 - 24
   - 25 - 29
   - 30 - 34
   - 35 - 39
   - 40 - 44
   - 45 - 49
4. Child-woman ratio, by age of mother
   - 15 - 19
   - 20 - 24
   - 25 - 29
   - 30 - 34
   - 35 - 39
   - 40 - 44
   - 45 - 49
5. Age-specific fertility rates
   - 15 - 19
   - 20 - 24
   - 25 - 29
   - 30 - 34
   - 35 - 39
   - 40 - 44
   - 45 - 49
6. Total fertility rate
7. Gross reproduction rates
8. Infant mortality rates
9. Crude death rate
10. Areas of net in-migration
11. Areas of net out-migration

Labor Force Qualifications

1. Total labor force 15 to 49 years
2. Non-technical workers
   - Unskilled
   - Semi-skilled
   - Skilled
   - Highly skilled
3. Technical workers
   - Technicians
   - Professionals
   - Directors
4. Others
5. Training - place
   - Government institute
   - Correspondence or records
   - On the job
   - Academies
   - Others
6. Training - length
   - Less than 3 months
   - 3 to 6 months
   - 7 to 12 months
   - More than 12 months
7. In respect to current job
   - Would like training
   - Would like to specialize
   - Would like to learn new trad
   - Don't want another trade
8. Without trade
   - Want to learn a trade
   - Don't want to learn a trade

Seasonal Migration

1. Total labor force
2. Total harvest workers
   - Migrants
     - With land
     - With out land
   - Non-migrants
     - With land
     - With out land
3. Harvest workers, normally in labor force
   - Migrants
   - Non-migrants
4. Harvest workers, normally economically inactive
   - Migrants
   - Non-migrants
5. Population less than 10 years of age working in harvest
   - Migrants
   - Non-migrants

Media

1. Homes at density level 100% or less
   - With radio, only
   - With both radio and television
   - With television only

2. Homes at density level 101 - 150 %
   With radio, only
   With both radio and television
   With television, only
3. Homes at density level 151 - 200%
   With radio, only
   With both radio and telvision
   With television, only
4. Homes at density level more than 200%
   With radio, only
   With both radio and television
   With television, only
5. Persons living in density 100% or less
   (Same as 1.)
6. Persons living in density 101 - 150%
   (Same as 2.)
7. Persons living in density 151 - 200%
   (Same as 3.)
8. Persons living in density more than 200%
   (Same as 4.)

C. Stratifying Variables

Population Composition

1. Total population
2. Total males
3. Total females
4. Age groups

Both sexes:	0 - 4
	5 - 9
	10 - 14
Males:	15 - 19
	20 - 29
	30 - 49
	50 +
Females:	15 - 19
	20 - 29
	30 - 49
	50 +

Geographic Areas

1. Total Republic
2. Urban areas
   - Total
   - Metropolitan
   - Occidental
   - Central I
   - Central II
   - Oriental
3. Rural areas
   - Occidental
   - Central I
   - Central II
   - Oriental
4. Agricultural zones
   - North
   - Central
   - South

Economic Sector

Agriculture
Mining
Manufacturing
Electricity, Gas and Water
Construction
Commerce
Transportation and storage
Financial institutions
Services
Not specified

Per Capita Monthly Income

0 - 50 colones
51 - 100 colones
101 - 200 colones
200 + colones

Occupation

1. Total employed
2. Non-salaried
   - Proprietors
   - Minifundistas
   - Craftsmen
   - Merchants
   - Independent workers
3. Salaried
   - Agricultural worker
   - Industrial worker
   - Construction worker
   - Business employee
   - Administrative employée
   - Domestic worker
   - Family worker
   - Other categories
4. Not specified

Seasonal Employment (Round 1 Data, Only)

1. Harvest workers
   - Total
   - Coffee
   - Cotton
   - Sugar cane
2. Duration of agricultural employment
   - Total workers
   - Less than 4 weeks
   - 4 - 8 weeks
   - 8 - 12 weeks
   - More than 12 weeks
3. Income recieved in agricultural employmen
   - Total workers
   - None
   - 1 - 99 colones
   - 100 - 299 colones
   - 300 - 499 colones
   - 500 - 799 colones
   - 800 + colones

SPSS DATA FILES

```
!JOB SPSS10,GERENTE.IPROS/ECID;OUTCLASS=LP2,1;TIME=UNLIM;PRI=DS
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!FILE FTN01;DISC=10000;DEV=1
!FILE FTN04;DISC=10000;DEV=1
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COMMENT          LISTA DE VARIABLES DE LA RONDA 1
COMMENT          REGISTRO DE PERSONAS Y HOGARES
NUMBERED         YES
RUN NAME         RONDA 1 PARA USO DEL PROGRAMA INTERFACE
FILE NAME        INTRSPS1
DATA LIST        FIXED/1 REGAR     1
                         EXPANS    2-4
                         INGRPC    5-8
                         INGR1     9
                         SEXO      10
                         EDAD      11-12
                         ALFABET   13
                         NIVEDUC   14-15
                         ESCEDUC   16
                         NIVEMP    17
                         CIIU      18-19
                         TIPO      20-21
                         CODEMP    22
                         INGRPER   23-26
                         FORMPRO   27
                         HACIN     28
                         MATSERV   29
INPUT MEDIUM     DISK(*ENTRA)
N OF CASES       46026
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IF               (EDAD GE 5 AND LE 9) GPEDAD = 2
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IF               (INGRPC GE  126 AND LE 150 ) INGR2 = 6
IF               (INGRPC GE  151 AND LE 175 ) INGR2 = 7
IF               (INGRPC GE  176 AND LE 200 ) INGR2 = 8
IF               (INGRPC GE  201 AND LE 225 ) INGR2 = 9
IF               (INGRPC GE  226 AND LE 250 ) INGR2 = 10
IF               (INGRPC GE  251 AND LE 275 ) INGR2 = 11
IF               (INGRPC GE  276 AND LE 300 ) INGR2 = 12
IF               (INGRPC GE  301 ) INGR2 = 13
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                 EXPANS    FACTOR DE EXPANSION/
                 INGRPC    INGRESO PER CAPITA/
                 SEXO      SEXO/
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20

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                    EDAD      EDAD/
                    ALFABET   ALFABE.....
                    NIVEDUC   NIVEL DE EDUCACION/
                    NIVEMP    NIVEL DE EMPLEO/
                    CIIU      SECTOR DE ACTIVIDAD/
                    TIPO      TIPO DE OCUPACION/
                    FORMPRO   FORMACION PROFESIONAL/
                    MATSERV   MATERIALES Y SERVCIOS EN LA VIVIENDA/
                    HACIN     HACINAMIENTO-NIVEL DE DENSIDAD /
                    INGR1     INGR PER CAP-50 COL /
                    INGR2     INGR PER CAP-AGRUP. /
                    INGRPER   INGRESO PERSONAL /
                    GPEDAD    EDADES AGRUPADAS /
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                    AREA      AREA/
                    ESCEDUC   ESCALA DE EDUCACION/
VALUE LABELS        REGAR     (1) METROPOLITANO
                              (2) OCCIDENTE URBANO
                              (3) CENTRAL I URBANO
                              (4) CENTRAL II URBANO
                              (5) ORIENTE URBANO
                              (6) OCCIDENTE RURAL
                              (7) CENTRAL I RURAL
                              (8) CENTRAL II RURAL
                              (9) ORIENTE RURAL/
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                              (3) 51 - 100 COLONES
                              (4)101 - 200 COLONES
                              (5)201 Y MAS COLONES /
                    INGR2     (1) 0   -  25 COLONES
                              (2) 26  -  50 COLONES
                              (3) 51  -  75 COLONES
                              (4) 74  - 100 COLONES
                              (5) 101 - 125 COLONES
                              (6) 126 - 150 COLONES
                              (7) 151 - 175 COLONES
                              (8) 176 - 200 COLONES
                              (9) 201 - 225 COLONES
                              (10) 226 - 250 COLONES
                              (11) 251 - 275 COLONES
                              (12) 276 - 300 COLONES
                              (13) 301 Y MAS COLONES/
                    SEXO      (1) HOMBRES
                              (2) MUJERES/
                    GPEDAD    (1) 0   -   4 ANOS
                              (2) 5   -   9 ANOS
                              (3) 10  -  14 ANOS
                              (4) 15  -  49 ANOS
                              (5) 50  -  64 ANOS
                              (6) 65  Y MAS ANOS/
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                              (1) ALFABETO
                              (2) ANALFABETO/
                    NIVEDUC   (0) NO APLICA
                              (1) UNIVERSITARIA
                              (2) SUPERIOR NO UNIVERSITARIA
```

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116                         (4) SECUNDARIA
117                         (5) III CICLO
118                         (6) II CICLO
119                         (7) I CICLO
120                         (8) PARVULOS
121                         (9) SIN ESCOLARIDAD
122                         (10) OTROS/
123                 NIVEMP  (0) NO APLICA
124                         (1) OCUPADOS
125                         (2) SUBOCUPADOS POR JORNADA
126                         (3) SUBOCUPADOS POR REMUNERACION
127                         (4) SUBOCUPADOS REMUN;JORNADA
128                         (5) SUBOCUPADOS NO DESEAC
129                         (6) CESANTES
130                         (7) BUSCAN POR 1 VEZ
131                         (8) PEI ASPIRANTES
132                         (9) PEI NO ASPIRANTES/
133                 CODEMP  (0) NO APLICA
134                         (1) OCUPADOS
135                         (2) NO TRAB-TIENE TRAB
136                         (3) CESANTE
137                         (4) BUSCA 1A VEZ
138                         (5) TAREAS DOMESTICAS
139                         (6) ESTUDIANTES
140                         (7) JUBILDAOS
141                         (8) NO PUEDE TRABAJAR
142                         (9) OTRO INACTIVOS /
143                 CIIU    (0) NO APLICA
144                         (1) AGRICULTURA
145                         (2) MINERIA
146                         (3) INDUSTRIA MANUF.
147                         (4) ELEC.GAS Y AGUA
148                         (5) CONSTRUCCION
149                         (6) COMERCIO
150                         (7) TRANSPORTE
151                         (8) FINANZAS
152                         (9) SERVICIOS
153                         (10) NO ESPEC. /
154                 TIPO    (0) NO APLICA
155                         (1) PROPIETARIO FORMAL
156                         (2) MINIFUNDISTA
157                         (3) ARTESANO
158                         (4) VENDEDOR
159                         (5) VENDEDOR AMBULANTE
160                         (6) INDEPENDIENTE
161                         (7) NO ESPECIFICADO
162                         (8) JORNALERO AGRICOLA
163                         (9) EMPLEADOS
164                         (10) OBRERO
165                         (11) OBRERO DE CONSTRUC.
166                         (12) DEPENDIENTE
167                         (13) EMPLEADO ADMINISTRATIVO
168                         (14) TRABAJADOR EN SERVICIOS
169                         (15) SERVICIO DOMESTICO
170                         (16) TRAB. FAMILIAR URBANO
171                         (17) TRAB. FAMILIAR RURAL
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22

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                                    (6) SEMI-CALIFICADOS
                                    (5) CALIFICADOS
                                    (4) ALTAMENTE CALIFICADOS
                                    (3) TECNICOS
                                    (2) PROFESIONALES
                                    (1) DIRECTORES
                                    (8) OTROS /
                        MATSERV     (0) NO INFORMACION
                                    (1) MAT PERM-SERV PRIV
                                    (2) MAT PERM-ALGUN COMUN
                                    (3) MAT PERM-ALGUN SERV
                                    (4) MAT PERM-SIN SERV
                                    (5) MAT NO PERM-ALG SERV
                                    (6) MAT NO PERM-SIN SERV/
                        HACIN       (0) NO INFORMACION
                                    (1) 100 PCT O MENOS
                                    (2) 101 - 150 PCT
                                    (3) 151 - 200 PCT
                                    (4) MAS DE 200 PCT /
                                    (5) NINGUNOS /
                        AREA        (1) URBANO
                                    (2) RURAL/
                        ESCEDUC     (0) NO APLICA
                                    (1) SECUNDARIA Y MAS
                                    (2) III CICLO
                                    (3) II CICLO
                                    (4) I CICLO
                                    (5) ALFABETO SIN ESCOLARIDAD
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    !EOJ
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                INGRPC    INGRESO PER CAPITA/
                SEXO      SEXO/
                EDAD      EDAD/
                ALFABET   ALFABETISMO/
                NIVEDUC   NIVEL DE EDUCACION/
                NIVEMP    NIVEL DE EMPLEO/
                CIIU      SECTOR DE ACTIVIDAD/
                TIPO      TIPO DE OCUPACION/
                CODSINT   CODIGO DE SINTOMAS/
                ATENC     ATENCION MEDICA/
                CODHOSP   CODIGO DE HOSPITALIZACION/
                ESCSALUD  ESCALA DE SALUD /
                NIVAC     NIVEL DE VACUNACION/
                INGR1     INGR PER CAP-AGRUPADO /
                INGR2     INGR PER CAP-25 COL. /
                INPER2    INGRESO PERSONAL - 25 COL.
                INGRPER   INGRESO PERSONAL /
                GPEDAD    EDADES AGRUPADAS /
                CODEMP    CODIGO SUM DE EMPLEO/
                AREA      AREA/
                ESCEDUC   ESCALA DE EDUCACION/
VALUE LABELS    REGAR     (1) METROPOLITANO
                          (2) OCCIDENTE URBANO
                          (3) CENTRAL I URBANO
                          (4) CENTRAL II URBANO
                          (5) ORIENTE URBANO
                          (6) OCCIDENTE RURAL
                          (7) CENTRAL I RURAL
                          (8) CENTRAL II RURAL
                          (9) ORIENTE RURAL/
                INGR1     (1)  0 -  25 COLONES
                          (2) 26 -  50 COLONES
                          (3) 51 - 100 COLONES
                          (4)101 - 200 COLONES
                          (5)201 Y MAS COLONES /
                INGR2     (1) 0   -  25 COLONES
                          (2) 26  -  50 COLONES
                          (3) 51  -  75 COLONES
```

24

```
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117                          (6) 126 - 150 COLONES
118                          (7) 151 - 175 COLONES
119                          (8) 176 - 200 COLONES
120                          (9) 201 - 225 COLONES
121                          (10) 226 - 250 COLONES
122                          (11) 251 - 275 COLONES
123                          (12) 276 - 300 COLONES
124                          (13) 301 Y MAS COLONES/
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127                          (2) 26 - 50 COLONES
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133                          (8) 176 - 200 COLONES
134                          (9) 201 - 225 COLONES
135                          (10) 226 - 250 COLONES
136                         (11) 251 - 275 COLONES
137                         (12) 276 - 300 COLONES
138                         (13) 301 - 325 COLONES
139                         (14) 326 - 350 COLONES
140                         (15) 351 - 375 COLONES
141                         (16) 376 - 400 COLONES
142                         (17) 401 Y MAS COLONES
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144                          (2) MUJERES/
145                 GPEDAD   (1) 0   -   4 ANOS
146                          (2) 5   -   9 ANOS
147                          (3) 10  -  14 ANOS
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158                          (4) SECUNDARIA
159                          (5) III CICLO
160                          (6) II CICLO
161                          (7) I CICLO
162                          (8) PARVULOS
163                          (9) SIN ESCOLARIDAD
164                          (10) OTROS/
165                 NIVEMP   (0) NO APLICA
166                          (1) OCUPADOS
167                          (2) SUBOCUPADOS POR JORNADA
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169                          (4) SUBOCUPADOS REMUN;JORNADA
170                          (5) SUBOCUPADOS NO DESEAN
171                          (6) CESANTES
```

25

```
                    (7) BUSCAN POR 1 VEZ
                    (8) PEI ASPIRANTES
                    (9) PEI NO ASPIRANTES/
CODEMP              (0) NO APLICA
                    (1) OCUPADOS
                    (2) NO TRAB-TIENE TRAB
                    (3) CESANTE
                    (4) BUSCA 1A VEZ
                    (5) TAREAS DOMESTICAS
                    (6) ESTUDIANTES
                    (7) JUBILDAOS
                    (8) NO PUEDE TRABAJAR
                    (9) OTRO INACTIVOS /
CIIU                (0) NO APLICA
                    (1) AGRICULTURA
                    (2) MINERIA
                    (3) INDUSTRIA MANUF.
                    (4) ELEC.GAS Y AGUA
                    (5) CONSTRUCCION
                    (6) COMERCIO
                    (7) TRANSPORTE
                    (8) FINANZAS
                    (9) SERVICIOS
                    (10) NO ESPEC. /
TIPO                (0) NO APLICA
                    (1) PROPIETARIO FORMAL
                    (2) MINIFUNDISTA
                    (3) ARTESANO
                    (4) VENDEDOR
                    (5) VENDEDOR AMBULANTE
                    (6) INDEPENDIENTE
                    (7) NO ESPECIFICADO
                    (8) JORNALERO AGRICOLA
                    (9) EMPLEADOS
                    (10) OBRERO
                    (11) OBRERO DE CONSTRUC.
                    (12) DEPENDIENTE
                    (13) EMPLEADO ADMINISTRATIVO
                    (14) TRABAJADOR EN SERVICIOS
                    (15) SERVICIO DOMESTICO
                    (16) TRAB. FAMILIAR URBANO
                    (17) TRAB. FAMILIAR RURAL
                    (18) NUNCA TRABAJO/
CODSINT             (0) NO ENFERMO
                    (1) INFECCIOSA Y PARASITARIA
                    (2) APARATO RESPIRATORIO
                    (3) OTRAS ENFERMEDADES/
ESCSALUD            (0) NO ENFERMO
                    (1) ATENDIDO POR MEDICO
                    (2) PARAMED O NO GRAVE
                    (3) GRAVE - NO ATENDIDO/
CODHOSP             (0) NO APLICA
                    (1) ACCIDEN. ENVENAM. VIOLENCIA
                    (2) INFECCIOSA Y PARASITARIA
                    (3) COMP. EMBARAZO Y PARTO
                    (4) OTRAS ENFERMEDADES
                    (5) NO HOSPITALIZADO/
```

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                    NIVAC     (0) NO APLICA
                              (1) 4 VACUNAS
                              (2) 1-3 VACUNAS
                              (3) NINGUNOS /
                    AREA      (1) URBANO
                              (2) RURAL/
                    ESCEDUC   (0) NO APLICA
                              (1) SECUNDARIA Y MAS
                              (2) III CICLO
                              (3) II CICLO
                              (4) I CICLO
                              (5) ALFABETO SIN ESCOLARIDAD
                              (6) ANALFABETO/
                    ATENC     (0) NO ENFERMO
                              (1) MEDICO O CLIN PARI
                              (2) CLIN O EST DE SALUD
                              (3) AYUDANTE RURAL
                              (4) FARMACEUTICO
                              (5) CURANDERO
                              (6) NADIE /
LIST FILEINFO  COMPLETE
SAVE FILE
FINISH
!EOJ
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METHODOLOGICAL ADVANCES

The following represent the key methodological or analytic contributions made by IPROS in its four years duration. The first six provide a means of measuring housing quality, food consumption and employment equivalents; the population projection provided a much needed means to estimate, by region, El Salvador's 1983 population; two analytic methods are described and finally the application of the CENTS and SPSS packages to the IPROS data sets.

The housing, food consumption and employment measures are described in detail in the documents:

1. IPROS: SUBSISTEMA MONITOR DE LA VIVIENDA EN EL SALVADOR
2. IPROS: SUBSISTEMA MONITOR DE LA ALIMENTACION EN EL SALVADOR: EL CASO PROTEICO - CALORICO
3. IPROS: SUBSISTEMA MONITOR DE LA ALIMENTACION EN EL SALVADOR: ENFOQUE PRODUCTO - CANASTA
4. IPROS: SUBSISTEMA MONITOR DEL EMPLEO EN EL SALVADOR
5. PROYECCIONES DE POBLACION POR SEXO Y EDAD (PARA NUEVE REGIONES DE EL SALVADOR 1978 - 1983)

These methods should not be taken as definative measures but merit discussion by associates in respective subject matter areas.

Materials and Services - Housing Indicator

This indicator was developed to provide a global index of housing stock which would characterize El Salvador's common housing types:

- private houses in good condition
- single/multiple dwellings in poor conditions
- housing on illegal lots ("squatter settlements")
- improvised housing

While wall, roof and floor materials are highly intercorrelated in El Salvador's housing, type of wall material is considered to best represent housing types.

Likewise, water source and sanitary services are also highly intercorrelated, but water was seen as reflecting slightly better on health and work conditions.

Lighting source was also included in this indicator to reflect electrification of communities.

The respective criteria are outlined in Table B-1.

The Materials and Services Indicators does turn out to be a global housing indicator, but is too comprehensive to refect specific program impacts.

Table B-1

CRITERIA FOR THE MATERIALS AND SERVICES INDICATOR

COMPONENTS	1	2			3		4			5		6
A. WALLS												
1. Concrete and mixed composition							X					
2. Bahareque	X	X	X	X			X					
3. Adobe	X	X	X	X			X					
4. Wood	X	X	X	X			X					
5. Corrugated metal	X				X	X		X	X	X	X	X
6. Straw or palm								X	X	X	X	X
7. Other								X	X	X	X	X
B. WATER SOURCES												
1. Piped, private	X		X		X			X		X		
2. Piped, communal		X	X		X	X			X	X		
3. Public fountain				X		X	X				X	X
4. Private well				X		X	X				X	X
5. Communal well				X		X	X				X	X
6. Cistern				X		X	X				X	X
7. River; rain				X		X	X				X	X

C. LIGHTING												
1. Electric	X	X		X		X		X	X		X	
2. Kerosene			X		X		X			X		X
3. Other			X		X		X			X		X

Code	Description
1.	Permanent materials and private services
2.	Permanent materials and communal serivces
3.	Permanent materials and some services
4.	Permanent materials and no services
5.	Impermanent materials and some services
6.	Impermanent materials and no services

Persons Per Room Indicator - Housing Indicator

An indicator of crowding within a household was developed not only to show how many persons lived in a given housing unit, but to reflect on the size of the house as well.

United Nations recommendations were taken as a standard:

Sleeping Quarters	Household Residents (Maximum)
1	3
2	5
3	8
4	10
5	12

The indicator was calculated as:

(Actual number residents / Recommended number residents for number of sleeping quaters) * 100 .

This result was then classified into four levels:

1. $\leq$ 100%
2. 101 - 150%
3. 151 - 200%
4. > 200%

This gave a fairly even national distribution of housing density experienced by El Salvador's population:

Level	Houses	Persons
1	43.3%	27.9%
2	16.0%	15.7%
3	22.5%	26.1%
4	18.2%	30.3%

Job Equivalents

To estimate the magnitude of needed employment generation, a measure was developed to take into account not only unemployed but underemployed persons. (Underemployed persons accounted for the largest category in the labor force in all survey rounds except the one taken during the harvest period 1978-79.).

The following criteria were applied to calculate the equivalent number of additional jobs needed to reach 100% full employment:

EQUIVALENT	APPLIED TO
0	Fully employed or part-time employed persons who seek no more work hours
$\frac{35\text{-Hours Worked}}{35}$	Underemployed: worked less than 35 hours per week
$\frac{\text{Hourly Minimum Wage} - \text{Hourly Wage Received}}{\text{Minimum Wage}}$	Underemployed: average hourly wage less than minimum wage
$\frac{((35\text{-Hours Worked}) * \text{Min. Wage}) + ((\text{Min. Wage} - \text{Wage Received}) * \text{Hours Worked}}{35 * \text{Minimum Wage}}$	Under employed both in terms of hourly wage and hours worked
1	Experienced unemployed; unemployed looking for first job; economically inactive who wish to work

This measure applied to 1978 labor force statistics give the following:

Economically Active	Persons	Job Equivalents Needed
Fully Employed	665,237	-----
Under Employed-hours	13,614	1,361
-wages	615,531	276,956
-wages/hours	19,733	7,709
-hours;don't want more work	58,674	-----
Experienced Unemployed	44,981	44,981
Looking for first job	8,219	8,219
Sum	1,426,039	328,377

Economically Inactive Population	Persons	Job Equivalents Needed
Want to work	97,888	97,888
Don't want to work	1,431,420	-----
Sum	1,529,308	97,888

One implication of this excercise is that the additional number of jobs needed to fully employ those economically active in 1978 would be equivalent to 18.7% -- (328,377 / 1,426,036 + 328,377) -- of those potentially fully employed and economically active.

The value of this measure lies particularly in its application in comparing demographic, regional occupational or industrial subpopulations.

Measures of Nutritional Status/ Consumption

Three measures were developed in an attempt to measure nutritional status through reported food consumption. However, nutritonal status is quite distinct from the food consumption patterns elicited from the survey as:

1. the survey inquires about purchased consumption of fifteen common food items,

2. consumption is reported for the household's weekly total, it is not based on individual reporting,

3. because it includes only purchased products, the family's own production and consumption of fruits, vegetables, eggs, cheese, and grains are omitted which underestimates actual consumption, particularly for rural families,

4. an urban family's consumption may also be distorted as the food purchased from side walk vendors, lunch time "comedores", etc. is omitted,

5. food purchased may differ from food served to family members due to food preparation habits, intra-family distribution patterns, etc.

6. food actually consumed differs from an individual's nutritional status as the latter is related to the individual's activity patterns, absorption ability, health status, etc.

Given that food purchased probably explains only a limited proportion of the variation in an individual's nutritional status, more work needs to be done to link the "input" and "output" variables.

The following three measures represent an attempt to move from crude to refined measures of food "consumption".

Protein / Calorie Adequacy Measure

The crudest of the three consumption measures is an attempt to classify the individual's protein and calorie intake from the food item list.

The following procedure was followed:

1. The family's weekly purchases of the fifteen food items were converted to total calories and grams of protein using INCAP's 1960 "Tabla de Composición de Alimentos de Centroámerica y Panamá".

2. These totals were divided by 7 and distributed to individual family members using the following assumed consumption patterns

1.0 consumption unit - head of household

0.8 consumption unit - other adults; children 6 years and older

0.5 consumption unit - children 4 - 5 years

0.4 consumption unit - children 1 - 3 years

0.3 consumption unit - infants under 1 year .

3. The estimated protein/calorie totals were compared to the age/sex calorie and protein requirements obtained from INCAP's 1973 "Recomendacions Dietéticas Diarios para Centroámerica y Panamá".

4. From these comparisons, indivuals were classified as:

≥ 100 %	adequately	nourished	in	terms	of	calories	(or	proteins)
85 - 99 %	"	"	"	"	"	"	"	"
75 - 84 %	"	"	"	"	"	"	"	"
65 - 74 %	"	"	"	"	"	"	"	"
65 %	"	"	"	"	"	"	"	"

This approach is a simple straight foward means of classifying individuals by consumption patterns, but it fails in this context as the data from the survey does not measure actual consumption.

Food Product Method

Moving away from the assumption that the fifteen food items actually reflect food consumption, the food product analysis looks at the pattern of purchases in an attempt to measure purchase short-falls of individual food items.

The interesting part of this method is that it establishes regional patterns of consumption of the fifteen items and makes comparisons between subgroups (such as income groups) within regional patterns.

The steps taken to calculate this measure are the following:

1. The average number of grams per capita of each food item is calculated.

2. These are converted to grams of protein and caloric equivalents.

3. The calorie and protein equivalents are summed per region to ascertain whether the sum of averages constitutes a suficient diet (which they do given an assumed 10-20% underreporting).

4. The average consumption amount is considered the norm, but as it is affacted by overconsumers, more than 50 % of the population in each region are considered lacking in regards to a given product.

5. The number of persons and grams ~~per-product~~ deficient for a given product are then stratified within regional groups (by income, occupation, etc.).

6. Two of the measures shown in this stratification are:

   a) number of persons below average consumption, and

   b) number of person-equivalents, calculated from actual grams below the average consumption.

While this measure begins to analyze in greater detail food purchase patterns, it greatly needs age/sex standardization and simulataneous

Food Basket Method

An extension of the food product method is a procedure which evaluates the family's food basket in its entirety, recognizing that some items contribute an excess share of calories or proteins, diminishing th need for other food stuffs.

The information needed to calculate "deficits in the family's food basket" are the following:

1. the regional recommended food pattern standardized in terms of: a) grams of food item per 1,000 calories

b) caloric distribution of food items per 1,000 calories,

2. the total family caloric needs as calculated from its age/sex composition

3. the family's reported consumption of the fifteen food items.

Table B-2 illustrates the calculation of a hypothetical family's actual food basket and weekly basket deficits.

The contribution of this technique is by introducing the family's age/sex distribution and explicitly permiting caloric (or protein) tradeoffs between food products; the resulting measure is more precise in pointing out needs in various population strata.

Table B-2

Calculation of Hypothetical Family's Food Consumption Deficits

(1) Food Item	(2) Grams Recommended X 1,000 Calories	(3) Caloric Dist, Per 1,000 Calories	(4) Family Weekly Consum. (gms)	(5) Recommended Weekly Consumption (gms)	(6) Diff. in Consum. (gms)	(7) Caloric Deficit by Food Item	(8) Weighted Caloric Deficit Item	(9) Deficit in grams per Food Item
				(2) X 28,000	(5)-(4)	(6)X(3)/(2)		(8)X(2)/(3
A	0.28	100	14.70	7.84	-6.86	-2,450	0	0
B	0.10	300	2.10	2.80	0.70	2,100	1,535	0.51
C	0.30	200	6.30	8.40	2.10	1,400	1,023	1.53
D	10.17	400	142.38	284.76	142.38	5,600	4,092	104.04

Notes:

(2), (3) standardized per 1,000 calories from recommended regionalpattern of food items

(4) from survey

(8) f X (7) given (7) is negative (expresses a deficit), where:
f = conversion factor
= sum of (7) / sum of deficits expressed in (7), or
= 6,650 / 9,100
= 0.73

Regional Population Projections 1978-83

Estimates of El Salvador's 1983 age/sex distribution was indicated as such estimates are basic for program planning, and as 20-40% of El Salvador's population has been uprooted in the period 1978-83.

Data Sources for the Projections

Population base - a 1978 population base was established using projections from the 1971 census (elaborated by the Minstry of Planning), regional data from the 1978 Household Survey and smoothing techniques for age misreporting.

Fertility - the Brass fertility technique was applied to questions from the 1978 Survey on births in the last year and children-ever-born (by age of mother).

Mortality - the basic mortality pattern was taken from 1981 registered deaths adjusted for underregistration, taking into account estimates of mortality from the civil war plus estimates of infant and child mortality from the 1978 Household Survey.

Internal Migration - The five year migration question from the 1978 Survey was used to estimate normal migration; to this estimate was added the results of the CONADES (Comision Nacional de Desplazados) study of internal refugees.

Internaltional Migration - Estimates of migration in the time period 1978-83 to Mexico and other Central American countries were obtained from the U.N. HIgh Commissioner of Refugees. This major demographic variable is quite conservative as these figures do not include estimates of migrants to the United States.

Methodology for Projection

The component projection method was used to project the five year age/sex groups by region using a life table based on age-sex specific deaths from the various sources and the 1978 estimated population, age-specific fertility rates, internal and international migration. The projected regional populations were then summed for rural, urban and total country populations.

Calidad de Vida -- Analytic Tool

This simple analytic tool permits the ranking of population subgroups from a weighted average of "problems" common to all subgroups. The weighting comes from the national prevalence of a given "problem" relative to other problems" being looked at.

This method has been computerized for interactive use but is simple to compute on paper. The algorithm calls for:

1. Data which are expressed in terms of percent of populations (at risk) of subgroups with a given "problem".

2. Data which come from the same time period or same data source to minimize confounding influences.

3. Data which consistantly express either "problem levels" or "benefit levels". For example, it would be erroneous to work simultaneously with "literacy" and "houses with no piped water".

The calculation of the index is as follows:

	National	Group 1	Group 2	Group 3
Problem 1	P_1	P_{11}	P_{12}	P_{13}
Problem 2	P_2	P_{21}	P_{22}	P_{23}
Problem 3	P_3	P_{31}	P_{32}	P_{33}
		ICV_1	ICV_2	ICV_3

P_i Proportion of total population with problem(i)

WP_i Weighted problem(i) for total population where:
$WP_i = P_i / \Sigma P_i$

P_{ij} Proportion of group (j) with problem (i)

WP_{ij} Weighted problem (i) in group (j) where
$WP_{ij} = WP_i * P_{ij}$

ICV_j Index of "calidad de vida" or "quality of life" for group j

One application of the method is to look at the difference between ranking of groups for one type of problem cluster versus another:

HOUSING ANALYSIS

Problem	Total	Metro Urb	Occ Urb	Cen 1 Urb	Cen 2 Urb	Ori Urb	Occ Rur	Cen 1 Rur	Cen 2 Rur	Ori Rur
Pct. in improvised housing	19	9	8	7	3	15	36	12	15	39
Pct. without electricity	55	4	16	20	28	30	79	75	88	91
Pct. living density level 200+	30	9	18	20	20	24	40	34	41	47
Index	--	6.3	15.2	17.7	21.1	25.5	59.8	51.7	61.1	68.7

TRAINING AND EDUCATION ANALYSIS

Problem	Total	Metro Urb	Occ Urb	Cen 1 Urb	Cen 2 Urb	Ori Urb	Occ Rur	Cen 1 Rur	Cen 2 Rur	Ori Rur
Pct. illiterate	33	10	18	23	23	24	45	40	45	52
Pct. with 3 year educ. or less	66	34	50	60	57	56	82	78	85	85
Pct. unskilled workers	39	18	41	37	39	24	77	47	49	34
Index	--	23.8	39.8	44.7	43.7	39.3	71.8	60.2	65.3	62.2

RANKING

	Housing Analysis		Education and Training Analysis	
1	Metropolitan	(6.3)	Metropolitan	(23.8)
2	Occidental - Urb	(15.2)	Oriental - Urb	(39.3)
3	Central 1 - Urb	(17.7)	Occidental - Urb	(39.8)
4	Central 2 - Urb	(21.1)	Central 2 - Urb	(43.7)
5	Oriental - Urb	(25.5)	Central 1 - Urb	(44.7)
6	Central 1 - Rur	(51.7)	Central 1 - Rur	(60.2)
7	Occidental - Rur	(59.9)	Oriental - Rur	(62.6)
8	Central 2 - Rur	(61.1)	Central 2 - Rur	(65.3)
9	Oriental - Rur	(68.7)	Occidental - Rur	(71.8)

These figures indicate the large gaps in levels of living between the Metropolitan, other urban and rural areas. Also there is a major shift in position between the Oriental and Occidental rural parts of the country in comparing housing and education variables, most likely due to the high number of unskilled workers in the Occidental or coffee growing areas.

As the indices themselves have no intrinsic arithmetic value, they can be used only for ranking between subgroups, <u>not measuring distances</u> between the groups.

Cadenas (Chains) -- Analytic Tool

While it is known that the poor in developing countries simultaneously lack satisfactory levels of housing, education, health, nutrition, employment and water, it is useful to pinpoint the groups of the population who are most lacking satisfaction of these basic needs. At the same time, it is interesting to see which clusters of problems are associated with the largest proportions of the population.

The "cadenas" method looks at associated problems through a simple device of ranking the number of persons in a population group who experience each combination of N problems (there are $N^2 - 1$ possibilities). The problems selected need to be applicable to the same individuals so that a vaccination measure, for example, which normally is ascertained for children ages 0-5 could not be simultaneously manipulated with employment indicators. The criteria for determining what constitutes a "problem" is subjective in most basic needs areas. Thus it is important to leave the criteria setting flexible in such a method in order the evaluate the impact of changing definitions or criteria of problems.

To illustrate the "cadenas" method, two examples are included using five "problems" from the 1978 survey data. Table B-3 shows that in the Metropolitan area, one-fourth of the population experiences none of the five problems and less than 1 percent (0.5) experience all five simultaneously. On the other hand in the rural eastern region (Table B-4), less than one percent of the population is problem free and 15 percent experience all five problems. This excercise could be repeated to contrast occupational groups, industrial groups, males and females, etc.

Table B-3

INDICADORES DE PROGRESO SOCIAL

TABULACION DE COMBINACIONES DE PROBLEMAS

***** AREA METROPOLITANA *****

CORR	PROBLEMAS 1	2	3	4	5	FRECUENCIA	PORCENTAJE	INGRESO PROMEDIO	DESVIACION STD
1						165645	22.25	315.20	360.10
2		***	***			101412	13.62	207.05	231.14
3		***				96714	12.99	282.15	319.79
4				***		85455	11.48	89.90	80.99
5		***	***	***		75087	10.09	84.71	78.70
6		***		***		61236	8.23	107.69	94.39
7			***			51192	6.88	374.54	483.41
8				***	***	13608	1.83	64.42	37.80
9	***	***				13527	1.82	314.77	323.70
10	***	***	***			13203	1.77	148.18	125.19
11	***	***	***	***		13041	1.75	72.72	37.90
12		***	***	***	***	10449	1.40	57.33	28.03
13		***		***	***	8991	1.21	76.55	42.00
14	***	***		***		8746	1.18	91.63	78.54
15			***	***		7047	.95	130.66	155.23
16		***			***	4050	.54	168.02	87.92
17	***	***	***	***	***	3807	.51	64.26	37.45
18		***	***		***	2916	.39	81.97	71.88
19					***	2673	.36	93.82	78.08
20	***	***		***	***	2673	.36	69.82	43.61
21	***	***	***		***	1539	.21	62.53	49.67
22	***	***			***	810	.11	115.00	71.73
23			***		***	324	.04	161.00	81.23
24			***	***	***	243	.03	64.33	16.03
25	RESTO DE COMBINACIONES								

*** PROBLEMAS ANALIZADOS ***

CODIGO	DESCRIPCION
1	ANALFABETISMO
2	ESCALA DE EDUCACION
3	NIVEL DE EMPLEO
4	HACINAMIENTO
5	MATERIALES Y SERVICIOS

Table B-4

INDICADORES DE PROGRESO SOCIAL

TABULACION DE COMBINACIONES DE PROBLEMAS

***** REGION ORIENTAL RURAL *****

CORR	PROBLEMAS 1	2	3	4	5	FRECUENCIA	PORCENTAJE	INGRESO PROMEDIO	DESVIACION STD
1				***	***	248421	29.59	24.70	24.03
2	***	***	***	***	***	125819	14.99	24.12	22.34
3		***	***	***	***	120657	14.37	27.47	30.25
4	***	***		***	***	95118	11.33	29.49	23.41
5		***		***	***	71779	8.55	34.04	26.52
6				***		28850	3.44	45.82	51.90
7	***	***	***		***	25136	2.99	39.27	40.94
8		***	***	***		22642	2.70	58.10	89.69
9	***	***			***	18097	2.16	55.87	47.31
10					***	14012	1.67	38.48	43.44
11		***	***		***	13217	1.57	83.28	214.55
12		***		***		11527	1.37	69.26	102.75
13		***			***	10319	1.23	82.16	171.10
14	***	***	***	***		9091	1.08	34.71	34.80
15	***	***		***		6850	.82	48.35	76.81
16						3997	.48	88.98	92.48
17		***				3678	.44	152.11	130.86
18		***	***			3420	.41	118.21	138.01
19	***	***	***			2303	.27	67.54	54.54
20	***	***				1665	.20	103.95	121.14
21			***	***	***	1305	.16	40.29	38.97
22			***	***		740	.09	42.18	23.20
23			***		***	475	.06	17.20	22.11
24			***			383	.05	218.20	139.78
25	RESTO DE COMBINACIONES					0			
	POBLACION TOTAL ANALIZADA					839501			

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*** PROBLEMAS ANALIZADOS ***

CODIGO	DESCRIPCION
1	ANALFABETISMO
2	ESCALA DE EDUCACION
3	NIVEL DE EMPLEO
4	HACINAMIENTO
5	MATERIALES Y SERVICIOS

Application of CENTS and SPSS Packages

While CENTS and SPSS have existed for well over a decade, they have not enjoyed widespread application in El Salvador. Their use in IPROS greatly enhanced access to the household survey data.

CENTS

CENTS was developed by the U.S. Bureau of the Census to provide efficient processing of large data sets (such as censuses and large scale surveys) to produce highly readable, publication-ready tables. CENTS is flexible in that it permits both variable manipulation and detailed table labling.

CENTS was applied to the various rounds of the national household surveys taken 1978 through 1980 to produce standard sets of tables. The tables are standardized in that each set of data (employment, education, housing, etc.) are cross-tabulated by the same set of variables (age/sex, geographic, occupational, industrial and income).

The steps have been well documented so that future household surveys can be quickly processed. The drwback to using CENTS is that it (or its local versions, at least) requires an IBM DOS (type of operating system) which means using expensive mainframe computers, Unless CENTS is adopted to the mini-systems, the cost of operation may override its aesthetic advantages.

SPSS (Statistical Package for the Social Sciences)

While heavily used by U.S. social scientists, SPSS has not had much recognition in Central America. Bruce Newman of INCAP (Instituto de Nutrición de Central América y Panamá) installed a version on the

Universidad Centroamericana (UCA) Hewlett-Packard 3000 mini-system in 1982.

Only certain SPSS statistical routines (such as FREQUENCIES, CROSS TABS and BREAKDOWNS) are appropriate to the nature of the survey, many other routines are available for other social science applications. It is hoped that the IPROS team will share its experience with other Salvadoran technicians so that not only will IPROS' specialized version interactive version of SPSS gain an audience but the full range of options that this user oriented package offers.

BASIC SOCIAL INDICATORS

A core set of social indicators were selected to be generally consistant with the following criteria[1], some of which are statistically testable. As such, these indicators should:

- Provide a quantitative measure of an important characteristic of life by being a statistic

- be obtained at reasonable cost
  For example measuring protein and caloric intake through a dietary survey provides data of questionable reliability at high cost.

- be a characteristic commonly found in a population, not one limited to a small social, economic or regional group

- reflect basic or permanent characteristics of society not emphemeral characteristics which would quickly change due to technology, taste or political fluctuations

- be readily understood by a wide audience of users and be generally considered "useful"

- respond to changes in the socio-economic environment due to development projects, policies or programs

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1/ The first eight were suggested by the original project paper "Progress indicators for Measuring Changes in the Level-of-Living of the Rural Poor" December 20, 1978.

- cover a range of basic human needs and not concentrate in one area, such as housing

- measure characteristics of sub -groups of a population in a way which would permit comparisons between groups and aggregations to a national level

- permit comparisons with indicators from other countries i.e treat common themes, use widely held criteria or permit reformulation for compatibility

- be common enough to not be greatly affected by statistical or sampling variability. For example, the infant mortality rate is a good national or even regional (rural/urban) social economic indicator, but suffers when estimated for smaller units of analysis.

- be sensitive, to underlying concerns such as rural-urban differentials or income distribution. Statistically speaking, the indicators as dependent variable should display significant variation and demonstrate (at least initially) association with the independent variables.

- obviously have an ordinal nature, that is suggesting a scale of preferred state of being (literate vs illiterate) rather than being merely categorical (male/female; agriculturalist/factory worker)

- be non-redundant

- be asked in a consistant manner in sucessive surveys to permit comparison overtime

- permit reconstruction or reformulation from raw data. As consensus does not exist on some measures (such as "unemployment" or "Minimum level of education"), these indicators should permit descomposition and reconstruction to fit criteria for various audiences

- constitute a small enough set of indicators so that all could be simultaneously manipulated by simple methods. Keep in mind that to look at all combinations of a set of N variables, there are $N^2 - 1$ possibilities.

These criteria were used to evaluate three lists of social indicators. The first two are based on data and experience of El Salvador's Nacional Multipurpose Household Surveys 1978-80; the third based on a proposed 1984 Household Survey.

List A[1] was constructed in a theoretical context in order to give precise definitions of social "problems" which would permit a series of statistical manipulations. List B[2] was developed to provide scales, not dichotomous variables, so that the data user would be free to decide just what level in the scale constituted the "problem". List C built on List B, differing where empirical criteria called for improvements.

In these lists, the words "index", "level" and "scale" are used in order to give some specificity to the indicators proposed. For current purposes, they are defined as:

<u>index</u> - a variable (simple or composite) representing a social problem with a specific cut point, such as caloric deficiency de-

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SIECA/ECID/IPROS - 03-2112-7.82

1) September 1983.

"Methodología de Indicadores de Progreso Social: 11. Indicadores Evaluativos" pages 11 - 12

2) IPROS (Draft) October 1983 "Manual de Usuario: Programas de Interfase".

fined as being less than the 85% adequacy level.

level - a simple variable with ordinal values with "1" being the most desirable status (as in employment, "1" represents those fully employed).

scale - composite variables with ordinal values; again "1" being the most desirable status. (An example is the materials and services scale, combining data on wall materials, light and water sources).

A series of figures illustrate the relationship between the indicators and rural/urban as well as percapita family income differentials.

ALTERNATIVE LISTS OF PRINCIPLE INDICATORS

SUBJECT AREA	A	B	C
EMPLOYMENT	Employment Status Index	Employment Status	Employment Status
EDUCATION	Literacy Index	Literacy Level	Literacy Level
	--------	Education Scale	Educational Attainment Level
HEALTH	Health and Medical Attention Index	Health and Medical Attention Scale	Health and Medical Attention Scale
	--------	Vaccination Scale	Vaccination Scale
FOOD AND NUTRITION	Calorie Deficiency Index	Caloric Adequacy Scale	--------
	Protein Deficiency Index	--------	--------
	--------	--------	Anthropometric Measure
HOUSING	Materials and Services Deficiency	Materials and Services Scale	--------
	--------	--------	Water and Sanitary Services Scale
	Persons-per-Room Index	Persons-per-Room Scale	Person-per-Room Scale
	Ownership and Housing Type Index	--------	--------

(ALTERNATIVE LISTS OF PRINCIPLE INDICATORS, CONT.)

LABOR FORCE TRAINING	Access to training for employed non-technicans	--------	--------
	Access to training for unemployed non-technicians	--------	--------
	--------	Training or Qualification Level	Training or Qualification Level

LIST A

SUBJECT AREA	INDICATOR	DEFINITION
EMPLOYMENT	EMPLOYMENT STATUS INDEX	Percent of economically active population either underemployed due to hours worked, underemployed due to wages below minimum underemployed due both to wages and hours unemployed - lost job, or unemployed - looking for first job
EDUCATION	LITERACY INDEX	Percent of the population 7 years and over who neither reads nor writes
HEALTH	HEALTH AND MEDICAL ATTAINMENT INDEX	Population with serious illness whil did not recieve treatment by qualified personel (such as doctors, nurses and qualified paramedics)
FOOD AND NUTRITION	CALORIE DEFICIENCY	Percent of population with caloric consumption less than 85% recommended for age and sex
	PROTEIN DEFICIENCY	Percent of population with protein consumption less than 85% recommended for age and sex
HOUSING	MATERIALS AND SERVICES DEFICIENCY	Percent of the population who lives in houses described as: - built of impermanent materials with some or no services, or -built of permanent materials with no or some services
	PERSONS-PER-ROOM INDEX	Percent of the population living in quarters with greater than 100% level in the persons-per-room-scale
	OWNERSHIP AND HOUSING TYPE	Percent of the population who do not live in houses on own property, "ranchos" on own property, or rented houses or apartments

LABOR FORCE	ACCESS TO TRAINING FOR EMPLOYED NON-TECHNICIANS	Percent of employed non-technical labor force who would like to receive training and are not now doing so
	ACCESS TO TRAINING FOR UNEMPLOYED NON-TECHNICIANS	Percent of unemployed non-technical labor force who would like to receive training and are not now doing so

LIST B

SUBJECT AREA	INDICATOR	DEFINITION
EMPLOYMENT	EMPLOYMENT STATUS	For economically active population: 1. Fully employed (worked at least 35 hours in the last week at at least minimum wage) 2. Underemployed due to hours worked 3. Underemployed due to wages 4. Underemployed due to wages and hours 5. Underemployed due to hours, but does not wish to work more hours 6. Unemployed; experienced labor force 7. Unemployed; looking for first job
EDUCATION	LITERACY	For population 10 years and over: 1. Literate - can read and write 2. Illiterate - neither reads nor writes
	EDUCATION SCALE	For population 10 years and over: 1. More than 9 years of school attended 2. Schooling: 7 - 9 years attended 3. Schooling: 4 - 6 years attended 4. Schooling: 1 - 3 years attended 5. Literate without schooling 6. Illiterate
HOUSING	MATERIALS AND SERVICES SCALE	Characteristics of housing by wall materials, water and light source: 1. permanent materials and private services 2. permanent materials and communal services 3. permanent materials and some services 4. permanent materials and no services 5. impermanent materials and some services 6. impermenent materials and no services
	PERSONS-PER-ROOM SCALE	Scale established as ratio of actual to U.N. recommended number of persons-per-room 1. 100 percent or less 2. 100 - 150 percent 3. 151 - 200 percent 4. greater than 200 percent

HEALTH	HEALTH AND MEDICAL ATTENTION SCALE	For all ages: 0. Persons who have not been sick in the last six months 1. Persons who have been ill but received treatment by private physicans, in clinics or other medical establishments 2. persons who have been ill who were attended by paramedical personel or considered illness not serious 3. persons seriously ill, who received no attention
	VACCINATIONS SCALE	Persons under age five who have received of the DPT, polio, measles or BCG vaccines: 1. All four vaccination types 2. 1 - 3 vaccinations 3. 0 vaccinations
FOOD AND NUTRITION	CALORIC INTAKE ADEQUACY	Caloric intake from list of 15 basic foods, standardized by age and sex 1. At least 100 percent of recommended level 2. 85 - 99 percent of recommended level 3. 75 - 84 percent of recommended level 4. 65 - 74 percent of recommended level 5. less than 65 persent of recommended level
LABOR FORCE QUALIFICATION	TRAINING OR QUALIFICATION LEVEL	Training or qualifications of economically active population age 15-49 : 1. Directors 2. Professionals 3. Technicians 4. Highly skilled 5. Skilled 6. Semi-skilled 7. Unskilled

LIST C

SUBJECT AREA	INDICATOR	DEFINITION
EMPLOYMENT	EMPLOYMENT STATUS	For economically active population 1. Fully employed (worked at least 35 hours at miniumum wage or more) 2. Underemployment due to no. hours worked 3. Underemployment due to wages received 4. Underemployed due both to wages and hours 5. Underemployed due to hours worked but doesn't want to work more hours 6. Unemployed; experienced labor force 7. Unemployed; looking for first job
EDUCATION	LITERACY LEVEL	For population 10 years and over: 1. Literate- can both read and write 2. Illiterate - unable to read or write
	EDUCATIONAL ATTAINMENT LEVEL	For population 10 years and over; level of attainment: 1. University 2. Non-university higher education 3. Bachillerato 4. Secondary 5. Third cycle : 9 years 6. Second cycle : 6 years 7. First cycle : 3 years 8. Less than first cycle or no education
FOOD AND NUTRITION	ANTHROPOMETRIC MEASURE	(Nutritional status based on weight per height per age, or arm circumference to be decided after consulting with field personnel)
HEALTH	HEALTH AND MEDICAL ATTENTION SCALE	For all ages: 0. Persons who have not been sick in the last six months 1. Persons who have been ill, but received treatment by private physicians in clinics or other medical establishments 2. Persons who have been seriously ill who were attended by paramedics or considered illness not serious and received no attention

		3. Persons seriously ill who received no attention
	VACCINATION	Persons under age 5 who have received for the list of DPT, polio, measles or BCG vaccines: 1. All four vaccinations 2. 1 - 3 vaccinations 3. 0 vaccinations
HOUSING	MATERIALS AND SERVICES SCALE	Characteristics of housing by wall materials, and by water and light sources: 1. Permanent materials and private services 2. Permenent materials and communal service 3. Permanent materials and some serivces 4. Permanent materials and no services 5. Impermanent materials and some services 6. Impermanent materials and no serivces
	ALTERNATE: WATER AND SANITARY SERVICES SCALE	Persons whose houses have: 1. Inside water; private bath/toilet 2. Inside water; communal bath/toilet 3. Public fountain or well;private latrine/ latrine/septic tank 4. Public fountain or wellñ communal latrine septic tank 5. River, cistern; latrine or septic tank 6. No services
LABOR FORCE QUALIFCATIONS	TRAINING OR QUALIFICATION LEVEL	Training or qualifications of economically active population age 15-49: 1. Directors or professionals 2. Technicians 3. Highly skilled 4. Skilled 5. Semi-skilled 6. Unskilled

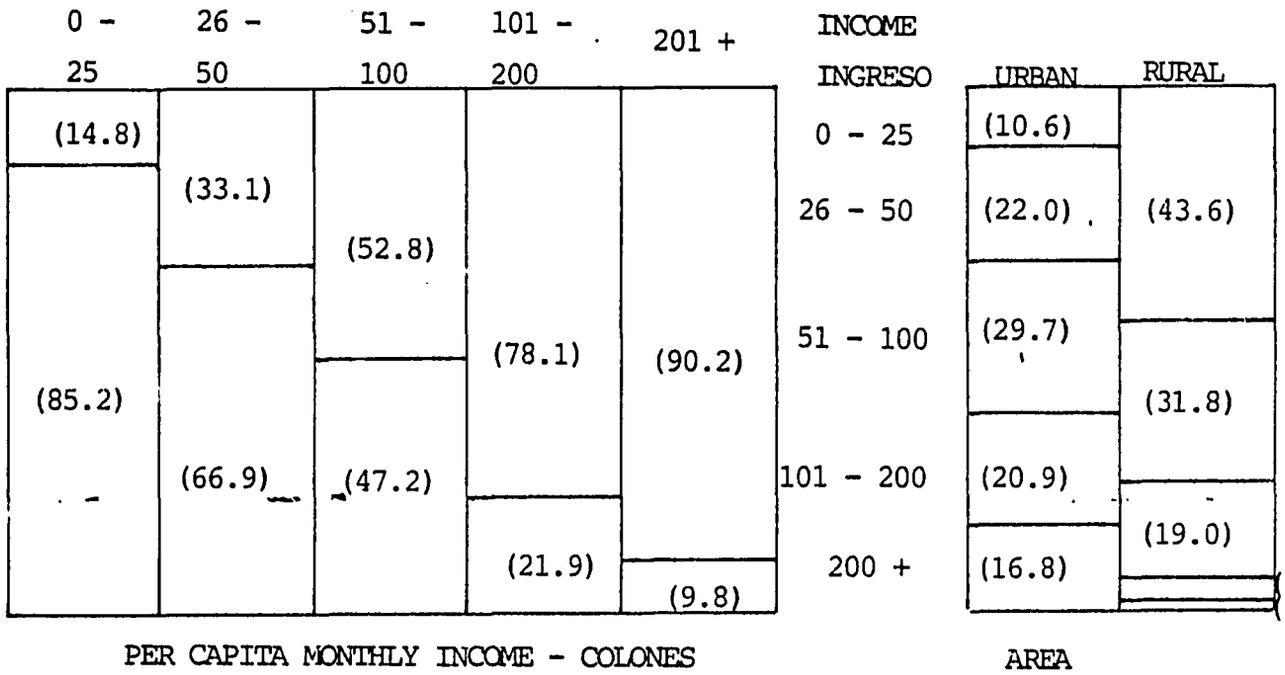
FIGURES C 1a, 1b

INCOME X RURAL URBAN

INGRESO X AREA

ROUND 1

1978



KEY:

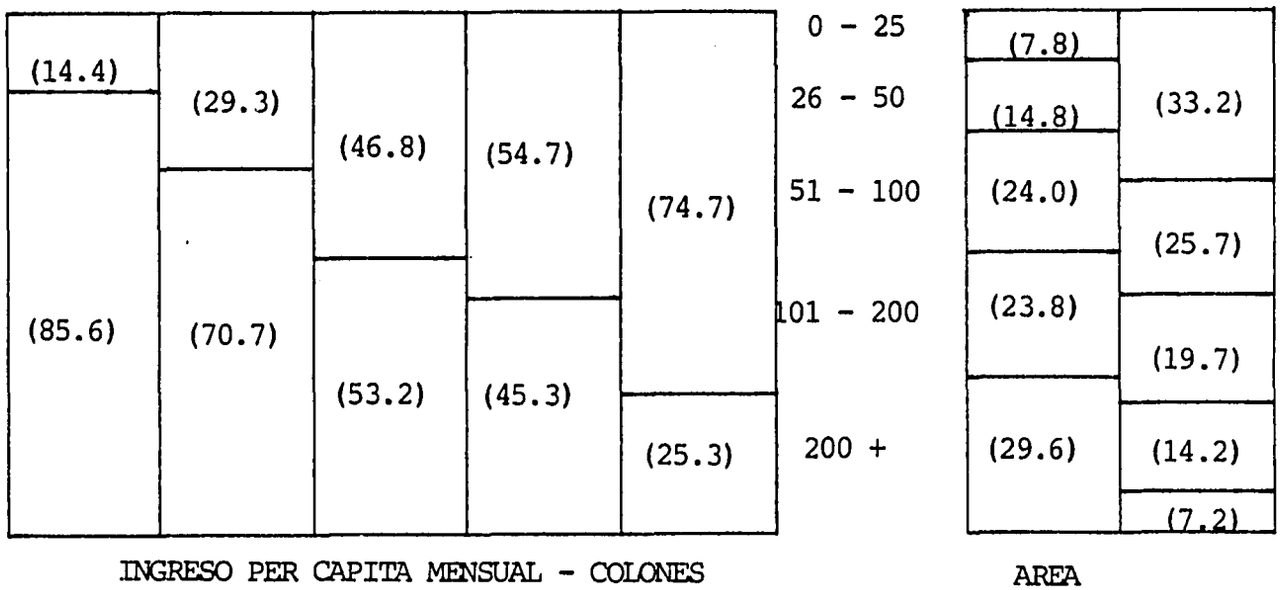
- URBAN
- RURAL

CLAVE:

- URBANO
- RURAL

ROUND 2

1978 - 79



DISCUSSION OF THE INDICES

EMPLOYMENT

Employment Status (Figure C-2a and 2b)

Employment status was expanded during the proyect to take into account various forms of under employment due to shortage of wages or hours worked. It was obvious that strict unemployment (not having worked for at least 1 hour in the previous week) was very rare in a country without economic "safety nets".

The only question which will be explored in greater detail in the next survey es whether or not to change the 35 hours international norm to a longer work week to reflect the local 5 1/2 day work week standard.

EDUCATION

Literacy (Figure C-3)

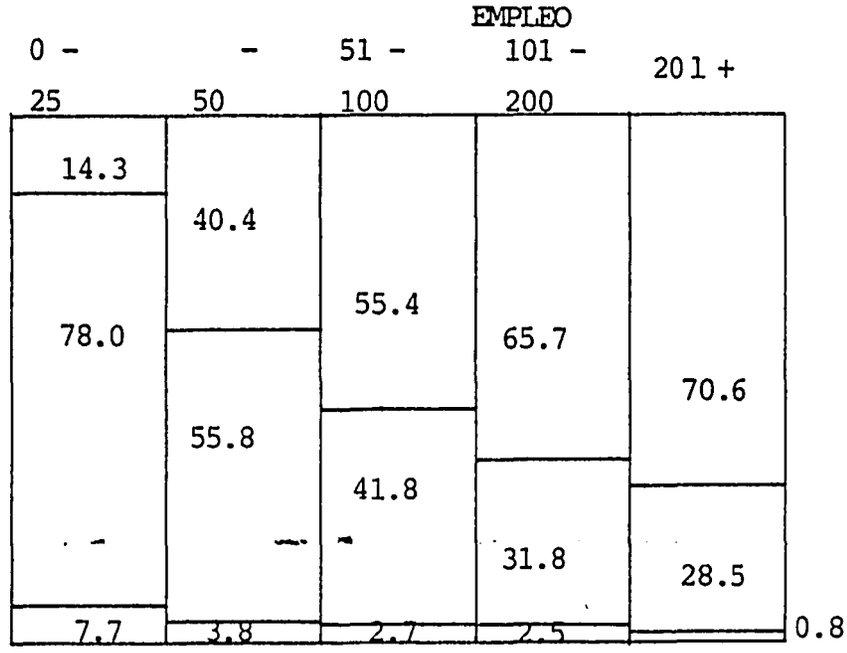
The concept is one of the most easily understood of indicators and still serves at this point in development for El Salvador to bear a strong relationship to income and rural/urban differentials.

What needs better definition is not the basic variable but the survey question to be expanded from "can read and write" to "can read and write a simple paragraph" - as experience has shown that some persons consider themselves literate if they can sign

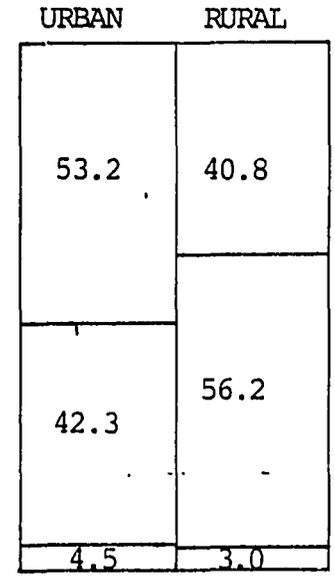
E M P L O Y M E N T

EMPLEO

ROUND 1
1978



PER CAPITA MONTHLY INCOME - COLONES



AREA

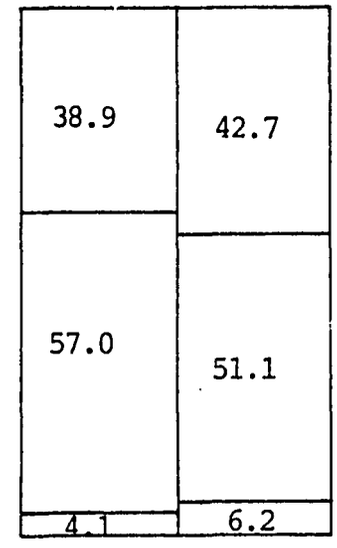
KEY:

- Fully employed
- Underemployed
- Unemployed

CLAVE:

- Ocupados plenos
- Subocupados
- Desocupados

RONDA 2
1978 - 79

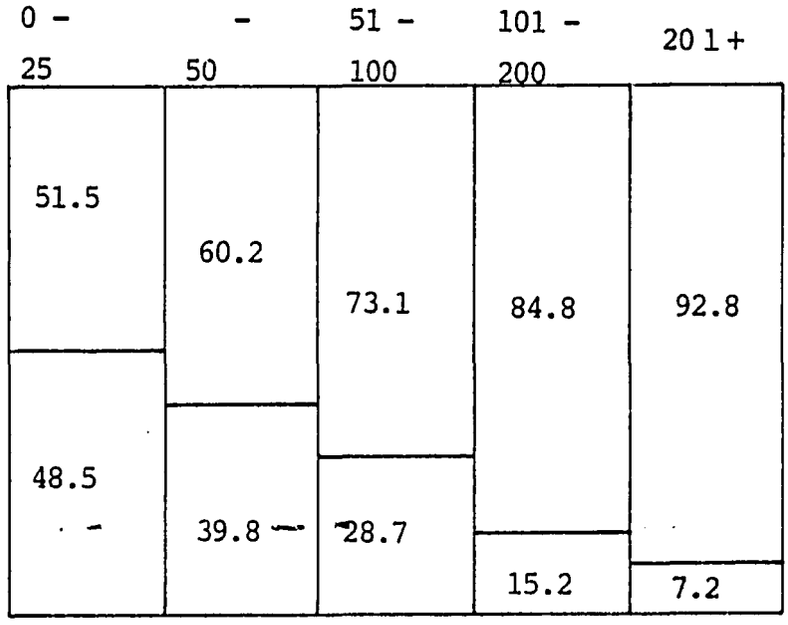


AREA

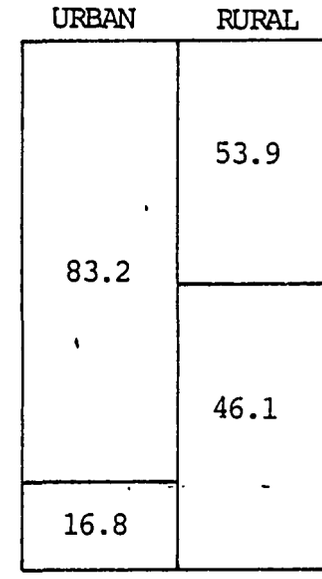
L I T E R A C Y

ALFABETISMO

ROUND 1
1978



PER CAPITA MONTHLY INCOME - COLONES



AREA

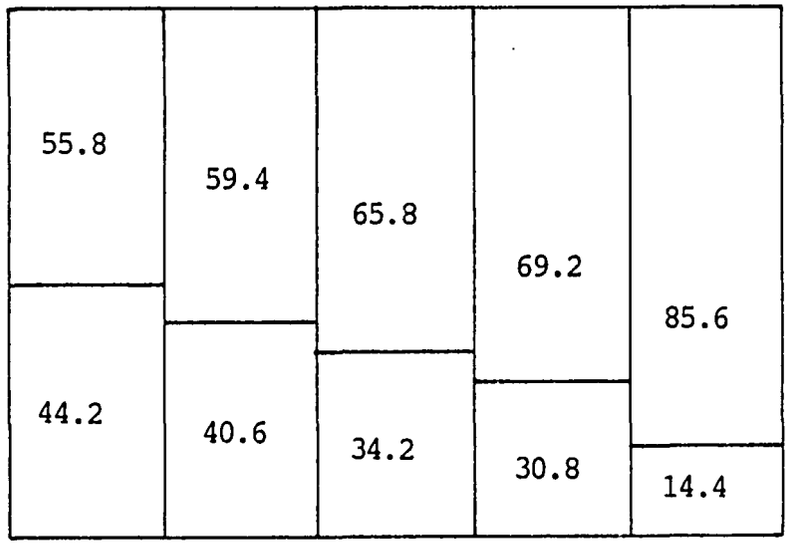
KEY:

- Literate
- Illiterate

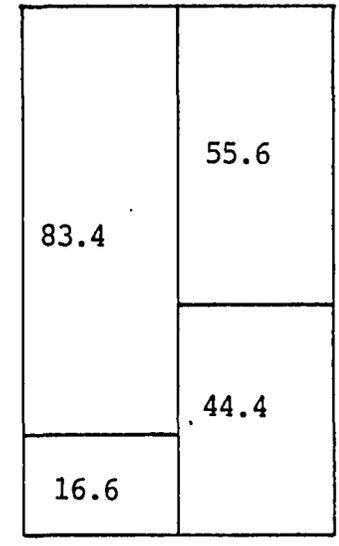
CLAVE:

- Alfabetos
- Analfabetos

RONDA 2
1978 - 79



INGRESO PER CAPITA MENSUAL - COLONES



AREA

their names.

Educational Scale and Attainment Level (Figure C-4)

The education scale, which combines literacy and attempted educational levels, is sensitive to rural/urban and income differentials.

However in a title concious market place, such as El Salvador's it is more useful (and more comparable) to indicate levels of education completed. Also, the addition of literacy is repetitious if a separate literacy indicator is used.

HEALTH

Health and Medical Attention (Figure C-5-a)

The value of this indicator is that medical attention is seen as a function of a population at risk (those who considered themselves sick enough to merit some attention) and that it allows for clinic based or paramedical treatment, not only formal doctor/hospital care.

The scale needs no change in definition. But the basic questionaire does, to change the illness recall period from 6 months to 2 weeks.

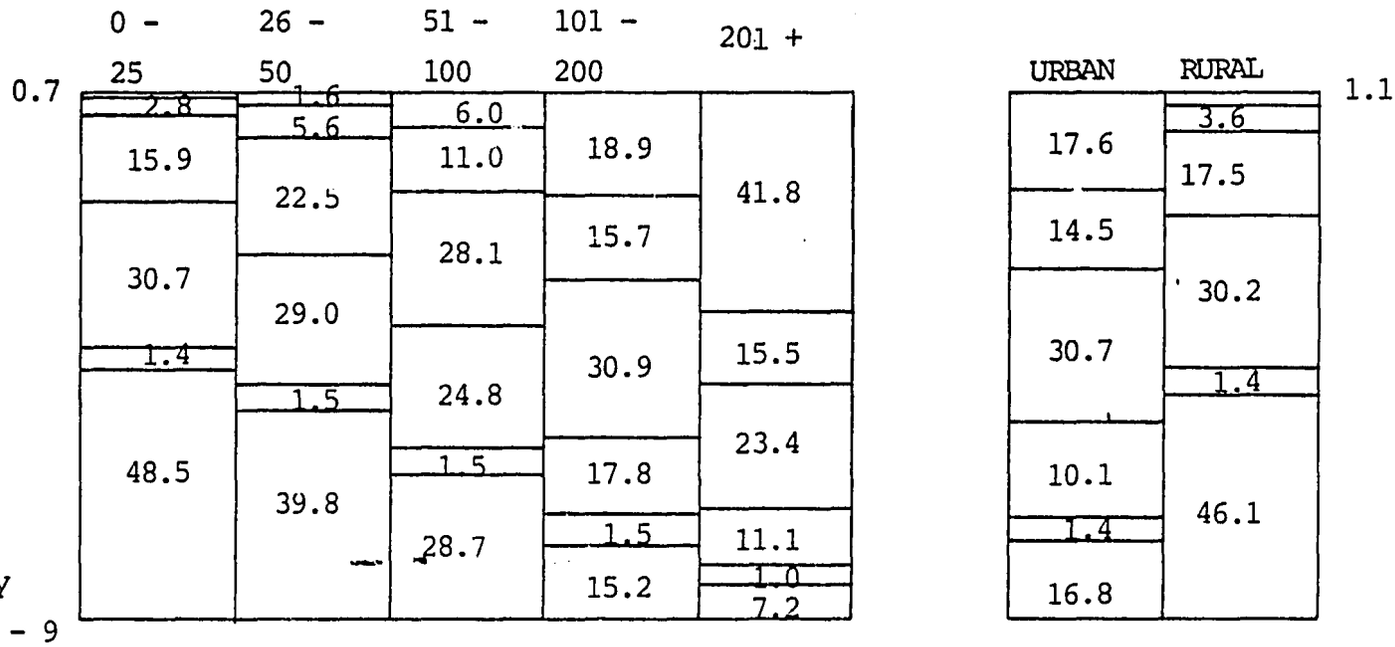
Vaccinations (Figure C-5-b)

The vaccination scale can be a good indicator of preventative medicine if the question reflects the quality of the vaccine (such

EDUCATION SCALE

ESCALA DE EDUCACION

ROUND 1
1978



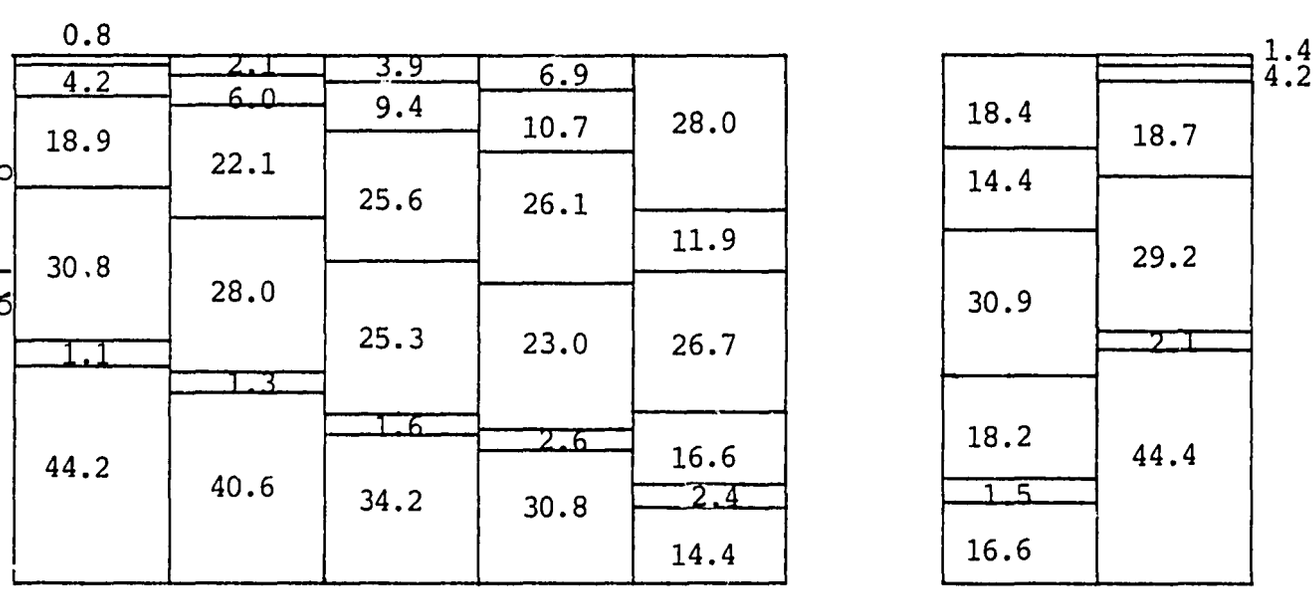
KEY:
- Secondary
- Grades 7 - 9
- Grades 4 - 6
- Grades 1 - 3
- Literate, no schooling
- Illiterate

PER CAPITA MONTHLY INCOME - COLONES

AREA

CLAVE:
- Secundaria
- Tercer Ciclo
- Segundo Ciclo
- Primer Ciclo
- Alfabeto, pero no estudió
- Analfabeto

RONDA 2
1978 - 79



INGRESO PER CAPITA MENSUAL - COLONES

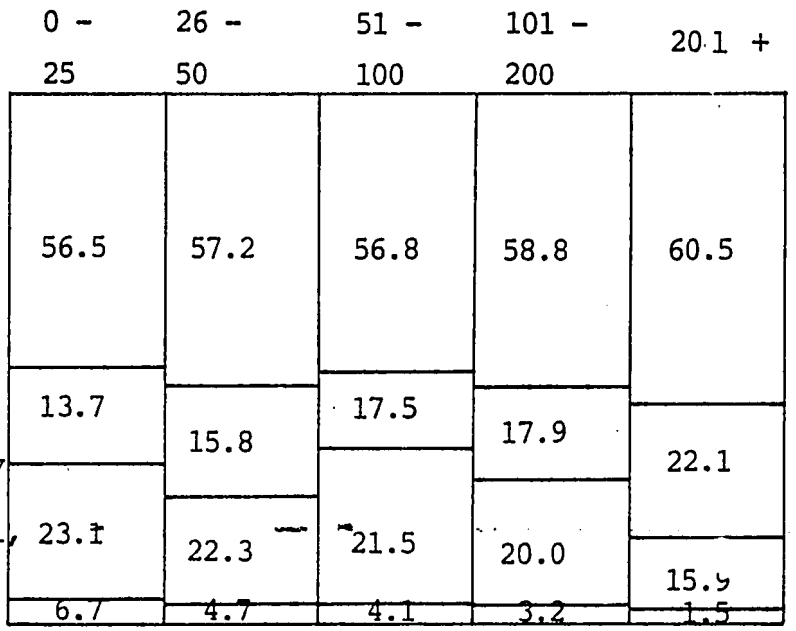
HEALTH AND MEDICAL ATTENTION

SALUD Y ATENCION MEDICA

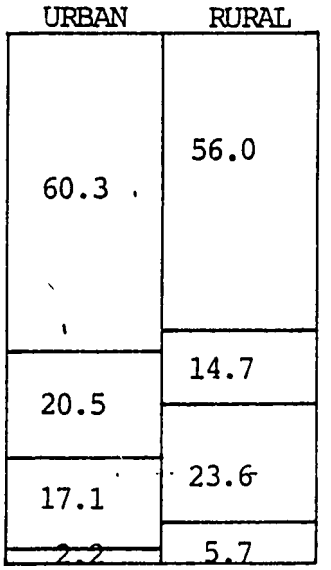
ROUND 2
1978 - 79

KEY:

- Not sick
- Had medical attention
- Paramedical attention or not seriously ill
- Seriously ill, no medical attention



PER CAPITA MONTHLY INCOME - COLONES



AREA

CLAVE:

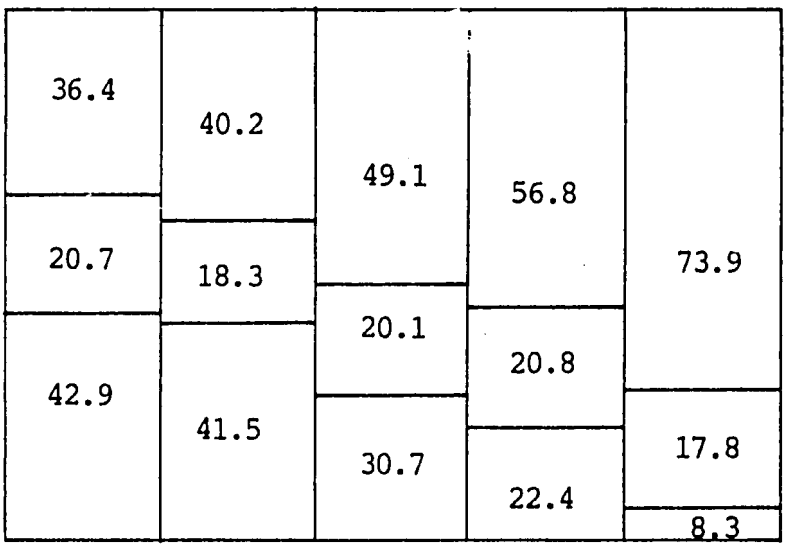
- No enfermó
- Atendido por médico
- Atendido por paramédico o estaba enfermo no grave
- Estaba enfermo grave, no atendido.

VACCINATIONS

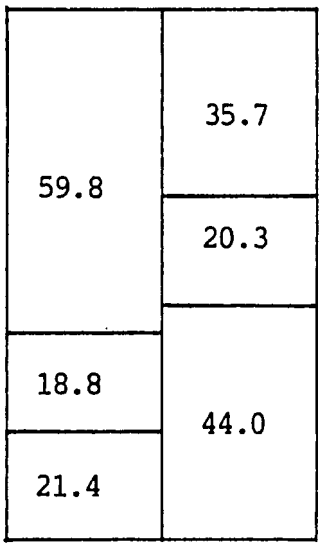
VACUNAS

KEY / CLAVE

- 4 vaccines/ vacunas.
- 1-3 vaccines/ vacunas
- 0 vaccines/ vacunas



INGRESO PER CAPITA MENSUAL - COLONES



AREA

as source) as a vaccine is only as good as its cold-chain.

Public health personnel need to be contacted on reformulating (if necessary) the vaccination question.

FOOD AND NUTRITION

Protein Deficiency (Figure C-6-a)

Dietary surveys are notorious for their misrepresentation of food intake due to recall problems, consumption away from the household etc. This index suffers in addition by applying an assumed food distribution pattern to family members and by including only purchased products (from a list of 15 foodstuffs)

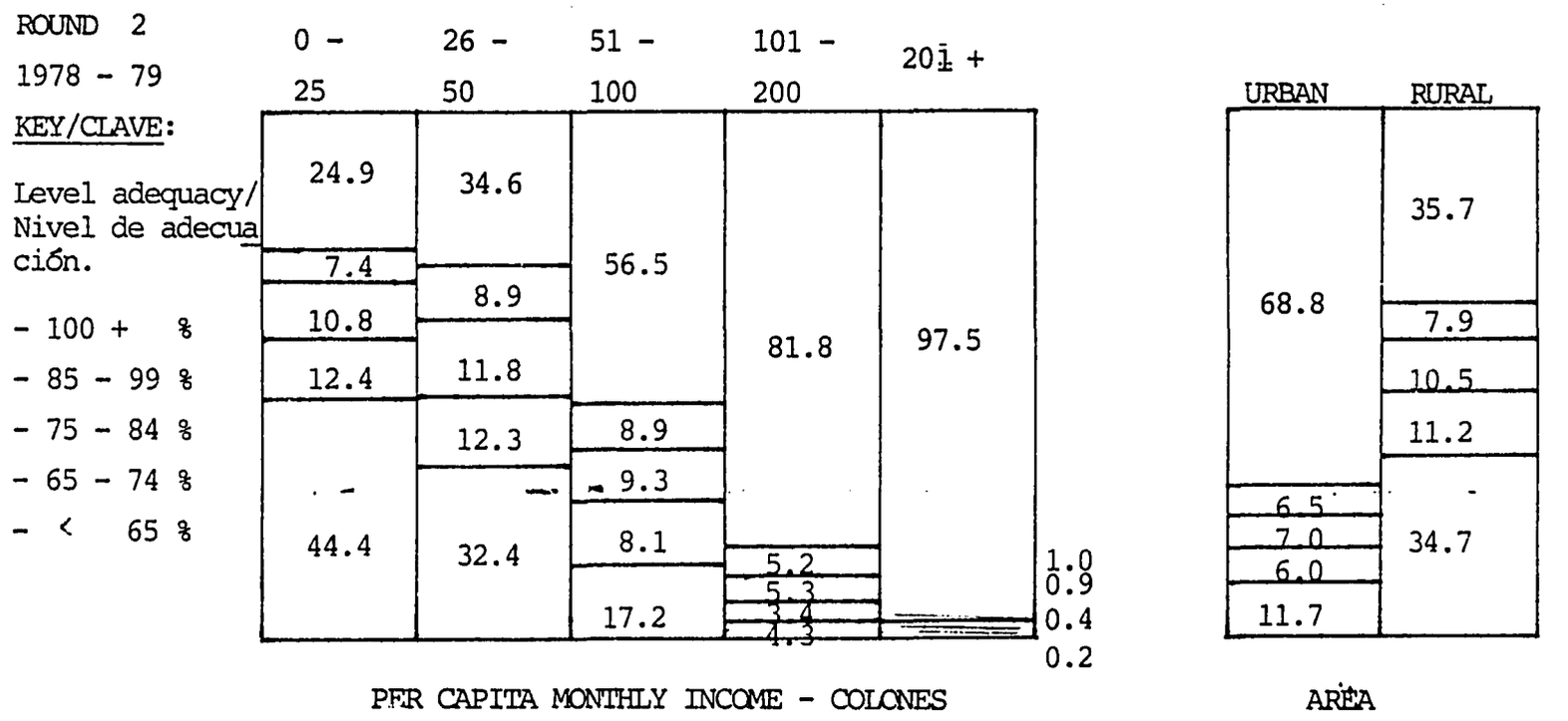
As such, the outcome is a very narrow interpretation of consumption or consumption adequacy. Further doubt is cast on the validity of this indicator when the figures show that (urban) Salvadoreans are rather adequately nourished when it comes to protein consuption; the figures seem to run contrary to other dietary observations.

Caloric Deficiency (Figure C-6-b)

The caloric consumption indicator suffers from de aforementioned problems, save that the figures seem to reflect more conventional wisdom on El Salvador's nutritional picture. It seems that far more work needs to be done to result in a valid, reliable and easy-to-ask food consumption indicator.

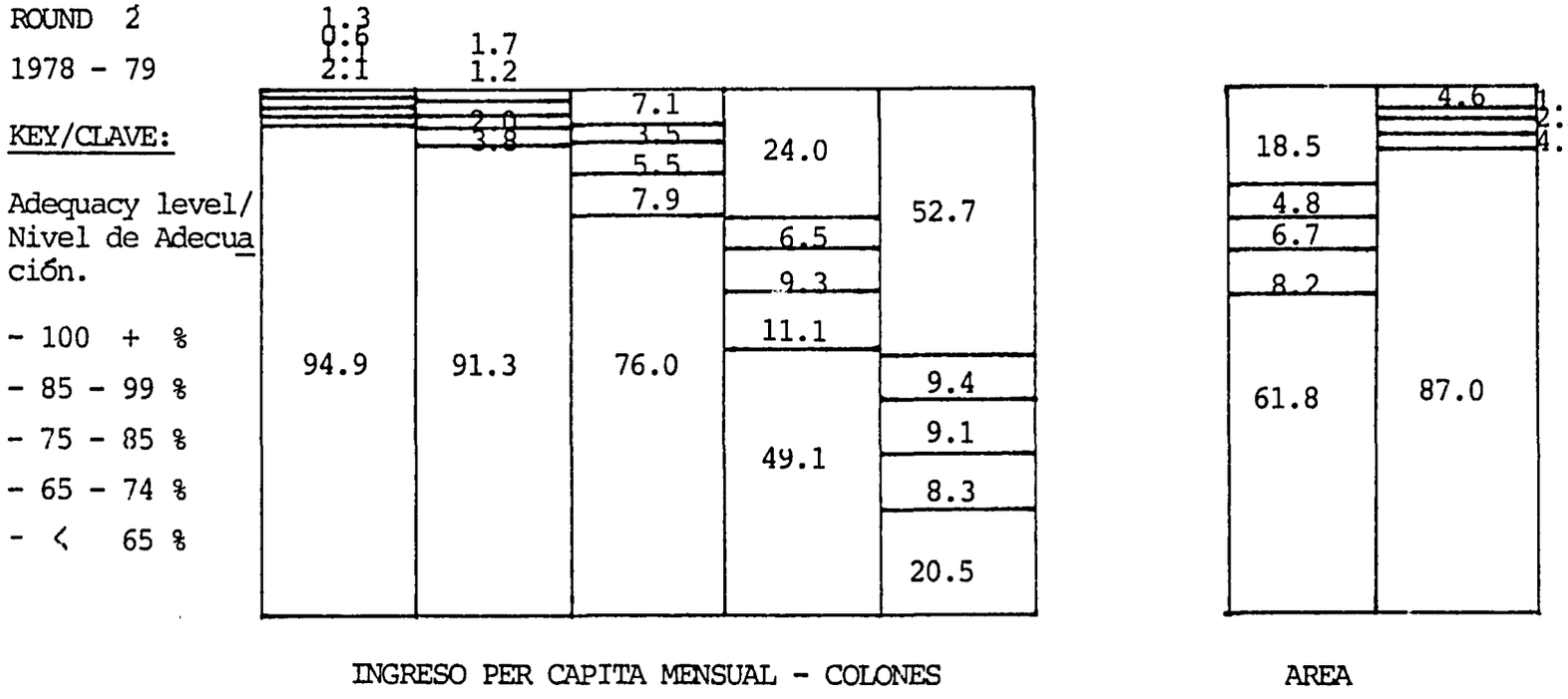
PROTEIN DEFICIENCY

DEFICIT PROTEICO



CALORIE DEFICIENCY

DEFICIT PROTEICO



Anthropometric Measure

As nutritional status is affected not only by food consumption but a host of other factors (metabolism, absorption ability, activity factors, etc.) anthropometric measures provide a means to classify nutritional status.

Two requiring simple measures are weight-per-height-per age and arm circumferences . Field personnel need to be consulted to determine the facility and validity of these measures.

It is suggested that these measures be performed on the under age 5 population as they would be the targets of many intervention programs.

HOUSING

Person per Room scale (Figure C-7-a)

This scale relates the ratio of actual to the U.N. recommended number of persons per sleeping quarter. These recommendation are:

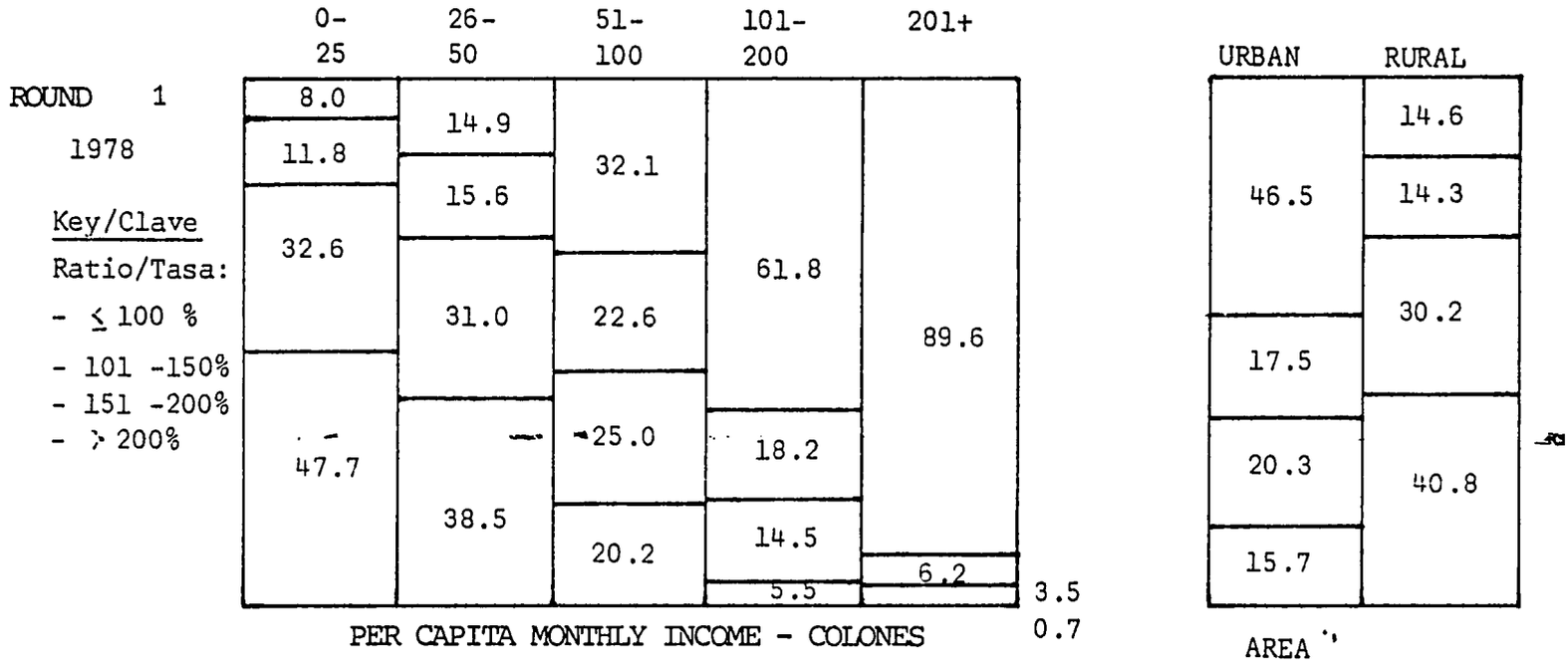
Rooms	Maximum Residents
1	3
2	5
3	8
4	10
5	12

As such, this indicator of crowding includes widely accepted criteria, is sensitive to income and rural/urban differentials, and is

PERSON - PER - ROOM SCALE

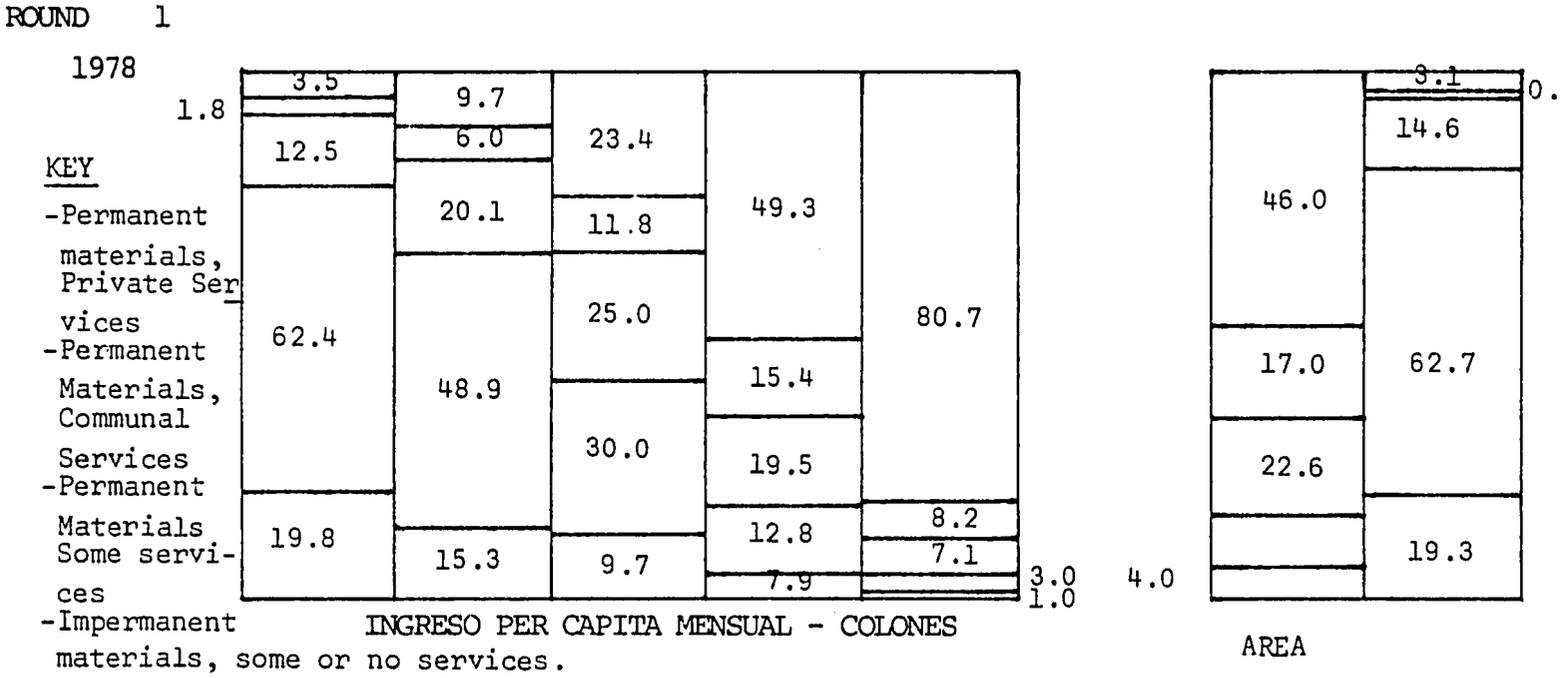
HACINAMIENTO

FIGURES C-7a,7b



MATERIALS AND SERVICES

MATERIALES Y SERVICIOS



Clave
- Materials permanents, servicios privados
- Materials permanents, servicios comunes
- Materials permanentes, algunos servicios
- Materiales permanentes, sin servicios
- Materiales no permanentes, sin o con servicios

easily calculated from standard survey questions.

Materials and Services Scale (Figure C-7-b)

This scale represents an attempt to provide a global index on physical quality of housing. It is sucessful in representing rural/urban and income differences.

Its principal limitation comes from the "material" part of the composite indicator. The wall, material component differentiates between permanent and impermanent, and those permanent materials appropriately include: brick concrete, mixed composition, adobe and bahareque.

The problem is not so much that these are local materials, (which limits the indicator's universal application) but that materials such as bahareque are not necessarily "better" than impermanent materials in various climes of the country. On a national level, the quadrant suggests that a more specific indicator is probably "services" than "materials" given the proponderance of houses built of permanent materials across income and regional groups.

HOUSING UNITS, EL SALVADOR 1978

	With Services	Without Services
Permanent Materials	31.8	37.5
Impermanent Materials	1.4	11.5

Housing Type and Ownership Scale (Figure C-8-a)

Another attempt to provide a global housing index, combining housing types with ownership relationship interestingly enough does not provide a discerning index of "desirable" and "undesirable" housing. The same percent of rural as urban dwellers live under "desirable" circumstances and a "U" shaped relationship exists between this index and income.

This can be explained as a large number of urbanites rent rooms in what are generally considered undesirable circumstances and a significant number of rural residents receive housing (free) on the estates where they work. Additional confusion is introduced as two/thirds of rural residents own their homes, as modest as they may be.

This index thus is too general to be a good indicator for El Salvador's complex housing situation.

Water and Sanitary Service (Figure C-8-b)

This alternative scale to the materials and Services Scale is proposed as it is more responsive to program intervention, has a more universal interpretation and bears more relationship to "quality of life". It also turns out that the Water and Sanitary Service Scale strongly reflects income and regional differences. Some work needs to be done on further defining water sources.

HOUSING TYPE AND OWNERSHIP

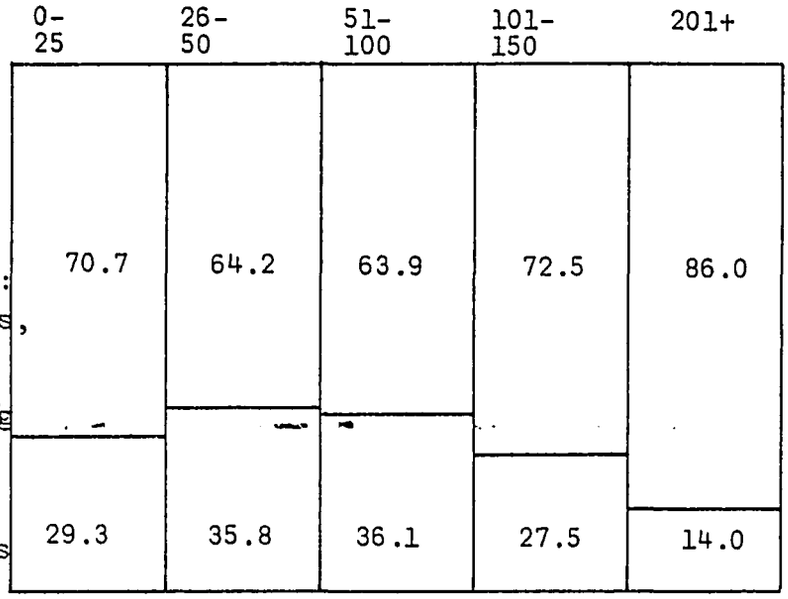
TENENCIA Y TIPO DE VIVIENDA

Figures C-8a,8b

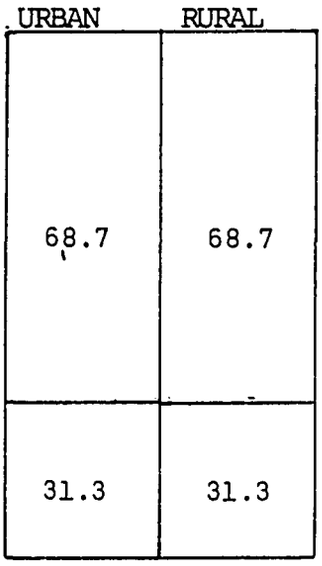
ROUND 1
1978

Key
-Desirable: rented or own house, apartment or "Rancho
-Undesirable: Rented rooms, improvised housing, estate housing

Clave
-Aceptable: Apartamentos o casas privadas en propiedad o en arrendamiento o ranchos en propiedad.
-No Aceptable: Piezas de mesón en alquiler, chozas y tugurios, ranchos de colonos.



PER CAPITA MONTHLY INCOME - COLONES



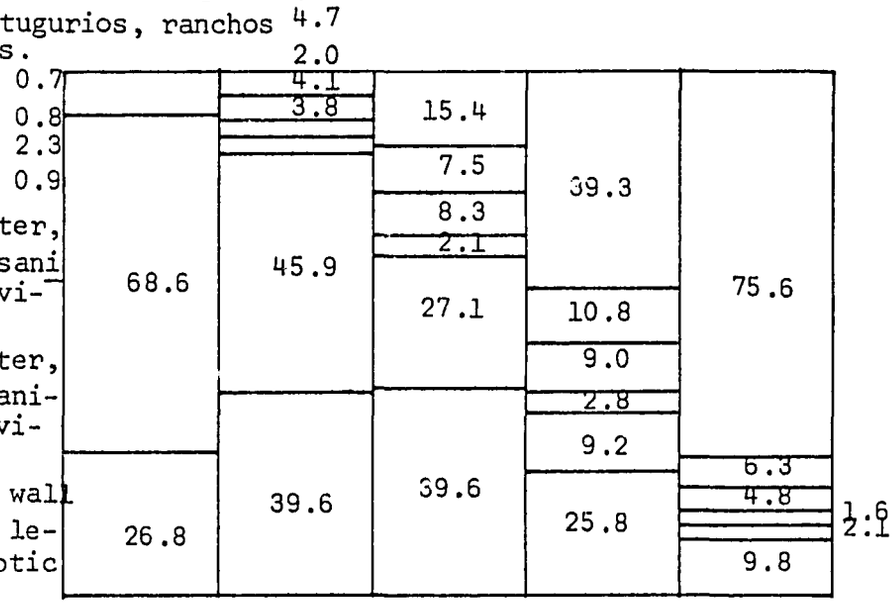
AREA

WATER AND SANITARY SERVICES SCALE

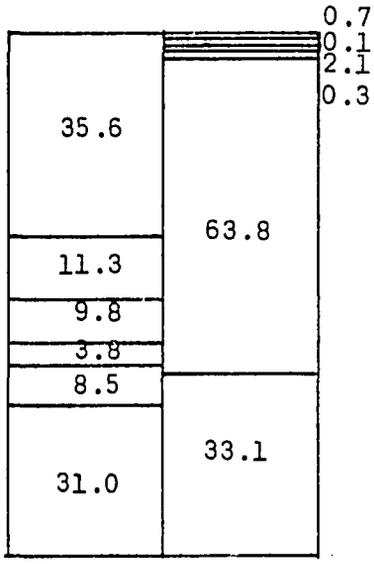
ESCALA DE AGUA Y SERVICIOS SANITARIOS

1978

Key
-Piped water, private sanitary services
-Piped water, commun sanitary services
-Fountain wall Communal letrine septic tank
-Otner
-None



INGRESO PER CAPITA MENSUAL - COLONES



AREA

Clave
- Cañería interna con baño y sanitario privado
- Cañería interna con baño y sanitario común
- Pila pública o pozo, con letrina o fosa séptica privada
- Pila pública o pozo, con letrina o fosa séptica común
- Otros
- Sin servicios

Simple Housing Variables (Figure C-9 a - f)

To give the clearest picture of El Salvador's housing situation, six variables can be represented individually (ownership, type of houses, wall materials, light sources, water source, sanitary services). The advantage is that these can clearly monitor program economic impacts, but the disadvantage is that the inclusion of all six would over represent housing in a social indicators set.

LABOR FORCE QUALIFICATIONS AND TRAINING

Access to Training for Non-Technicians (Figure C-10-a)

The question which asked non-technicians whether or not they wanted more advanced training or training in a different skill received an interesting response. For those who were employed, about 29%, with little variation replied "yes"; 100%. who were unemployed replied "yes". The desire for training reflects neither rural-urban residence, nor income but employment status (among other factors).

As such, the desire for training doesn't seem to be a good indicator of "social progress" as originally conceived.

Training or Qualification Level (Figure C-10-b)

This indicator reflects basically human capital as that term applies to the labor force. The 1978 figures show simultaneously

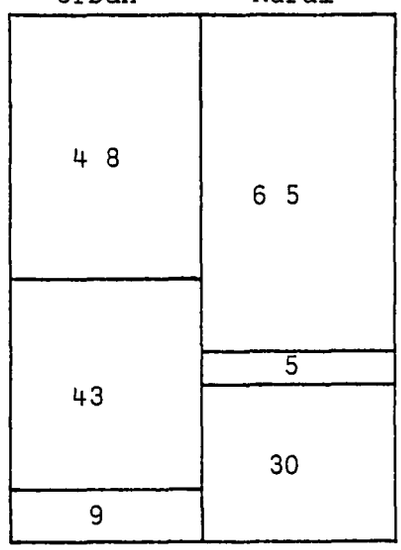
ROUND 1
1978

HOUSING / VIVIENDA

Ownership
Tenencia

Key
- Owner
- Renter
- Receive free, etc.

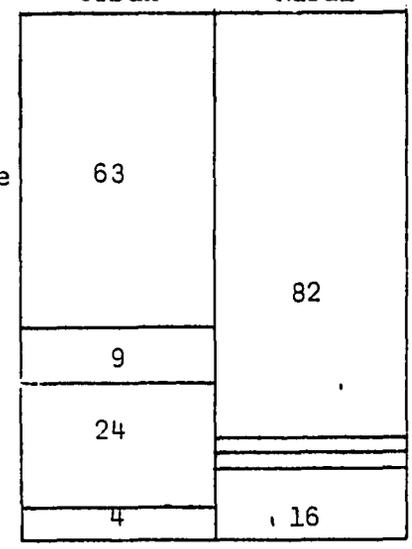
Clave
- Propietarios
- Arrendatarios
- Otros



Figures C9-a-f
Type of Housing
Tipo de vivienda

Key
- Independent house
- Rooms in house
- Apartment
- Improvised housing

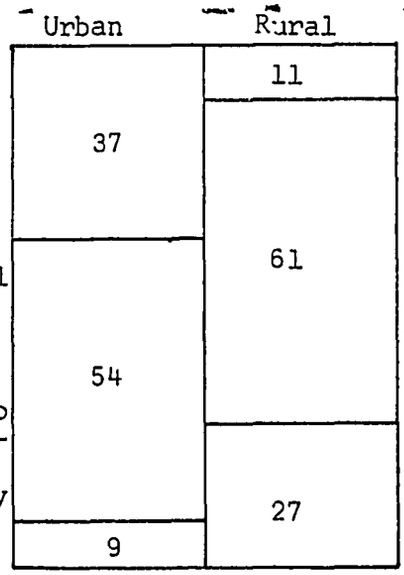
Clave
- Casa independiente
- Pieza o mesón
- Apartamento
- Rancho y tugurios



Wall Materials
Pared

Key
- Concrete and mix ed composition
- Bahareque and adobe
- Corrugated metal wood and palm

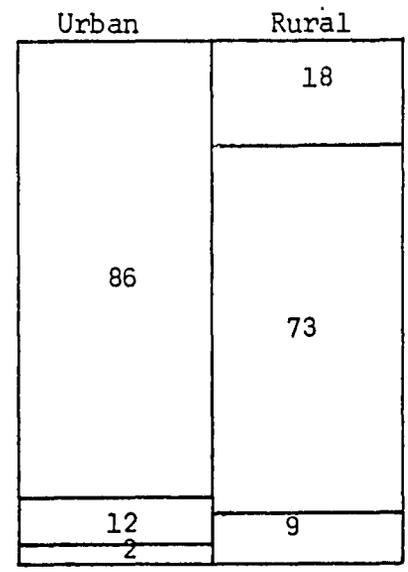
Clave
- Concreto y Mixto
- Bahareque y Adobe
- Lámina, madera y palma



Lighting,
Luz

Key
- Electricity
- Kerosene
- None

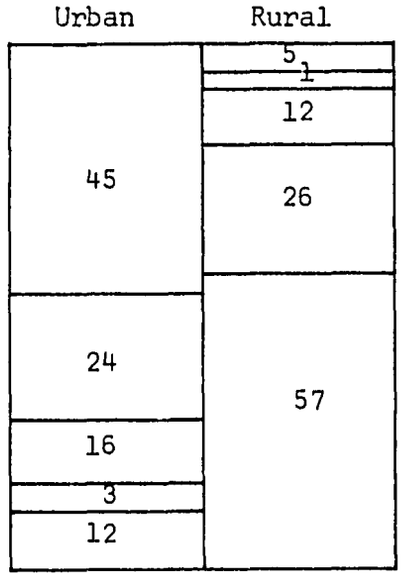
Clave
- Electricidad
- Kerosene
- Sin servicio



Water source
Agua

Key
- Piped, Private
- Piped communal
- Public Fountain
- Well
- Other

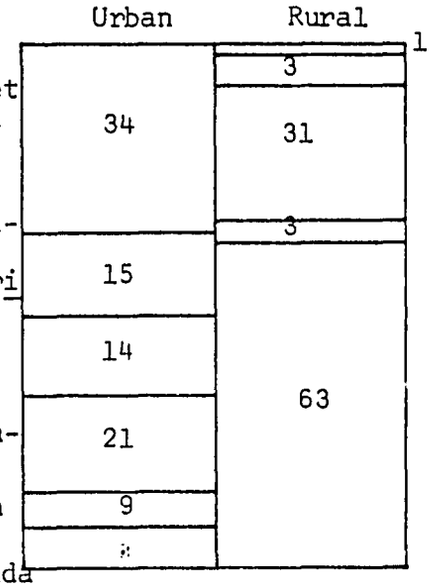
Clave
- Cañería privada
- Cañería común
- Pila pública
- Pozo
- Otros



Sanitary Services
Servicios sanitarios

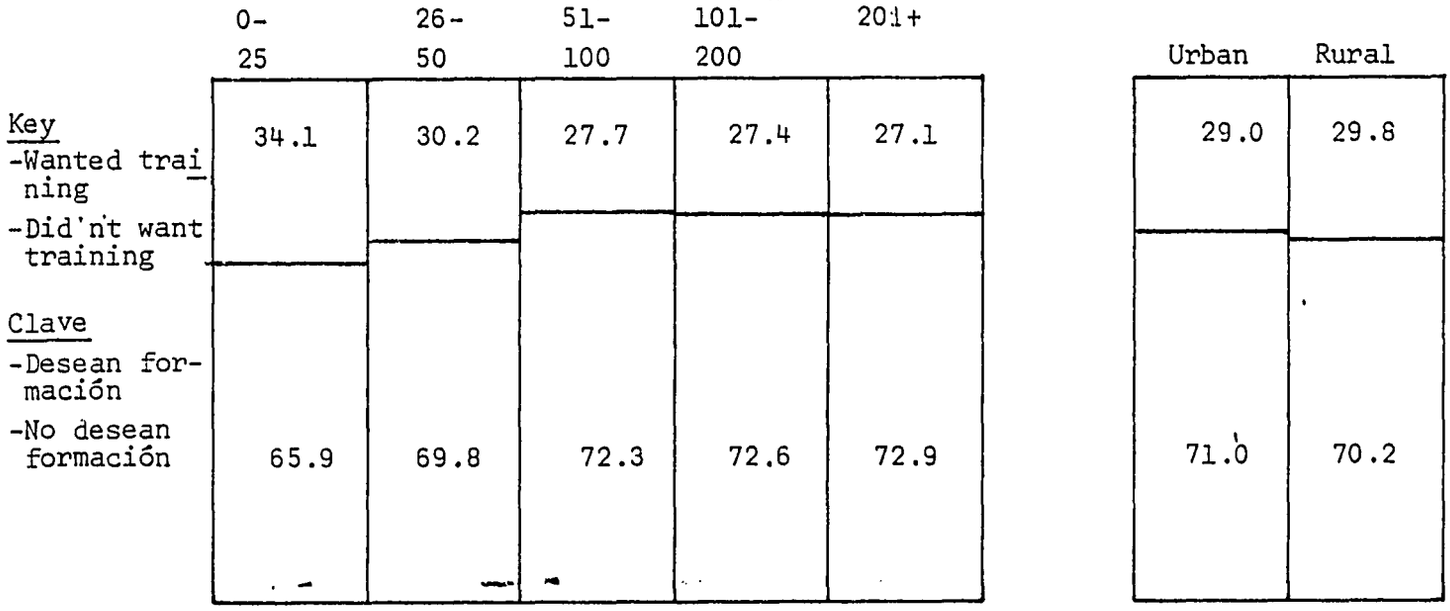
Key
- Private toilet
- Communal toilet
- Septic tank
- Private letrine
- Communal letrine
- None

Clave
- Inodoro Privado
- Inodoro común
- Fosa Séptica
- Letrina privada
- Letrina Común
- Sin servicio



EMPLOYED TECHNICIANS WHO WANTED TRAINING

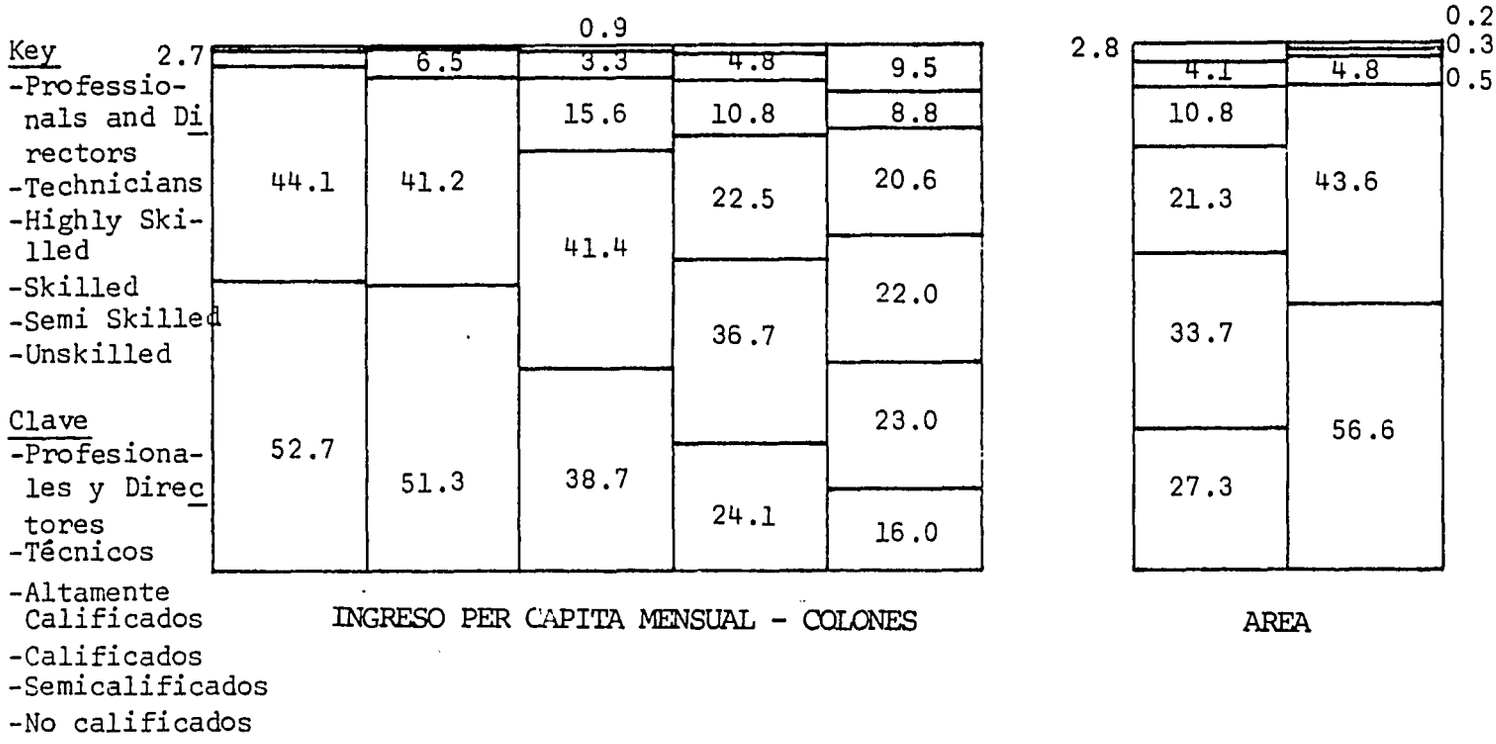
NO TECNICOS (OCUPADOS) QUE DESIAN FORMACION



LABOR FORCE QUALIFICATIONS

ROUND 1
1978

CAPACITACION PROFESIONAL



the lack of technically qualified persons in El Salvador's labor force, as well as strong rural/urban and income differentials in this indicator. Apparently no changes need to be made in the survey question or the indicator construction.

It should be emphasized that this set of indicators should not be read as a recommendation for the extent of data requirements from a household survey as each indicator only superficially describes conditions in subject areas. But they constitute a core set of conditions which, when taken together, go a long way in describing a country's or subgroup's socio-economic status.

DATA PROCESSING AND MANIPULATION

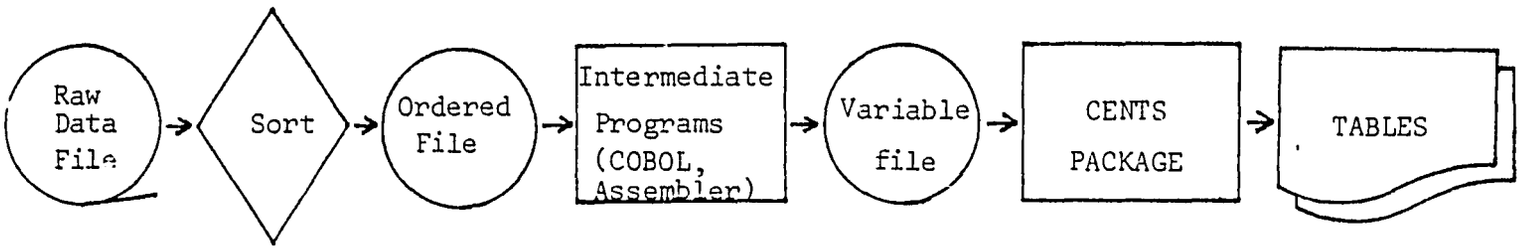
SUBJECT MATTER TABLES: "SUBJECT MONITORS"

Each of the nine subject matter areas (such as education, employment etc.) underwent independent data processing in order to tabulate its key variables with a common set of stratifying variables (age/sex, composition, geographic region, family per-capita income, economic sector and occupation of the principal wage earner.

In order to produce the tables, an IBM system with a D.O.S. operating system was required to use the version of CENTS (U.S. Bureau of the Census written table-producing package) available in El Salvador. While, specifically an IBM 370/115 (with 128 K Byte capacity) of El Salvador's Dirección General de Estadísticas y Censos (DIGESTYC) was used, comparable equiptment is available at the Instituto Salvadoreño del Seguro Social.

Prior to producing the tables, several steps were involved to create the summary variables before tabulating them with the stratifying variables. For example, subject matter variables are cross- tabulated with the economic sector of the families' principal "bread earners". This requires first establishing who the major earner is, then assigning that economic sector to all members of the family.

The following represents the general sequence from raw data to tables to repeat, this is required for each subject area:



Altogether, the software required to produce the tables included the languages COBOL and ASSEMBLER, CENTS III package and IBM utilities: SORT, OBJMAINT and DITTO.

ANALYTIC PROGRAMS

In the last year of the project a number of Fortran programs were written to explore various analytic methods developed for the data base. ("Data base" is loosely used here, meaning the data potential from five household surveys, not an organized direct-access computerized base). The programming was greatly enhanced by the low-cost and generous access policy provided by the Centro Computo, Universidad Centroamericana Simeón Cañas (UCA). UCA's powerful mini-computer system HP - 3000 (two tape drives, 1.5 M byte capacity, 16 terminal access) is a rarity in El Salvador with its inclusion of COBOL, FORTRAN, and PASCAL lenguages along with the flexible SPSS (version 6) package.

The programs developed in this last period only suggest future access and manipulative ability of survey data that the Ministry of planning will have in this period of rapid expansion of powerful mini-computers.

1. Computer Proyection

A component projection program was written to project an estimated 1978 population by region, to 1983. The program allows for internal and international migration as well as age-specific fertility and mortality rates.

2. Interactive computer programs

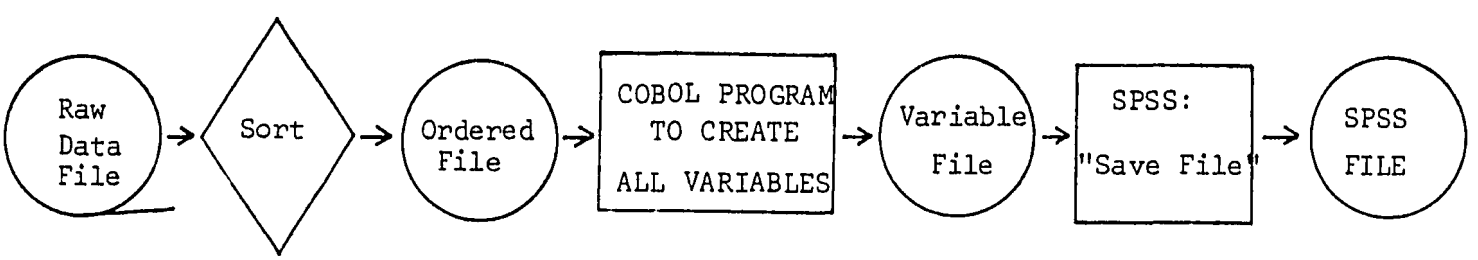
Three programs were written to give the non-experienced or busy data user greater access to the data from the household surveys. The user's manual is attached as Appendix C..

At the close of the project, only data from the first two survey rounds were included in the programs these 1978 data were chosen as they contain the key supplementary modules (health, food consumption, housing and labor face qualifications). The two data sets have not been combined into a single data set, as while there is considerable overlap between the households sampled in Round 1 and 2, a statistical weighting problem remains unresolved.

a. INTERFASE: Interactive Application of SPSS (Statistical Package for the social sciences)

Interfase was written to give a flexible interactive means to manipulate data from Rounds 1 and 2. The user is presented with a menu to select either data from Round 1 or 2, then the user is given the option of performing an analysis on a subgroup of the population as defined by regional, income, sectoral or occupational characteristics. Next the user chooses the appropiate statistical subroutine for analysis - frequency distributions, crosstabulacions or analysis of variance selecting from a list of variables. While SPSS itself contains many more statistical routines; the household survey data (being only categorical or ordinal in nature, with the exception of age and income data). only support the simpler routines. The program permits additional analysis with the same or different sub-populations.

As the data sets each contain approximately 50,000 records, a "job" will require anywhere from 10 minutes to 2 hours of CPU time, with the corresponding cost of ¢12.50 - 250 colones ($ U.S 5 - 100). The data processing configuration to create the SPSS files is the following:*



*At this writing, nutrition data, requiring complex file manipulation, have not been introduced into the SPSS data files.

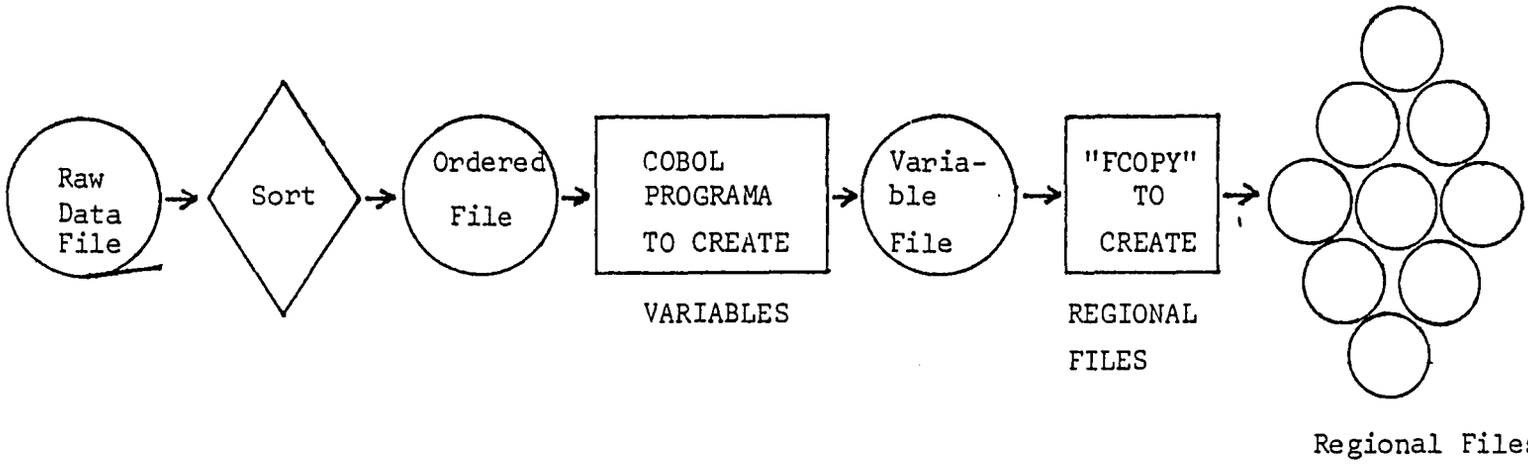
b. CADENAS (Chains)

This simple but appealing program was written to generate all combinations of "problems" particular subpopulations may have in common, following which the combinations are ranked by prevalence in the population. The intent of this excercise is to determine which sets of problems are simultaneously linked for subpopulations.
The "problems" use a priori established criteria for each of the basic indicators coming from Rounds 1 and 2.

As these criteria of course affect the outcome of the excercise (such as determining whether unemployment or underemployment is a problem).

We have decided to expand the program to permit the user to select the criteria for choosing problem areas.
As it now stands, the CADENAS program asks the user to select from Round 1 or Round 2 data, then presents the user with a short list of problems (such as employment, education, literacy, housing crowding, and housing materials/services) to look at the relationship between all or some of the problems listed. Then the user has the choice among the 9 regions of the country for analysis. The last offering will be expanded to permit analysis of other population subgroups.
As each data file contains very few variables and only each region's cases, the execution cost is at most, ¢10.oo Colones.

The current file creation process is as follows:



Note: as the variables must pertain to all individuals in the analysis, several "good" indicators are left out (such as vaccinations or labor force qualifications, as they pertain to specific age groups only).

c. CALIDAD DE VIDA

This program provides a means to compare regions or subpopulations by a weighted average of the populations' "problems" The result is a ranking from "better" to "worse" of the subgroups being compared.

The user must supply the data for analysis which can be any type of indicator expressed as proportions of the population at risk, disaggregated for the subpopulations being analyzed. Not being restricted to one data source, the user is free to combine any type of data collected in a similar time period. The users to date have drawn only from data found in the subject matter documents, or "monitorias"

In using the program, the user is asked to name type of subgroup being analyzed (regional, income, sectoral, occupational), to name the variables or problems being analyzed and then is prompted, item-by-item to enter the figures for each variable and subgroup; execution is almost immediate; the cost of operation is negligible.

APPENDIX A

INSTITUTIONALIZATION OF IPROS

Summary

In some ways, El Salvador's institutional ability to absorb a data synthesizing project today is similar to what it had been four years ago at the inception of the IPROS project. The need for current data and the means to analyze them is a strong as ever; there are many capable technicians in the country who can apply the data; the technology is still intact for gathering, processing and disseminating such data. But within the key ministry for coordinating these activities, the Ministry of Planning, these exists such strong antipathy on the part of many technicians towards IPROS, that what is institutionalized will have to overcome a bad legacy.

A Quick Replay of IPROS History

IPROS was originally conceived to:

1. develop a set of social indicators to assist programs oriented to improving the level of living for the rural poor, and
2. develop a set of social indicators to be incorporated as a National Social Accounts System to monitor a nation's social and economic development.

From the beginning, there existed a split in orientation - the project originators had an empirical orientation, the project director a policy orientation. The termination of the surveys in 1980 somewhat freed the director from the original scheduled requirements. He pushed his concept of developing "Descriptive, Evalutive and Prioritizing Indicators" which would lead to developing national development policies.

However, Director Levia did not have the technical background to develop and test this "methodological progression" nor did he listen to his local team's advice, but brought in outside consultants to develop limited project aspects. In the last minutes of the project, Leiva has stuck to his vision of IPROS as an ascending series of indicators while technical concensus holds that this idea not only has not been developed to meet generally accepted statistical criteria, it does not make sense.

This departure in orientation plus the very strong attraction that politics per se hold for the ambitious director has meant that what is presented publically bears little resemblance to the original project.

Meanwhile, the technicians of the IPROS team constructed a basic data system from which a wide variety of variables could be stratified by a consistant set of characteristics. They also developed a number of conceptual and analytic tools which are briefly described in the main part of this paper.

A technical coordinator has hired for the last three months of the project to see if the project could be put back on its original social indicators track. After assessing the situation, this coordinator decided the time was better spent in documentation and broadening data access (through interactive computer programs and "training seminars") then reviving the original concept.

Training

MIPLAN (Ministry of Planning)

The technicians of MIPLAN were given several opportunites to listen to summaries of the "theory and practice of IPROS":

December 1982 October 1983	presentation of theory and data results, primarily by G. Leiva
October 1983	presentation of three interactive computer programs at the Universidad Centroamericana (UCA) computer center by R. Argueta
October 1983	open sessions at UCA to ask questions, use the computer programs

The first three sessions with mandatory attendance, had strong representation; the last, which was assigned (but not mandatory) was very lightly attended. The feedback was that the theory and methods were felt to be of minimum substance (the local term is "pura paja") but the MIPLAN technicians welcomed the final efforts to make the data accessible.

Other Ministries

On invitation by MIPLAN, planners, computer programmers and economists from other ministries (Education, Public Works, Labor, Agriculture, Housing and Urban Development) attended informal session given by the Salvadoran IPROS team. In these sessions, interest was very high, not only because the sectoralists saw the opportunity to obtain relatively recent data, but to relate that data to other sectoral data and to socio-economic characteristics as well. These meetings were additionally positive as contacts wer made to assist the redesign

of the next multi-purpose household and to give alternate sectoral perspectives.

Specific Institutionalization

Currently under negotiation between AID/El Salvador and the Ministry of Planning/GOES is a project to finance a recommencement of "national" household surveys and the incorporation of the IPROS technicians into MIPLAN as an analytic unit. The thrust of this project is different from IPROS (which intended, to repeat, to develop a set of - social indicators to a)assist projects focused on the rural poor, and b) develop a national social accounts system). The new project is oriented to providing integrated socio-economic data to a wide variety of users and to develop analytic means to intepret and apply that data.

The new project will involve some reorganization of MIPLAN to establish an Information Center which would include UIM - Unidad de Muestrales- the survey unit; an expanded data processing unit; the former IPROS members as an analytic unit; a publication unit, and a bibliographic unit. The thrust of this reorganization is to provide a flexible, accessible center to meet multiple information needs within MIPLAN and between other national and international organizations.

Conditions Favoring Institutionalizing a Socio-Economic Data System

The IPROS concept has expanded, from one oriented to development planning for the rural poor to one of meeting general data and analytic needs for national development. The data "system" is not a tight

package of a handful of indicators but a range of social and economic variables related to a consistant set of population characteristics (demographic, geographic, income, occupational and industrial).

There are a number of conditions in El Salvador which favor the widespread use for such data:

Technical capability - In spite of very heavy professional out-migration during the past five years of the civil war, the government of El Salvador maintains well trained and highly motivated, if professionally isolated technicians.

Data access - The current climate favors the exchange of data between national institutions rather than stricturing it under confidentiality clauses.

Interest - Expressed interest in socio-economic data is high. The opportunity to use high quality as opposed to incomplete or estimated sectoral data heightens interest. Figures are more seen as being valuable in policy and program making as less seen as obfuscation.

Data processing - El Salvador is moving with the rest of the world into the era of low cost, flexible mini- and micro-computer systems. With the waing of the epoch at costly, limited, hard-to-maintain mainframe systems, data from a socieconomic data base now becomes inexpensive, easy and quick to access.

Conditions That Could Interfere with Institutionalizing a Socio-Economic Data System

Hostility within MIPLAN - Many technicians with MIPLAN have harsh feelings about the past IPROS proejct which could carry over

into a new project. These feelings are based on the current Director's persistant presentation of what they see as a useless "methodology" and the political ambitions of this Director (a non-national) which have resulted in his inappropriate excercise of power within the MIPLAN hierarchy. Even with a new director, the current IPROS members will need to disassociate themselves from past directives.

Political incertainty - Current project negotiation is taking place while a civil war continues. A change in goevernment can certainly change the broad pragmatic orientation of the project to a narrow or ideologically limited focus. Also, increased fighting may alter the prospect of conducting surveys, even on an urban basis.

With all projects in El Salvador, there is promise and there is question.

APPENDIX B

MEMORANDUM

TO : Ms. Lorraine Simard
USAID/ES

FROM : Sharon Kirmeyer
Technical Coordinator/IPROS

RE. : Recommendations for Continuation of a Socio-Economic Data Project

DATE : October 13, 1983

* * * * * * * * * * * * * *

1.- In order to satisfy the needs of the Ministry of Planning (MIPLAN), GOES and AID/ES for current social and economic data, a national (or extensive as possible) household survey needs to be designed and executed as soon as it is feasible to do so. Alternative data sources are found to be very incomplete and generally describe events, not populations.

2.- This survey should stress employment, education, training and demographic characteristics with secondary emphasis on health, nutrition and housing conditions.

3.- The "Unidad de Investigaciones Muestrales" (UIM) of MIPLAN is the appropriate unit to be responsible for this survey, given its experience in the five household surveys (1978-80) and its organizational arrangement.

4.- UIM will need assistance from AID in at least the following areas:

a.- Salaries for additional survey interviewers.

b.- Technical assistance, particularly in the area of developing a new survey frame.

c.- Data processing equipment (UIM is thinking of a modestly priced HP-86 microcomputer).

More detailed requests should be discussed with José Navarro, head of UIM and the administration of MIPLAN.

5.- The five technicians (Guillermina Vásquez de García, Ana Elèna Escalante, Roberto Argueta, Mauricio Aliens and Hernán Orellana), all Salvadoran nationals, should be incorporated as a "Unidad de Análisis" in MIPLAN. This would ideally be located within MIPLAN's planned "Centro Informática".

6.- This unit would need at least a part time director or coordinator who is a Salvadoran national, with administrative experience and a strong quantitative background.

7.- Gustavo Leiva, current Director, should have no role to play in this future "Unidad de Análisis" because, at minimum the orientation of this project is data access and analysis not policy construction.

8.- The principle responsibilities of this "Unidad" will be:

a.- To take major responsibility for the household survey design, based on their IPROS experience, incorporating imput from local national and international organizations.

b.- To design computer software for rapid processing of household survey results.

c.- To serve as a "data interface", that is to solicit and comply with requests from MIPLAN, AID and other national and international agencies for data from all national household surveys.

d.- Instruct other national technicians inthe various means to access household surveys using such tools as the CENTS and SPSS packages.

e.- Collaborate with other MIPLAN units to develop and apply methods in such areas as:

1.- Demographic estimation and projection, using resources prepared by CELADE and U. S. Bureau of the Census.

2.- Measuring changes in El Salvador's "human capital" since the onset of the civil war, using 1978 household survey as a base line.

3.- Apply multiple purpose socio-economic planning models, such as LRPM2 for analyzing impact of alternative planning strategies as proposed by the next GOES.

9.- Specific contract terms should note:

a.- That a new contract with former IPROS members needs to begin December 1, 1983.

b.- That their salaries continue, (with adjustment for inflation) at the equivalent level in colones, that they had received through SIECA.

APPENDIX C
INTERFASE USER'S MANUAL

I N D I C E

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2 INTERFASE-SPSS
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RONDA DOS -OCTUBRE/MARZO/1978/1979-
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A N E X O S
PROGRAMAS

1. INTRODUCTON

PROGRAMAS DE INTERFASE

LOS PROGRAMAS INTERACTIVOS DEL PROYECTO IPROS, INTERFASE, ESTAN ESCRITOS PARA UN USUARIO CASUAL (O UN USARIO OCUPADO) PARA AYUDARLE A HACER UN ANALISIS DE DATOS SOCIO-ECONOMICOS DE IPROS.

EL PROYECTO IPROS TRATA DATOS SOCIO-ECONOMICOS DE ENCUESTAS NACIONALES DE HOGARES REALIZADAS EN EL SALVADOR EN LOS ANOS 1978-80. ESTE PROYECTO TIENE ENFOQUE EN INDICADORES DE "NECESIDADES BASICAS" (VIVIENDA, SALUD, ALIMENTACION, EDUCACION, Y EMPLEO). TAMBIEN, SE TIENE EL PROPOSITO DE AYUDAR AL DISENO Y LA EVALUACION DE PROYECTOS QUE PROPONEN MEJORAR LAS CONDICIONES SOCIO-ECONOMICAS EN EL PAIS.

ENTONCES, INTERFASE INCLUYE LOS SIGUIENTES PROGRAMAS:

- 2. INTERFASE-SPSS

- 3. CADENAS

- 4. CALIDAD DE LA VIDA

LOS PROGRAMAS SON AUTO-DOCUMENTADOS. POR ESO, EL USUARIO

PUEDE USARLOS SIN ESTE MANUAL. PERO, SE ESCRIBE PARA DOCUMENTAR LAS DEFINICIONES DE VARIABLES INCLUIDAS EN LOS ARCHIVOS DE DATOS, DESCRIBIR METODOLOGIAS USADAS Y DEMOSTRAR VARIAS USOS DE LOS PROGRAMAS. ADEMAS, SE INCLUYE UN ANEXO CON LISTADOS DE LOS PROGRAMAS EN FORTRAN: UN USUARIO/ PROGRAMADOR PUEDE EXPANDIR O CAMBIAR LOS PROGRAMAS A SU SITUACION PARTICULAR.

EN REALIDAD, LOS PROGRAMAS DE INTERFASE SON "PROTOTIPOS". ELLOS APLICAN A LAS PRIMERAS DOS RONDAS DE ENCUESTAS DE HOGARES DE LOS ANOS 1978 Y 1979. CON CAMBIOS PEQUENOS SE PUEDE INCLUIR DATOS DE OTRAS RONDAS, OTRAS FUENTES O HACER OTROS TIPOS DE ANALISIS.

2. INTERFASE-SPSS

2.1 DESCRIPCION

EL LA PLANIFICACION SE REQUIERE A MENUDO DISPONER DE INFORMACION EN FORMA [illegible] TABULACIONES ADEMAS DE OTRAS ESTADISTICAS ~~DE~~ DE LA INFORMACION DISPONIBLE. ESTO SE PUEDE LOGRAR A TRAVES DEL USO DE LA COMPUTADORA Y DE PROGRAMAS ELABORADOS PARA TAL FIN. ESTO SE PUEDE LOGRAR HACIENDO USO DEL PAQUETE DE PROGRAMAS SPSS (STATISTICAL PACKEGE FOR THE SOCIAL SCIENCES) PERO ESTO EXIGE EL CONOCIMIENTO DE LAS INSTRUCCIONES Y COMANDOS DEL PAQUETE POR LO QUE SU USO SE RESTRINGE A AQUELLAS PERSONAS QUE TENGAN TAL CONOCIMIENTO.

PARA SUPERAR ESTE OBSTACULO SE HA DISENADO UN PROGRAMA QUE PERMITE AL USUARIO ELABORAR SUS PROGRAMAS SPSS SIN NECESIDAD DE CONOCER LOS COMANDOS DEL PAQUETE. ESTO SE LOGRA A TRAVES DE UN PROGRAMA QUE DESPLIEGA EN LA PANTALLA DE LA TERMINAL TODA LA INFORMACION NECESARIA QUE SIRVA DE GUIA PARA QUE EL USUARIO PUEDA CONFIGURAR EL TIPO DE RESULTADOS QUE DESEA.

HASTA EL MOMENTO, Y DEBIDO A LA NATURALEZA DE LOS DATOS EL MENU DE PROCEDIMIENTOS ESTADISTICOS COMPRENDE: DISTRIBUCION DE FRECUENCIAS, TABULACIONES CRUZADAS Y ESTADISTICAS DETENDENCIA CENTRAL DE SUBPOBLACIONES. A CONTINUACION SE DESCRIBE LA NATURALEZA DE CADA UNO DE LOS PROCEDIMIENTOS MENCIONADOS.

A. DISTRIBUCION DE FRECUENCIAS (FREQUENCIES)

NORMALMENTE LA PRIMERA TAREA EN EL ANALISIS DE DATOS ES DETERMINAR LAS CARACTERISITCAS DISTRIBUCIONALES BASICAS DE CADA UNA DE LAS VARIABLES A SER USADAS EN LOS ANALISIS ESTADISITCOS POSTERIORES. LA INFORMACION SOBRE LA DISTRIBUCION, VARIABILIDAD Y TENDENCIAS CENTRALES DE LAS VARIABLES PROVEE AL INVESTIGADOR DE LA INFORMACION REQUERIDA PARA LA SELECCION DE TECNICAS ESTADISTICAS POSTERIORES Y A MENUDO CONSTITUYE UN DOCUMENTO BASICO DE REFERENCIA.

LA DISTRIBUCION DE FRECUENCIAS CONSISTE EN UNA TABLA QUE CONTIENE LAS FRECUENCIAS ABSOLUTAS Y RELATIVAS DE LOS VALORES DE UNA VARIABLE ADEMAS DE ALGUNAS MEDIDAS

ESTADISTICAS COMO LA MEDIA, LA DESVIACION STANDARD Y LA VARIANZA. TAMBIEN SE OBTIENE UN HISTOGRAMA LO CUAL ES UNA MANERA GRAFICA DE PRESENTAR LAS FRECUENCIAS DE LOS VALORES DE LAS VARIABLES DEL ANALISIS.

B. TABULACION CRUZADA. (CROSSTABS)

DESPUES DE HABER EXAMINADO LA DISTRIBUCION DE LOS VALORES DE LAS VARIABLES SE PUEDE COMENZAR CONJUNTOS DE RELACIONES ENTRE DOS O MAS VARIABLES. UNO DE LOS PROCEDIMIENTOS QUE PERMITE ESTE TIPO DE ANALISIS ES LA TABULACION CRUZADA O TABLA DE CONTINGENCIA DE DOS O MAS VARIABLES SIENDO ESTE UNO DE LOS METODOS ANALITICOS MAS UTILIZADOS EN LA INVESTIGACION SOCIAL.

LAS FRECUENCIAS DE LOS CASOS QUE APARECEN EN UNA TABULACION CRUZADA PUEDEN SER ANALIZADAS ESTADISITCAMENTE POR MEDIO DE CIERTOS "TESTS DE SIGNIFICACION" COMO EL ESTADISTICO CHI-CUADRADO QUE SIRVE PARA DETERMINAR SI LAS VARIABLES SON O NO ESTADISITCAMENTE INDEPENDIENTES. ADEMAS SE PUEDEN OBTENER CIERTAS MEDIDAS DE ASOCIACION TALES COMO EL COEFICIENTE DE CONTINGENCIA, O "V" DE CRAMER, QUE DESCRIBEN EL GRADOS EN EL CUAL LOS VALORES DE UNA VARIABLE PREDICEN O VARIAN CON LOS VALORES DE OTRA.

EN UNA TABULACION CRUZADA SE PRESENTA LA FRECUENCIA PARA CADA COMBINACION DE VALORES DE LAS VARIABLES INCLUIDAS ADEMAS DE LOS PORCENTAJES DE FILA, DE COLUMNA Y DEL TOTAL.

AL PIE DE LA TABLA SE PRESENTAN ALGUNAS MEDIDAD ESTADISTICAS PARA EL ANALISS DE LOS DATOS RESULTANTES EN LA TABULACION.

C. DESCRIPCION DE SUBPOBLACIONES. (BREAKDOWN)

ESTE PROCEDIMIENTO PERMITE EL CALCULO Y LA IMPRESION DE LAS MEDIDAS TENDENCIA CENTRAL, SEGUN PARA VARIAS SUBPOBLACIONES.

LA DESCRIPCION DE SUBPOBLACIONES (BREAKDOWN) PERMITIRA AL USUARIO OBTENER PROMEDIOS, DESVIACIONES STANDARD Y VARIANZA DE LAS VARIABLES, PARA VARIOS SUBGRUPOS DETERMINADOS POR LOS VALORES DE OTRAS VARIABLES INDEPENDIENTES, ADEMAS SE CALCULA UN "ANALISIS DE VARIANZA".

HAY DOS CRITERIOS PARA VARIABLES DEPENDIENTES:

1) SON VARIABLES CONTINUAS COMO EL INGRESO Y
2) SON VARIABLES QUE SE QUIEREN EXPLICAR POR LAS VARIBLES INDEPENDIENTES.

POR EJEMPLO, SE PUEDE DETERMINAR EL INGRESO PROMEDIO PARA VARIOS NIVELES DE EDUCACION. ESTE EJEMPLO PUEDE SER EXTENDIDO DE TAL MANERA QUE SE CALCULE EL INGRESO PROMEDIO PARA DIFERENTES NIVELES DE EDUCACION Y SEXO. EN ESTE EJEMPLO LA VARIABLE INGRESO SE CONSIDERA VAVARIABLE DEPENDIENTE Y EL NIVEL DE EDUCACION Y SEXO SE CONSIDERAN VARIABLES INDEPENDIENTES.

2.2 DEFINICION DE VARIABLES

PARA NUESTRO ANALISIS INTERFASE-SPSSSE, SE UTILIZAN LAS SIGUIENTES VARIABLES.

AREAS: DIVISION POLITICO ADMINISTRATIVO.

1 URBANO; AQUELLA DONDE RESIDEN LAS AUTORIDADDES MUNICIPALES SIENDO SUS LIMITES LOS QUE LAS MISMAS AUTORIDADES DETERMINAN.

2 RURAL; EL AREA FORMADO POR LOS CANTONES DE UN MUNICIPIO.

REGION: SE UTILIZA LA DIVISION DE PLANIFICACION NUEVE REGIONES, CINCO URBANAS Y CUATRO RURALES.

1 METROPOLITANA; CONSTITUIDA POR LA REGION CAPITAL Y LAS AREAS URBANAS ALEDANAS.

2 OCCIDENTE URBANO; FORMADO POR EL AREA URBANA DE LOS DEPARTAMENTOS DE AHUACHAPAN, SANTA ANA Y SONSONATE.

3 OCCIDENTE RURAL; AREAS RURALES DE LOS DEPARTAMENTOS DE AHUACHAPAN, SANTA ANA Y SONSONATE.

4 CENTRAL I URBANO; FORMADO POR EL AREA URBANA DE LOS DEPARTAMENTOS DE CHALATENANGO, LA LIBERTAD, CUSCATLAN Y SAN SALVADOR, EXCEPTO LA REGION METROPOLITANA.

5 CENTRAL I RURAL; AREAS RURALES DE LOS DEPARTAMENTOS DE CHALATENANGO, LA LIBERTAD, CUSCATLAN Y SAN SALVADOR.

6 CENTRAL II URBANA; FORMADA POR EL AREA URBANA DE LOS DEPARTAMENTOS DE LA PAZ, CABANAS Y SAN VICENTE.

7 CENTRAL II RURAL: AREAS RURALES DE LOS DEPARTAMENTOS DE LA PAZ, CABANAS Y SAN VICENTE.

8 ORIENTE URBANO: FORMADO POR EL AREA URBANA DE LOS DEPARTAMENTOS DE SAN MIGUEL, MORAZAN USULUTAN Y LA UNION.

9 ORIENTE RURAL; AREA RURAL DE LOS DEPARTAMENTOS DE SAN MIGUEL, MORAZAN, USULUTAN Y LA UNION.

FACTORES DE EXPANSION: SE CALCULARON LOS PESOS PARA EL AREA URBANA Y RURAL DE CADA DEPARTAMENTO, OBTENIENDO EL COCIENTE DE DIVIDIR CADA POBLACION ENTRE LA POBLACION MUESTRAL. EN EL SIGUIENTE CUADRO SE PRESENTA LOS TREINTA FACTORES UTILIZADOS EN ESTA ENCUESTA.

FACTORES DE EXPANSION POR AREAS SEGUN DEPARTAMENTOS

DEPARTAMENTOS	URBANO	RURAL
AHUACHAPAN	83	107
SANTA ANA	104	86
SONSONATE	63	86
CHALATENANGO	92	102
RESTO LA LIBERTAD	69	119
RESTO SAN SALVADOR	97	240

CUSCATLAN	104	103
LA PAZ	70	140
CABANA	103	116
SAN VICENTE	87	139
USULUTAN	64	95
SAN MIGUEL	84	93
MORAZAN	72	81
LA UNION	116	104
1/AREA METROPOLITANA LA LIBERT.	82	--
2/AREA METROPOLITANA SAN SALV.	85	--

1/PARTE URBANA DE LOS MUNICIPIOS: NUEVA SAN SALVADOR Y ANTIGUO CUSCATLAN.

2/CORRESPONDIENTE AL AREA URBANA DE LOS MUNICIPIOS DE SAN SALVADOR, SOYAPANGO, CUSCATANCINGO, MEJICANOS, CIUDAD DELGADO, AYUTUXTEPEQUE, ILOPANGO Y SAN MARCOS.

INGRESO PER CAPITA: ES EL INGRESO ACUMULADO DE TODOS ~~LOS~~ MIEMBROS DEL HOGAR DIVIDIDO POR EL NUMERO DE PERSONAS EN EL MISMO.

INGRESO PER CAPITA RECODIFICADO: ES EL INGRESO PROMEDIO DEL GRUPO FAMILIAR AGRUPADO EN LOS SIGUIENTES RANGOS.

1	0 - 50 COLONES MENSUALES
2	51 - 100 COLONES MENSUALES
3	101 - 150 COLONES MENSUALES
4	101 - 200 COLONES MENSUALES
5	201 Y MAS COLONES MENSUALES

INGRESO PERCAPITA RECODIFICADO: ES EL INGRESO PROMEDIO DEL GRUPO FAMILIAR AGRUPADO EN LOS SIGUIENTES RANGOS.

1	0 - 25 COLONES MENSUALES
2	26 - 50 COLONES MENSUALES
3	51 - 75 COLONES MENSUALES
4	76 - 100 COLONES MENSUALES
5	101 - 125 COLONES MENSUALES
6	126 - 150 COLONES MENSUALES
7	151 - 175 COLONES MENSUALES
8	176 - 200 COLONES MENSUALES
9	201 - 225 COLONES MENSUALES
10	225 - 250 COLONES MENSUALES
11	251 - 275 COLONES MENSUALES
12	276 - 300 COLONES MENSUALES
13	300 Y MAS COLONES MENSUALES

INGRESO PERSONAL: TOTAL DE INGRESOS RECIBIDOS EN EL MES.

SEXO	SEXO DE CADA PERSONA
1	HOMBRE
2	MUJER

EDAD	EDAD RECODIFICADA CUMPLIDA DE CADA UNO DE LOS MIEMBROS DEL HOGAR.

```
                    NES INMUEBLES Y SERVICIOS PRESTADOS A LAS
                    EMPRESAS.
          9         SERVICIOS COMUNALES, SOCIALES Y PERSONALES.
          0         ACTIVIDADES NO BIEN ESPECIFICADAS.

          CODIGOS SUMARIOS: CALIFICAN A TODA LA POBLACION MA-
                    YOR DE DIEZ ANOS. LA POBLACION ECONOMICAMEN-
                    TE ACTIVA LA CONSTITUYEN LOS CODIGOS 1, 2, 3
                    Y 4, EL RESTO FORMA PARTE DE LA POBLACION E-
                    CONOMICAMENTE INACTIVA.
          0         POBLACION MENOR DE 10 ANOS
          1         TRABABARON LA SEMANA PASADA.
          2         TIENEN EMPLEO PERO NO TRABAJAN.
          3         CESANTES.
          4         BUSCAN TRABAJO POR PRIMERA VEZ.
          5         QUEHACERES DOMESTICOS.
          6         ESTUDIANTES.
          7         JUBILADOS.
          8         NO PUEDEN TRABAJAR, (INVALIDOS Y ANCIANOS,
                    CUALQUIER NOTACION).
          9         OTROS INACTIVOS.

          NIVELES DE EMPLEO: CONDICION DE EMPLEO REFERIDO A
                    SEMANA ANTERIOR A LA ENCUESTA. PARA TODAS
                    LAS PERSONAS MAYORES DE DIEZ ANOS.
          0         MENORES DE 10 ANOS.
                    LAS PERSONAS MAYORES DE DIEZ ANOS.
          1         OCUPADOS PLENOS; TODAS LAS PERSONAS QUE
                    TUVIERAN LA CATEGORIA DE PATRONOS, O LOS
                    TRABAJARON MAS DE TREINTA Y CINCO HORAS A
                    SEMANA Y SU RELACION DE SALARIO POR HORAS
                    ES SUPERIOR AL SALARIO MINIMO, O QUE TRABA-
                    JARON MENOS DE TREINTA Y CINCO, PERO USUAL-
                    MENTE TRABAJAN NORMALMENTE Y SU RELACION
                    SALARIO POR HORAS ES SUPERIOR AL MINIMO, O
                    QUE NO TRABAJARON LA SEMANA PASADA, PERO
                    TIENEN TRABAJO Y LA RELACION SALARIO POR
                    HORAS ES SUPERIOR AL SALARIO MINIMO.
          2         SUBOCUPADOS POR JORNADA: TODAS LAS PERSONA
                    QUE TRABAJARON MENOS DE TREINTA Y CINCO,
                    PERO PREFERIRIAN TRABAJAR MAS Y SU RELA-
                    CION SALARIO POR HORAS ES SUPERIOR AL MI-
                    NIMO; O LOS QUE NO HABIENDO TRABAJADO LA
                    SEMANA PASADA, TRABAJAN MENOS DE TREINTA
                    Y CINCO HORAS Y SU RELACION SALARIO POR
                    HORAS ES MAYOR QUE EL MINIMO.
          3         SUBOCUPADOS POR REMUNERACION; TODAS LAS
                    PERSONAS QUE TRABAJAN MENOS DE TREINTA Y
                    CINCO HORAS, PERO QUE NORMALMENTE TRABAJAN
                    MAS Y QUE LA RELACION DE SALARIOS POR HORAS
                    SEA MENOR QUE EL MINIMO; O LOS QUE TRABAJA-
                    RON MAS DE TREINTA Y CINCO HORAS Y QUE SU
                    RELACION SALARIO POR HORAS ES MENOR QUE EL
                    MINIMO; O LOS QUE NO HABIENDO TRABAJADO LA
                    SEMANA PASADA, TRABAJAN MAS DE TREINTA Y
                    CINCO HORAS Y SU RELACION SALARIO POR HORAS
                    ES MENOR QUE EL MINIMO.
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10 OBREROS DE LA CONSTRUCCION; SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN TRABAJADORES DE LA CONSTRUCCION.

11 OBREROS; SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN TRABAJADORES NO AGRICOLAS, O COMERCIANTES Y VENDEDORES.

12 DEPENDIENTES: SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN COMERCIANTES Y VENDORES.

13 EMPLEADOS EN ADMINISTRACION; SON TODOS LOS EMPLEADOS Y OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN PROFESIONALES, TECNICOS Y TRABAJADORES; O TODOS LOS EMPLEADOS A SUELDO FIJO Y DESTAJO, QUE SEAN ADMINISTRADORES.

14 TRABAJADORES EN SERVICIOS; SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN ADMINISTRADORES; O TODOS LOS EMPLEADOS Y OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN TRABAJADORES EN SERVICIOS.

15 SERVICIO DOMESTICO: SON TODOS LOS TRABAJADORES EN SERVICIOS DOMESTICOS.

16 TRABAJADOR FAMILIAR URBANO; SON TODOS LOS TRABAJADORES FAMILIARES SIN REMUNERACION.

17 TRABAJADOR FAMILIAR RURAL; SON TODOS LOS TRABAJADORES FAMILIARES SIN REMUNERACION.

18 NUNCA TRABAJO; SON TODOS LAS PERSONAS QUE BUSCAN TRABAJO POR PRIMERA VEZ.

2.2.1 DEFINICIONES DE VARIABLES EXCLUSIVAS PARA LA RONDA UNO, DEL PERIODO DE FEBRERO A SEPTIEMBRE DE 1978.

CAPACITACION PROFESIONAL: CALIFICA A TODAS LAS PERSONAS ENTRE 15 A 49 ANOS, SEGUN SU FORMACION PROFESIONAL.

0 PERSONAS ENTRE 0 Y 14 ANOS, ADEMAS LAS PERSONAS ENTRE 50 Y MAS ANOS.

1 DIRECTORES; TRABAJADORES CON TITULO O DIPOMAS UNIVERSITARIOS, QUE SE OCUPAN DE LAS TAREAS DE PLANIFICACION, ORGANIZACION Y DIRECCION.

2 PROFESIONALES; TRABAJARES CON NIVEL DE EGRESADOS DE UNA CARRERA UNIVERSITARIA, INVESTIGADORES DE ALTO NIVEL.

3 TECNICOS; TRABAJADORES CON FORMACION TEORICA Y TECNICA, CON EL NIVEL MINIMO DE ESTUDIOS SECUNDARIOS O DE INSTITUTOS TECNICOS.

4 TRABAJADORES ALTAMENTE CALIFICADOS; TRABADORES CON CONOCIMIENTO COMPLETO DEL OFICIO (CAPATACES, SUPERVISORES Y JEFES DE EQUIPO))

5 TRABAJADORES CALIFICADOS; TRABAJADORES QUE POSEEN CONOCIMIENTO DE SU OFICIO.

6 TRABAJADORES SEMICALIFICADOS; TRABAJADORES SIN EL CONOCIMIENTO REQUERIDO, PERO QUE DESPENAN UN NUMERO LIMITADO DE TAREA .

7 TRABAJADORES NO CALIFICADOS; TRABAJADORES QUE REQUIEREN UN MINIMO DE INSTRUCCIONES, PARA CUMPLIR SUS TAREAS (PEONES, APRENDICES ETC.).

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514                 8       OTROS; TODOS LOS TRABAJADORES QUE PUEDEN
515                         SER INCLUIDOS EN LAS CALIFICACIONES ANTE-
516                         RIORES.
517
518                 MATERIALES Y SERVICIOS: CARACTERISTICAS QUE PERMI-
519                         TEN CALIFICAR LAS VIVIENDA SEGUN EL MATE-
520                         RIAL DE SUS PAREDES, EL TIPO DE SERVICIO
521                         DE AGUA Y TIPO DE ENERGIA
522                 1       VIVIENDAS CON MATERIALES PERMANENTES Y SER-
523                         VICIOS PRIVADOS; ST SUS PAREDES SON DE CON-
524                         CRETO Y MIXTO, BAHAREQUE, ADOBE O MADERA, Y
525                         TIENEN AGUA ATRAVES DE CANERIA PRIVADA, Y A-
526                         LUMBRADO ELECTRICO.
527                 2       VIVIENDAS CON MATERIALES PERMANENTES Y SER-
528                         VICIOS COMUNES; SI SUS PAREDES SON DE CON-
529                         CRETO Y MIXTO, BAHAREQUE O ADOBE, Y AGUA A-
530                         TRAVES DE CANERIA COMUN, Y ALUMBRADO ELEC-
531                         TRICO.
532                 3       VIVIENDAS CON MATERIALES PERMANENTES Y ALGU-
533                         NOS SERVICIOS; ST SUS PAREDES SON DE CONCRE-
534                         TO Y MIXTO, BAHAREQUE, ADOBE O MADERA, Y NO
535                         TIENEN AGUA, Y SI TIENEN ALUMBRADO; O SI SUS
536                         PAREDES SON DE CONCRETO Y MIXTO, BAHAREQUE,
537                         ADOBE O MADERA, Y NO TIENEN ALUMBRADO, Y SI
538                         TIENEN AGUA.
539                 4       VIVIENDAS CON MATERIALES PERMANENTE, SIN
540                         SERVICIOS; ST SUS PAREDES SON DE CONCRETO Y
541                         MIXTO, BAHAREQUE, ADOBE O MADERA, Y NO TIENE
542                         AGUA POTABLE, NI ENERGIA ELECTRICA.
543                 5       VIVIENDAS CON MATERIALES NO PERMANENTES Y
544                         ALGUNOS SERVICIOS (PUBLICOS O PRIVADOS); SI
545                         SUS PAREDES SON DE LAMINA, PAJA O PALMA, U
546                         OTROS MATERIALES, Y TIENEN AGUA POTABLE ( PU-
547                         BLICA O PRIVADA) Y TIENEN O NO ENERGIA.
548                 6       VIVIENDA CON MATERIALES NO PERMANENTES, SIN
549                         SERVICIO; SI SUS PAREDES SON DE LAMINA, PA-
550                         JA O PALMA, U OTROS MATERIALES, Y SIN AGUA
551                         POTABLE, Y SIN ENERGIA ELECTRICA.
552
553                 HACINAMIENTO: LA RELACION ENTRE EL NUMERO DE PER-
554                         SONAS Y EL NUMERO DE HABITACIONES. LA SI-
555                         GUIENTE TABLA DETERMINA EL GRADO DE HACI-
556                         NAMIENTO DE CADA VIVIENDA.
557                         1 HABITACION  =  3 PERSONAS
558                         2 HABITACIONES =  5 PERSONAS
559                         3 HABITACIONES =  8 PERSONAS
560                         4 HABITACIONES = 10 PERSONAS
561                         5 HABITACIONES = 12 PERSONAS
562                         EL GRADO DE HACINAMIENTO SE CALCULA DE LA
563                         SIGUIENTE MANERA: DIVIDIENDO EL NUME
564                         PERSONAS DEL HOGAR MULTIPLICADAS POR CIEN,
565                         ENTRE EL NUMERO DE PERSONAS DETERMINADAS
566                         POR LA TABLA (CANTIDAD DE HABITACIONES QUE
567                         DEBE TENER CADA VIENDA).
568                 1       NIVEL 100 % O MENOS; O NO HACINADOS.
569                 2       NIVEL 101 % A 150%; CON HACINAMIENTO HASTA
570                         UN 50 %
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GUIENDO LA CLASIFICACION INTERNACIONAL DE
LA ORGANIZACTON MUNDIAL DE LA SALUD.

0 PERSONAS NO HOSPTIALIZADAS; PERSONAS QUE DIGERON QUE EN LOS ULTTMOS DOCE MESES NO HABIA SIDO HOSPITALIZADA.

1 ACCIDENTE, ENVENENAMIENTO O VIOLENCIA; PERSONAS ESTUVIERON HOSPITALIZADAS POR ESTOS MOTIVOS DE ACUERDO A LA CLASIFICACTON DE LA OMS. CORRESPONDIENDO A LOS CODIGOS DEL 43 AL 49.

2 INFECCIOSAS Y PARASITARIAS; PERSONAS QUE ESTUVIORON HOSPITALIZADAS POR ESTAS CAUSA Y CLASIFICADAS AST POR LA OMS DE ACUERDO LOS SIGUIENTES CODIGOS DEL 1 AL 17 23, 27, 41 Y 64.

3 COMPLICACIONES DE EMBARAZO Y PARTO; PERSONAS QUE ESTUVIORON HOSPITALIZADAS POR DICHAS CAUSAS DE ACUERDO A LA CLASIFICACION DE LA OMS SEGUN LOS SIGUIENTES CODIGOS 39 Y 40.

4 OTRAS ENFERMEDADES; PERSONAS QUE ESTUVIERON HOSPITALIZADAS POR CAUSAS DISTINTAS A LAS ANTES MENCTONADAS.

NIVEL DE VACUNACION: NUMERO DE VACUNAS APLICADAS A LOS MENORES DE CINCO ANOS; TALES COMO DPT, SARAMPION, POLTOMELITIS Y TURERCULOCIS.

0 PUBL CTON DE CINCO Y MAS ANOS

1 NINOS VACUNADOS CONTRA EL SARAMPION, BCG, DPT Y POLIOMELTITIS.

2 NINOS VACUNADOS A LOS QUE SE LES HA APLICADO UNA A TRES VACUNAS.

3 NINOS NO VACUNADOS.

ESCALA DE SALUD: PERSONAS QUE DIJERON ESTAR ENFERMAS Y HABER RECIBIDO ATENCION MEDICA O NO HABER VISITADO LA CLINICA O ESTABLECIMIENTO DE SALUD PORQUE SU ENFERMEDAD FUE LEVE O POR OTRAS CAUSAS.

0 PERSONAS NO ENFERMAS; PERSONAS QUE LOS ULTIMOS SEIS MESES NO ESTUVIERON ENFERMAS.

1 PERSONAS ENFERMAS QUE RECIBIERON ATENCTON DE MEDICOS, O EN CLINICAS, O EN ESTABLECIMIENTOS DE SALUD.

2 PERSONAS ENFERMAS QUE FUERON ATENDIDOS POR PERSONAL PARAMEDICO O PERSONAS ENFERMAS QUE NO RECIBIERON NINGUN TIPO DE ATENCION MEDICA, PERO QUE SU ENFERMEDAD FUE CONSIDERADA COMO LEVE.

3 PERSONAS ENFERMAS QUE NO RECIBIERON NINGUN TIPO DE ATENCION MEDICA Y QUE SU ENFERMEDAD FUE CONSIDERADA COMO GRAVE.

ADECUACION CALORICA: MUESTRA EL APORTE ENERGETICO PROVENIENTES DE 15 ALIMENTOS, EXPRESADOS EN TERMILNOS CALORICOS Y COMPARDOS CON LAS RECOMENDACIONES CALORICAS SEGUN SEXO Y EDAD.

1 NIVEL DE 100% Y MAS; NO EXISTE UN DEFICIT CALORICO.
2 NIVEL DE 85% A 99%; DE ADECUACION CALORICA.
3 NIVEL DE 75% A 84%; DE ADECUACION CALORICA.
4 NIVEL DE 65% A 74%; DE ADECUACION CALORICA.
5 NIVEL DE MENOS DE 65%; DE ADECUACION CALORICA.

R E S U M E N D E V A R I A B L E S

R O N D A U N O	R O N D A D O S
1. NIVEL DE EMPLEO	1. NIVEL DE EMPLEO
2. ALFABETISMO	2. ALFABETISMO
3. NIVEL DE EDUCACION	3. NIVEL DE EDUCACION
4. ESCALA DE EDUCACION	4. ESCALA DE EDUCACION
5. CAPACITACION PROFESIONAL	5. CODIGO DE SINTOMAS
6. MATERIALES Y SERVICIOS	6. ATENCION MEDICA
7. HACINAMIENTO	7. CODIGO DE HOSPITALI.
---	8. NIVEL DE VACUNACION
---	9. ESCALA DE SALUD
---	10. ADECUACION CALORICA

2.3 INTERPRETACION DE RESULTADOS

ESTE PROGRAMA REQUIERE CONOCER LO SIGUIENTE:

1 CUAL ES EL PERIODO O RONDA QUE NOS INTERESA INVESTIGAR.
2 CUAL ES EL GRUPO DE POBLACION, CON EL CUAL DESEAMOS HACER EL ANALISIS.
3 QUE TIPO DE ANALISIS ESTADISTICO QUEREMOS.
4 CUALES SON LAS VARIABLES QUE QUEREMOS INCLUIR EN EN NUESTRO ANALISIS.

EN NUESTRO EJEMPLO, NOS INTERESA CONOCER DE LA RONDA DOS (OCTUBRE/MARZO/1978/1979) LA SITUACION DEL SECTOR AGROPECUARIO, ATRAVEZ DE UN ANALISIS DE TABLAS CRUZADAS, DE INGRESO CONTRA NIVEL DE ALFABETISMO, Y INGRESO CONTRA NIVEL DE VACUNACION.

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3. CADENAS

3.1 DESCRIPCION

LA METODOLOGIA DEL SUBSISTEMA "CADENAS" ESTA BASADA: EN LA DETERMINACION DE FRECUENCIAS, EN CADA UNA DE LAS POSIBLES COMBINACIONES DE "N" PROBLEMAS DADOS.

DE ESTA MANERA PODEMOS CONOCER PARA CADA UNO DE LAS REGIONES, LOS GRUPOS DE PERSONAS AFETADOS POR UNA CADENA DE PROBLEMAS (ASOCIACION DE PROBLEMAS).

ESTA METODOLOGIA REQUIERE QUE LAS VARIABLES TENGAN DEFINIDOS PUNTOS DE CORTE, O SEA VARIABLES DICOTOMICAS. PARA NUESTRO ANALISIS HEMOS UTILIZADO LOS SIGUIENTE TIPOS DE VARIABLES:

1. VARIABLES SIMPLES CON DOS RESPUESTAS: SI O NO.
2. VARIABLES SIMPLES CON VARIAS RESPUESTAS ENTRE LAS CUALES HEMOS DELIMITADO NUESTROS PUNTOS DE CORTE.

3. VARIABLES COMPUESTAS POR DOS O MAS VARIABLES SIMPLES PARA UNA MEJOR CAPTACION DE LA REALIDAD; ESTA VARIABLE COMPUESTA PERMITIRA LA FORMACION DE UNA ESCALA CON DIFERENTES ESCALONES O GRADOS DE INTENSIDAD. PARA ELLAS TAMBIEN SE HA DELIMITADO PUNTOS DE CORTE O HASTA QUE GRADA O ESCALON SE PUEDA CONSIDERAR UNA SITUACION ACEPTABLE Y QUE APARTIR DE ESE PUNTO, LA PROXIMA GRADA O ESCALON ES UNA SITUACION PROBLEMATICA.

ASI EL INVESTIGADOR FIJARA SU UNIVERSO A INVESTIGAR O SU GRUPO DE POBLACION OBJETO DE ACUERDO A SUS PROPIOS INTERESES. PARA EL PRESENTE CASO SE HA CONSIDERADO COMO GRUPO DE INVESTIGACION LAS NUEVE REGIONES DE PLANIFICACION,PERO DE LA MISMA MANERA PODRIAN SER SUJETO DE ANALIS LOS SECTORES DE ACTIVIDAD ECONOMICA O LOS GRUPOS DE POBLACION POR EDAD Y SEXO.

ESTE SUBSISTEMA REQUIERE ADEMAS, QUE LA UNIDAD DE ANALISIS SEA LA MISMA PARA TODAS LAS VARIABLES. PARA NUESTRO CASO LA UNIDAD SON LAS PERSONAS DE 10 AÑOS Y MAS PERO PODRIA SER CUALQUIER OTRA UNIDAD PARA LA CUAL EXISTIERA INFORMACION; EJEMPLO DE ELLO SERIA LA FAMILIA.

3.2 DEFINICION DE VARIABLES UTILIZABLES EN EL ANALISIS METODOLOGICO DE CADENAS.

ALFABETISMO:
1 ALFABETOS; PERSONAS MAYORES DE 10 AÑOS QUE SABEN LEER Y ESCRIBIR.
2 ANALFABETOS; PERSONAS MAYORES DE 10 AÑOS QUE NO SABEN LEER, NI ESCRIBIR.

ESCALA DE EDUCACION:
1 PERSONAS MAYORES DE 10 AÑOS CON ALGUN GRADO DE ESTUDIO.
2 PERSONAS MAYORES DE 10 AÑOS SIN ESCOLARIDAD Y ANALFABETAS.

NIVELES DE EMPLEO:
1 OCUPADOS PLENOS
2 SUBOCUPADOS Y DESOCUPADOS.

DEFINICION DE VARIABLES PARA EL ANALISIS METODOLOGICO DE CADENAS, DE LA RONDA UNO -FEBRERO/SEPTIEMBRE/1978-. (PARA PERSONAS MAYORES DE 10 AÑOS)

MATERIALES Y SERVICIOS;
1 VIVIENDAS CON MATERIALES PERMANENTES QUE TIENEN ALGUN TIPO DE SERVICIOS.
2 VIVIENDAS CON MATERIALES PERMANENTES SIN SERVICIOS Y VIVIENDAS CON MATERIALES NO PERMANENTES CON ALGUN SERVICIO O SIN SERVICIOS.

HACINAMIENTO:
1 NIVEL 100 % O MENOS; NO HACINADOS.
2 NIVEL 101 % Y MAS; HACINADOS.

DEFINICION DE VARIABLES PARA EL ANALISIS METODOLOGICO DE CADENAS, DE LA RONDA DOS -OCTUBRE/ABRIL,1978/1979- (PARA PERSONAS MAYORES DE 10 AÑOS)

ESCALA DE SALUD:

1 PERSONAS ENFERMAS QUE FUERON ATENDIDAS

2 PERSONAS ENFERMAS QUE NO FUERON ATENDIDAS.

ADECUACION CALORICA:

1 ADECUACION CALORICA HASTA DE 85 %

2 ADECUACION CALORICA MENOR DE 85 %

R E S U M E N D E V A R I A B L E S

R O N D A U N O	R O N D A D O S
1. NIVEL DE EMPLEO	1. NIVEL DE EMPLEO
2. ALFABETISMO	2. ALFABETISMO
3. ESCALA DE EDUCACION	3. ESCALA DE EDUCACION
4. MATERIALES Y SERVICIOS	4. ESCALA DE SALUD
5. HACINAMIENTO	5. ADECUACION CALORICA

3.3 INTERPRETACION DE RESULTADOS:

(VER CUADRO DE SALIDA)

EN LA TABLA DE COMBINACION DE RESULTADOS, CONOCEMOS DE ACUERDO AL NUMERO DE PROBLEMAS SELECCIONADOS, LAS POSIBLES COMBINACIONES DE LOS PROBLEMAS Y EL NUMERO DE PERSONAS CORRESPONDIENTES A CADA UNO DE LOS GRUPOS; ASI COMO SU PORCENTAJE, EL INGRESO PROMEDIO Y SU DESVIACION STANDARD.

SE DESCRIBE ADEMAS EL NOMBRE DE CADA UNO DE LOS CODIGOS CORRESPONDIENTES A LAS VARIABLES SELECCIONADAS, EJEMPLO: CODIGO 3 NIVEL DE EMPLEO, SON LAS PERSONAS SUBOCUPADAS MAS LOS DESOCUPADOS.

PARA CADA SUBGRUPO CONOCEMOS CUANTOS PROBLEMAS AFECTAN A UN NUMERO DETERMINADO DE PERSONAS, ASI COMO LA MAGNITUD O SU PESO RELATIVO DENTRO DE ESA REGION, EL INGRESO PROMEDIO QUE CORRESPONDE A ESE GRUPO, Y LA MEDIDA ESTADISTICA DESVIACION STANDARD, QUE NOS DESCRIBE LA DISPERCION DE LOS CASOS CON RELACION A SU MEDIA.

UN EJEMPLO SERIA: EL GRUPO 2 SON PERSONAS QUE ESTAN AFECTADAS POR PROBLEMAS DE ANALFABETISMO MAS ALFABETAS SIN ESCOLARIDAD Y PERSONAS DESOCUPADAS MAS PERSONAS SUBOCUPADAS, LAS CUALES SUMAN 101412, QUE REPRESENTAN UN 13.62% DE LAS PERSONAS DE LA REGION METROPOLITANA; TODAS ELLAS TIENEN UN INGRESO PERCAPITA, QUE LES CORRESPONDE DE ACUERDO A SU GRUPO FAMILIAR, CON ESTE INGRESO PERCAPITA SE OBTIENE UN INGRESO PROMEDIO PARA CADA GRUPO EN ESTE CASO ES DE 207.05 COLONES MENSUALES; Y UNA DESVIACION STANDARD DE 231.14

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4. CALIDAD DE VIDA.

4.1 DESCRIPCION.

EL SUBSISTEMA "CALIDAD DE VIDA" CONSISTE EN PROPORCIONAR UN INDICE DE ORDENAMIENTO, BASADO EN EL PORCENTAJE DE COLUMNAS DE VARIAS VARIABLES,PONDERADAS SEGUN EL PORCENTAJE DE COLUMNAS DEL TOTAL DEL PAIS.

ESTA METODOLOGIA PROPORCIONA UN INDICE DE CALIDAD DE DE VIDA EL CUAL PERMITE CONOCER EL ORDEN DE DETERIORO O SATISFACCION, DENTRO DE UN GRUPO DE REGIONES, SECTORES O CUALQUIER OTRO GRUPO Y DEFINIR CUAL ES DENTRO DE ELLOS, AL QUE LE CORRESPONDERIA EL MAXIMO DE DETIORO.

ESTA METODOLOGIA REQUIERE COMO SE HA MENCIONADO EL PORCENTAJE DE COLUMNAS O SEA LA PROPORCION DE POBLACION AFECTADA CON RELACION A SU TOTAL.

LAS VARIABLES UTILIZADAS PARA ESTE ANALISIS SON LAS ORIENTDAS DE LAS MONOGRAFIAS DE LOS INDICADORES DESCRIPTIVOS (SALUD, EDUCACION,EMPLEO ETC.) Y ADEMAS EL USO DE OTRAS VARIABLES EXTERNAS, SIEMPRE QUE ELLAS CUMPLAN CON LOS REQUISITOS SOLICITADOS POR ESTA METODOLOGIA (MORTALIDAD INFANTIL, TASA DE DEPENDENCIA, ETC.)

PARA EL USO DE ESTA METODOLOGIA SE CONSIDERARA QUE EL PORCENTAJES ESTEN REFERIDO UNICAMENTE A DETERIORO O SATISFACCION.

4.2 DEFINICION DE PERFILES

PARA EL USO DE NUESTRO ANALISIS SE REQUIERE QUE LAS VARIABLES ESTEN CRUZADAS CONTRA LOS SIGUIENTES PERFILES: REGION, SECTOR DE ACTIVIDAD, INGRESOS Y TIPOS DE OCUPACION (PROPIETARIOS Y ASALARIADOS).

REGION: SE UTILIZA LA DIVISION DE PLANIFICACION NUEVE REGIONES, CINCO URBANAS Y CUATRO RURALES.

1 METROPOLITANA; CONSITTUIDA POR LA REGION CAPITAL Y LAS AREAS URBANAS ALEDANAS.

2 OCCIDENTE URBANO: FORMADO POR EL AREA URBANA DE LOS DEPARTAMENTOS DE AHUACHAPAN, SANTA ANA Y SONSONATE.

3 OCCIDENTE RURAL; AREAS RURALES DE LOS DEPARTAMENTOS DE AHUACHAPAN, SANTA ANA Y SONSONATE.

4 CENTRAL I URBANO; FORMADO POR EL AREA URBANA DE LOS DEPARTAMENTOS DE CHALATENANGO, LA LIBERTAD, CUSCATLAN Y SAN SALVADOR,EXCEPTO LA REGION METROPOLITANA.

5 CENTRAL I RURAL; AREAS RURALES DE LOS DEPARTAMENTOS DE CHALATENANGO, LA LIBERTAD, CUSCATLAN Y SAN SALVADOR.

6 CENTRAL II URBANA; FORMADA POR EL AREA URBANA DE LOS DEPARTAMENTOS DE LA PAZ, CABANAS Y SAN VICENTE.

7 CENTRAL II RURAL; AREAS RURALES DE LOS DEPARTAMENTOS DE LA PAZ, CABANAS Y SAN VICENTE.

8 ORIENTE URBANO; FORMADO POR EL AREA URBANA DE LOS DEPARTAMENTOS DE SAN MIGUEL, MORAZAN USULUTAN Y LA UNION.

9 ORIENTE RURAL; AREA RURAL DE LOS DEPARTAMENTOS DE SAN MIGUEL, MORAZAN, USULUTAN Y LA UNION.

INGRESO PER CAPITA RECODIFICADO: ES EL INGRESO PROMEDIO DEL GRUPO FAMILIAR AGRUPADO EN LOS SIGUIENTES RANGOS.

1 0 - 50 COLONES MENSUALES
2 51 - 100 COLONES MENSUALES
3 101 - 150 COLONES MENSUALES
4 101 - 200 COLONES MENSUALES
5 201 Y MAS COLONES MENSUALES

CLASIFICACION INDUSTRIAL INTERNACIONAL UNIFORME DE TODAS LAS ACTIVIDADES ECONOMICAS (CIIU).
(ESTA VARIABLE CALIFICA A LAS PERSONAS DE PEA Y A LOS "DEPENDIENTES" DEL GRUPO FAMILIAR SEGUN EL SECTOR DE ACTIVIDAD DEL MAYOR PERCEPTOR)

I AGRICULTURA, CAZA, SILVICULTURA Y PESCA.
2 EXPLOTACION DE MINAS Y CANTERAS.
3 INDUSTRIA MANUFACTURERA.
4 ELECTRICIDAD, GAS Y AGUA.
5 CONSTRUCCION.
6 COMERCIO AL POR MAYOR Y AL POR MENOR Y RESTAURANTES Y HOTELES.
7 TRANSPORTES, ALMACENAMIENTO Y COMUNICACIONES
8 ESTABLECIMIENTOS FINANCIEROS, SEGUROS, BIENES INMUEBLES Y SERVICIOS PRESTADOS A LAS EMPRESAS.
9 SERVICIOS COMUNALES, SOCIALES Y PERSONALES.
0 ACTIVIDADES NO BIEN ESPECIFICADAS.

TIPOS DE OCUPACION; ES UNA CLASIFICACION DE LA POBLACION SEGUN CIUO Y CATEGORIA OCUPACIONAL. (ESTA VARIABLE CALIFICA A LAS PERSONAS DE LA PEA Y A LOS "DEPENDIENTES" DEL GRUPO FAMILIAR, SEGUN EL TIPO DE OCUPACION DEL MAYOR PERCEPTOR)

P R O P I E T A R I O S

1 PATRONO; SERAN TODOS LOS QUE TUVIERAN CATEGORIA OCUPACIONAL DE PATRON Y LOS TRABAJADORES POR CUENTA PROPIA, QUE FUERAN DIRECTORES, PROFESIONALES Y EMPLEADOS ADMINISTRATIVOS.

2 MINIFUNDISTAS; SON TODOS LOS TRABAJADORES POR CUENTA PROPIA, QUE SEA AGRICOLAS.

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3 ARTESANO; SON TODOS LOS TRABAJADORES POR CUENTA PROPIA, QUE SEAN OBREROS NO AGRICOLA.

4 VENDEDORES; SON TODOS LOS TRABAJADORES POR CUENTA PROPIA, QUE SEAN COMERCIANTES Y VENDORES.

5 VENDEDORES AMBULANTES; SON TODOS LOS TRABAJADORES POR CUENTA PROPIA, QUE SEAN VENDEDORES AMBULANTES Y VENDEDORES DE PERTODICOS.

6 INDEPENDIENTES; SON TODOS LOS TRABAJADORES POR CUENTA PROPIA, QUE SEAN TRABAJADORES EN SERVICTOS.

7 NO ESPECIFICADOS: TODAS AQUELLAS PERSONAS QUE NO PUEDAN SER CLASIFICADAS SEGUN SU CATEGORIA OCUPACIONAL O SU OCUPACION U OFICIO

A S A L A R I A D O S

8 JORNALEROS AGRICOLAS: SON TODOS LOS TRABAJADORES A SUELDO FIJO O DESTAJO; QUE SEAN TRABAJADORES AGRICOLAS.

9 EMPLEADOS; SON TODOS LOS EMPLEADOS A SUELDO FIJO O DESTAJO, QUE SEAN TRABAJADORES AGRICOLAS Y NO AGRICOLAS.

10 OBREROS DE LA CONSTRUCCION; SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN TRABAJADORES DE LA CONSTRUCCION.

11 OBREROS; SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN TRABAJADORES NO AGRICOLAS, O COMERCIANTES Y VENDEDORES.

12 DEPENDIENTES; SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN COMERCIANTES Y VENDORES.

13 EMPLEADOS EN ADMINISTRACION; SON TODOS LOS EMPLEADOS Y OBPEROS A SUELDO FIJO Y DESTAJO, QUE SEAN PROFESIONALES, TECNICOS Y TRABAJADORES; O TODOS LOS EMPLEADOS A SUELDO FIJO Y DESTAJO, QUE SEAN ADMINISTRADORES.

14 TRABAJADORES EN SERVICIOS; SON TODOS LOS OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN ADMINISTRADORES; O TODOS LOS EMPLEADOS Y OBREROS A SUELDO FIJO Y DESTAJO, QUE SEAN TRABAJADORES EN SERVICIOS.

15 SERVICIO DOMESTICO: SON TODOS LOS TRABAJADORES EN SERVICIOS DOMESTICOS.

16 TRABAJADOR FAMILIAR URBANO: SON TODOS LOS TRABAJADORES FAMILIARES SIN REMUNERACION.

17 TRABAJADOR FAMILIAR RURAL; SON TODOS LOS TRABAJADORES FAMILIARES SIN REMUNERACION.

18 NUNCA TRABAJO; SON TODOS LAS PERSONAS QUE BUSCAN TRABAJO POR PRIMERA VEZ.

4.3 DEFINICIONES DE VARIABLES COMUNES PARA LAS DOS RONDAS (1976, 1978/1979).

NIVELES DE EMPLEO: CONDICION DE EMPLEO REFERIDO A SEMANA ANTERIOR A LA ENCUESTA. PARA TODAS LAS PERSONAS MAYORES DE DIEZ AÑOS.

1 OCUPADOS PLENOS; TODAS LAS PERSONAS QUE

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1027                    TUVIERAN LA CATEGORIA DE PATRONOS, O LOS                0
1028                    TRABAJARON MAS DE TREINTA Y CINCO HORAS A               0
1029                    SEMANA Y SU RELACION DE SALARIO POR HORAS               0
1030                    ES SUPERIOR AL SALARIO MINIMO, O QUE TRABA-             0
1031                    JARON MENOS DE TREINTA Y CINCO, PERO USUAL-             0
1032                    MENTE TRABAJAN NORMALMENTE Y SU RELACION                0
1033                    SALARIO POR HORAS ES SUPERIOR AL MINIMO, O              0
1034                    QUE NO TRABAJARON LA SEMANA PASADA, PERO                0
1035                    TIENEN TRABAJO Y LA RELACION SALARIO POR                0
1036                    HORAS ES SUPERIOR AL SALARIO MINIMO.                    0
1037            2       SUBOCUPADOS POR JORNADA: TODAS LAS PERSONA              0
1038                    QUE TRABAJARON MENOS DE TREINTA Y CINCO,                0
1039                    PERO PREFERIRIAN TRABAJAR MAS Y SU RELA-                0
1040                    CION SALARIO POR HORAS ES SUPERIOR AL MI-               0
1041                    NIMO; O LOS QUE NO HABIENDO TRABAJADO LA                0
1042                    SEMANA PASADA, TRABAJAN MENOS DE TREINTA                0
1043                    Y CINCO HORAS Y SU RELACION SALARIO POR                 0
1044                    HORAS ES MAYOR QUE EL MINIMO.                           0
1045            3       SUBOCUPADOS POR REMUNERACION: TODAS LAS                 0
1046                    PERSONAS QUE TRABAJAN MENOS DE TREINTA Y                0
1047                    CINCO HORAS, PERO QUE NORMALMENTE TRABAJAN              0
1048                    MAS Y QUE LA RELACION DE SALARIOS POR HORAS             0
1049                    SEA MENOR QUE EL MINIMO; O LOS QUE TRABAJA-             0
1050                    RON MAS DE TREINTA Y CINCO HORAS Y QUE SU               0
1051                    RELACION SALARIO POR HORAS ES MENOR QUE EL              0
1052                    MINIMO; O LOS QUE NO HABIENDO TRABAJADO LA              0
1053                    SEMANA PASADA, TRABAJAN MAS DE TREINTA Y                0
1054                    CINCO HORAS Y SU RELACION SALARIO POR HORAS             0
1055                    ES MENOR QUE EL MINIMO.                                 0
1056            4       SUBOCUPADOS POR JORNADA Y REMUNERACION: TO-             0
1057                    DAS LAS PERSONAS QUE TRABAJAN MENOS DE TREI-            0
1058                    TA Y CINCO HORAS, PERO PREFERIRIAN TRABAJAR             0
1059                    MAS Y SU RELACION SALARIO POR HORAS ES ME-              0
1060                    NOR QUE EL MINIMO; O LOS QUE TRABAJAN MENOS             0
1061                    DE TREINTA Y CINCO HORAS Y SU RELACION SALA-            0
1062                    RIO POR HORAS ES MENOR QUE EL MINIMO.                   0
1063            5       SUBOCUPADOS NO DESEAN; TODAS LAS PERSONAS               0
1064                    QUE TRABAJAN MENOS DE TREINTA Y CINCO HORAS             0
1065                    Y NO DESEAN TRABAJAR MAS.                               0
1066            6       CESANTES: TODAS LAS PERSONAS CON EXPERIEN-              0
1067                    CIA LABORAL Y NO ESTAN EMPLEADAS, PERO                  0
1068                    DESEARIAN TRABAJAR.                                     0
1069            7       BUSCAN TRABAJO POR PRIMERA VEZ; TODAS LAS               0
1070                    PERSONAS QUE BUSCAN TRABAJO, PERO NUNCA HAN             0
1071                    HAN TRABAJADO                                           0
1072            8       POBLACION ECONOMICAMENTE INACTIVA ASPITANTES;           0
1073                    TODAS LAS PERSONAS DE LA PEI QUE DIJERON QUE            0
1074                    PODIAN ACEPTAR UN TRABAJO AHORA.                        0
1075            9       POBLACION ECONOMICAMENTE INACTIVA RESTANTE;             0
1076                    TODAS LAS PERSONAS DE LA PEI QUE NO PUEDEN              0
1077                    ACEPTAR UN TRABAJO.                                     0
1078                                                                            0
1079            ALFABETISMO:                                                    0
1080            0       MENORES DE 10 ANOS                                      0
1081            1       ALFABETO; PERSONA MAYOR DE 10 ANOS QUE SA-              0
1082                    BE LEER Y ESCRIBIR.                                     0
1083            2       ANALFABETO; PERSONA MAYOR DE 10 ANOS QUE                0
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NO SABE LEER NI ESCRIBIR

NIVEL DE EDUCACION: EDUCACION ACTUAL DE ESTUDIOS REALIZADA POR CADA PERSONA MAYOR DE CUATRO ANOS.

0 MENORES DE 5 ANOS
1 UNIVERSITARIA
2 SUPERIOR NO UNIVERSITARIA
3 BACHILLERATO
4 SECUNDARIA
5 TERCER CICLO: ESTUDIOS ENTRE 9 Y 7 GRADO
6 SEGUNDO CICLO; ESTUDIOS ENTRE 6 Y 4 GRADO
7 PRIMER CICLO: ESTUDIOS ENTRE 3 Y 1 GRADO
8 PARVULOS
9 SIN ESCOLARIDAD; SIN NINGUN CURSO APROBADO
10 OTROS; CON EDUCACION ESPECIAL O IGNORADOS

4.3.1 DEFINICION DE VARIABLES EXCLUSIVAS DE LA RONDA NNO (FEBRERO-SEPTIEMBRE DE 1978).

CAPACITACION PROFESIONAL: CALIFICA A TODAS LAS PERSONAS ENTRE 15 A 49 ANOS, SEGUN SU FORMACION PROFESIONAL.

0 PERSONAS ENTRE 0 Y 14 ANOS, ADEMAS LAS PERSONAS ENTRE 50 Y MAS ANOS.

T R A B A J A D O R E S N O T E C N I C O S

1 NO CALIFICADOS:
2 SEMICALIFICADOS
3 CALIFICADOS
4 ALTAMENTE CALIFICADOS

T R A B A J A D O R E S T E C N I C O S

5 TECNICOS
6 PROFESIONALES
7 DIRECTORES
8 OTROS

MATERIALES Y SERVICIOS; CARACTERISTICAS QUE PERMITEN CALIFICAR LAS VIVIENDA SEGUN EL MATERIAL DE SUS PAREDES, EL TIPO DE SERVICIO DE AGUA Y TIPO DE ENERGIA

1 VIVIENDAS CON MATERIALES PERMANENTES Y SERVICIOS PRIVADOS; SI SUS PAREDES SON DE CONCRETO Y MIXTO, BAHAREQUE, ADOBE O MADERA, Y TIENEN AGUA ATRAVES DE CANERIA PRIVADA, Y ALUMBRADO ELECTRICO.

2 VIVIENDAS CON MATERIALES PERMANENTES Y SERVICIOS COMUNES; SI SUS PAREDES SON DE CONCRETO Y MIXTO, BAHAREQUE O ADOBE, Y AGUA ATRAVES DE CANERIA COMUN, Y ALUMBRADO ELECTRICO.

3 VIVIENDAS CON MATERIALES PERMANENTES Y ALGUNOS SERVICIOS; SI SUS PAREDES SON DE CONCRETO Y MIXTO, BAHAREQUE, ADOBE O MADERA, Y NO TIENEN AGUA, Y SI TIENEN ALUMBRADO; O SI SUS PAREDES SON DE CONCRETO Y MIXTO, BAHAREQUE,

ADOBE O MADERA, Y NO TIENEN ALUMBRADO, Y SI TIENEN AGUA.

4 VIVIENDAS CON MATERIALES PERMANENTE, SIN SERVICIOS; SI SUS PAREDES SON DE CONCRETO Y MIXTO, BAHAREQUE, ADOBE O MADERA, Y NO TIENE AGUA POTABLE, NI ENERGIA ELECTRICA.

5 VIVIENDAS CON MATERIALES NO PERMANENTES Y ALGUNOS SERVICIOS (PUBLICOS O PRIVADOS); SI SUS PAREDES SON DE LAMINA, PAJA O PALMA, U OTROS MATERIALES, Y TIENEN AGUA POTABLE (PUBLICA O PRIVADA) Y TIENEN O NO ENERGIA.

6 VIVIENDA CON MATERIALES NO PERMANENTES, SIN SERVICIO; SI SUS PAREDES SON DE LAMINA, PAJA O PALMA, U OTROS MATERIALES, Y SIN AGUA POTABLE, Y SIN ENERGIA ELECTRICA.

HACINAMIENTO: LA RELACION ENTRE EL NUMERO DE PERSONAS Y EL NUMERO DE HABITACIONES. LA SIGUIENTE TABLA DETERMINA EL GRADO DE HACINAMIENTO DE CADA VIVIENDA.

1 HABITACION = 3 PERSONAS
2 HABITACIONES = 5 PERSONAS
3 HABITACIONES = 8 PERSONAS
4 HABITACIONES = 10 PERSONAS
5 HABITACIONES = 12 PERSONAS

EL GRADO DE HACINAMIENTO SE CALCULA DE LA SIGUIENTE MANERA: DIVIDIENDO EL NUMERO DE PERSONAS DEL HOGAR MULTIPLICADAS POR CIEN, ENTRE EL NUMERO DE PERSONAS DETERMINADAS POR LA TABLA (CANTIDAD DE HABITACIONES QUE DEBE TENER CADA VIVIENDA).

1 NIVEL 100 % O MENOS; O NO HACINADOS.

2 NIVEL 101 % A 150%; CON HACINAMIENTO HASTA UN 50 %

3 NIVEL 151 % A 200 %; CON HACINAMIENTO HASTA UN 100 %.

4 NIVEL 201 % Y MAS; CON HACINAMIENTO MAYOR DE 100 %.

4.3.2 DEFINICION DE VARIABLES EXCLUSIVAS DE LA RONDA DOS, DEL PERIODO DE OCTUBRE A ABRIL 1978/1979.

CODIGO DE SINTOMAS: SON LOS SINTOMAS REPORTADOS POR LAS PERSONAS ENFERMAS DENTRO DE UN PERIODO DE STES MESES ANTERIORES A LA ENCUESTA Y AGRUPADOS SEGUN EL MANUAL DE CODIGOS DE SINTOMAS DE LA ORGANIZACION MUNDIAL DE LA SALUD.

0 PERSONAS NO ENFERMAS; AQUELLAS QUE RESPONDIERON, NO HABERSE ENFERMADO EN LOS ULTIMOS SEIS MESES.

1 INFECCIOSAS Y PARASITARIAS; PERSONAS QUE RESPONDIERON, HABER ESTADO ENFERMO CON SINTOMAS DE ESTADOS INFECCIOSO Y PARARITARIOS; DE ACUERDO A LOS CODIGOS DEL 1 AL 17, 23, 27, 41 O 04; DE LA ORGANIZACION MUNDIAL DE LA SALUD.

2 APARATO RESPIRATORIO; PERSONAS QUE RESPONDIERON, HABER PRESENTADO SINTOMAS DE ENFERMEDADES DEL APARTO RESPIRATORIO; DE ACUERDO A LOS CODIGOS 31,31,32; DE LA OMS.

3 OTRAS ENFERMEDADES; PERSONAS QUE RESPONDIERON HABER PRESENTADO SINTOMAS DIFENTES A LOS DEL APARATO RESPIRATORIO O INFECCIOSAS Y PARACITARIO.

ATENCION MEDICA: SI ESTUVO ENFERMO; QUIEN LO ATENDIO, O DONDE FUE ATENDIDO.

0 PERSONAS NO ENFERMAS; AQUELLAS QUE RESPONDIERON, NO HABERSE ENFERMADO EN LOS ULTIMOS SEIS MESES.

1 EN CLINICAS; PERSONAS ATENDIDAS POR MEDICOS O CLINICAS PARTICULARES O EN ESTABLECIMIENTOS DE SALUD.

2 POR PERSONAL PARAMEDICO; PERSONAS ATENDIDAS POR AYUDANTE RURAL O FARMACEUTICO.

3 SIN ATENCION MEDICA; PERSONAS ATENDIDAS POR CURANDEROS O POR NADIE.

CODIGO DE HOSPITALIZACION: SE LES PREGUNTO A TODAS PERSONAS SI ELLAS HABIAN ESTADO HOSPITALIDAS EN LOS ULTIMOS DOCE MESES Y CUAL FUE LA ENFERMEDAD POR LA QUE FUE HOSPITALIZADO SIGUIENDO LA CLASIFICACION INTERNACIONAL DE LA ORGANIZACION MUNDIAL DE LA SALUD.

0 PERSONAS NO HOSPITALIZADAS; PERSONAS QUE DIGERON QUE EN LOS ULTIMOS DOCE MESES NO HABIA SIDO HOSPITALIZADA.

1 ACCIDENTE, ENVENENAMIENTO O VIOLENCIA; PERSONAS ESTUVIERON HOSPITALIZADAS POR ESTOS MOTIVOS DE ACUERDO A LA CLASIFICACION DE LA OMS. CORRESPONDIENDO A LOS CODIGOS DEL 43 AL 49.

2 INFECCIOSAS Y PARASITARIAS; PERSONAS QUE ESTUVIORON HOSPITALIZADAS POR ESTAS CAUSA Y CLASIFICADAS ASI POR LA OMS DE ACUERDO LOS SIGUIENTES CODIGOS DEL 1 AL 17 23, 27, 41 Y 64.

3 COMPLICACIONES DE EMBARAZO Y PARTO; PERSONAS QUE ESTUVIORON HOSPITALIZADAS POR DICHAS CAUSAS DE ACUERDO A LA CLASIFICACION DE LA OMS SEGUN LOS SIGUIENTES CODIGOS 39 Y 40.

4 OTRAS ENFERMEDADES; PERSONAS QUE ESTUVIERON HOSPITALIZADAS POR CAUSAS DISTINTAS A LAS ANTES MENCIONADAS.

VACUNACION: VACUNAS APLICADAS A LOS MENORES DE CINCO AÑOS.

1 VACUNADOS DPT

2 VACUNADOS POLIOMIELITIS

3 VACUNADOS SARAMPION

4 VACUNADOS BCG (TUBERCULOSIS)

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ADECUACION CALORICA: MUESTRA EL APORTE ENERGETICO PRO-
VENIENTES DE 15 ALIMENTOS, EXPRESADOS EN
TERMILNOS CALORICOS Y COMPARDOS CON LAS
RECOMENDACIONES CALORICAS SEGUN SEXO Y E-
DAD.

1 NIVEL DE 100% Y MAS; NO EXISTE UN DEFICIT
CALORICO.

2 NIVEL DE 85% A 99%: DE ADECUACION CALORICA.

3 NIVEL DE 75% A 84%; DE ADECUACION CALORICA.

4 NIVEL DE 65% A 74%: DE ADECUACION CALORICA.

5 NIVEL DE MENOS DE 65%; DE ADECUACION CALORICA.

R E S U M E N D E V A R I A B L E S

R O N D A U N O	R O N D A D O S
1. NIVEL DE EMPLEO	1. NIVEL DE EMPLEO
2. ALFABETISMO	2. ALFABETISMO
3. NIVEL DE EDUCACION	3. NIVEL DE EDUCACION
4. CAPACITACION PROFESIONAL	4. CODIGO DE SINTOMAS
5. MATERIALES Y SERVICIOS	5. ATENCION MEDICA
6. HACINAMIENTO	6. CODIGO DE HOSPITALI.
---	7. VACUNACION
---	8. ADECUACION CALORICA

4.4 INTERPRETACION DE RESULTADOS:
(VER CUADRO DE SALIDAD)

EN LA TABLA DE CALIDAD DE VIDA, CONOCEMOS EL PERFIL ANALIZADO, LAS VARIBLES DE ANALISIS, Y LOS PORCENTAJES CORRESPONDIENTES.

EL INDICE DE CALIDAD DE VIDA ES UN PROCEDIMIETO QUE STANDARIZA LOS PORCENTAJES DE LOS COMPONENTES DEL PERFIL POR LOS PORCENTAJES DEL TOTAL DEL PAIS; ES DECIR UN PROMEDIO PONDERADO, EN EL CUAL EL INDICE MAYOR LE CORRESPONDE AL SECTOR, O REGION DE MAYOR DETERIORO.

POR EJEMPLO; EL PERFIL ANALIZADO ES REGION Y AREA Y LAS VARIABLES SON ANALFABETISMO Y ADECUACION CALORICA MENOS DE 65%, LA REGION METROPOLITANA ES LA QUE TIENE EL INDICE MAS BAJO ES DECIR LA QUE ESTA EN MEJOR SITUACION (39.97), LAS REGIONES URBANAS EN POSIONES INTERMEDIAS (ENTRE 49.97 Y 58.80) Y LAS REGION ORIENTAL RURAL CON UN INDICE MAS ALTO (77.61), ES DECIR LA SITUACION MAS DEFICITARIA.

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